Washoe County Regional EMS Protocols

REMSA HEALTH®

NORTHERN NEVADA Public Health

Mt. Rose SKI TAHOE

Version 14 – Effective 07/01/2024

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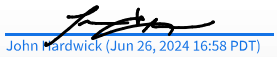
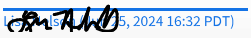
Washoe County Regional EMS Protocols Signature Page



Dr. John Hardwick
Medical Director for Sparks Fire Department and Reno-Tahoe Airport Authority Fire Department



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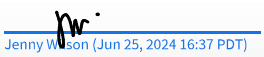

Dr. Jennifer Wilson
Medical Director for REMSA Health

The Washoe County Regional EMS Protocols were last reviewed and approved on June 27, 2024 for use beginning July 1, 2024.

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The Washoe County Regional EMS Protocols are intended to establish guidelines and best practices for regional patient care and treatment. Agencies utilizing these protocols may not be able to procure all medications and equipment due to availability, funding, and Medical Director discretion. All appropriately indicated medications and equipment will be utilized if available. In situations where co-responders may have differing medication or equipment complements, providers should work cooperatively and in the best interest of the patient.

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Protocol Change Log

Effective Date	Protocol Title	Summary of Changes
7/1/2024	Sepsis	Removed 'If suspect sepsis, call sepsis pre-alert and continue care' box
	Nausea/Vomiting	Added 'DROERIDOL 0.625-1.25 mg glow IV/IO/IM may repeat x1 in 10 min. Geriatrics – 0.625 mg slow IV/IO/IM may repeat x1 in 10 min. Added Pearl 'Avoid DROPERIDOL for patients presenting with suspected MI, ACS, or uncorrected hypotension' Added Pearl 'Do NOT co-administer with PROMETHAZINE'
	Behavioral Emergency	Added 'DROPERIDOL 2.5-5mg slow IV/IO/IM q 5 min; max 10 mg' Added Pearl ' Do NOT co-administer with HALOPERIDOL'
	Trauma Criteria and Assessment	Updated elements of protocol to align with hospital trauma and criteria assessment protocols
	Formulary	Added DROPERIDOL Formulary Updated KETAMINE Formulary Contraindication/Precaution to mirror Pain Management Protocol
	Adult Medication	Added DROPERIDOL
	Destination	Added "X" under CTH for Possible Stroke in Patient Destination Table
1/1/2024	Pediatric Cardiac Arrest	Added bullet under 'Defibrillate at 4 J/kg' to read 'Subsequent Defibrillations increase in 2 J/kg increments to a max of 10 J/kg not to exceed the adult dose'
	Adult Burns/Crush Injury	Moved both Adult Burns and Crush Injury Protocols from Adult Treatment Protocols to Trauma Protocols
	Adult Medications Reference	Updated based on protocol changes
	Shock-Hemorrhagic	Added TRANEXAMIC ACID IO route
	Pediatric Medications Reference	Updated based on protocol changes
	Acute Aortic Dissection	Added new protocol
	Acute Coronary Syndrome	Removed Pearl '12-lead ECG should be obtained as soon as reasonably possible.'
		Added Pearl 'If suspected Aortic Dissection, reference Acute Aortic Dissection (Suspected) Protocol.'
	Pediatric Neonatal Resuscitation	Added bullet to top box 'If fetal demise is recognized after cord is clamped and cut, and known gestational age is < 22 weeks, treat as a miscarriage and provide supportive care to family'

Protocol Change Log

Effective Date	Protocol Title	Summary of Changes
1/1/2024	Pediatric Behavioral Emergency	Updated ‘Apply Cardiac monitor as needed – required with chemical restraint’ to ‘Apply cardiac monitor and monitor ETCO2 – required with chemical restraint’
		Removed box ‘Consider Pediatric Pain Management/Sedation protocol
		Added box 'MIDAZOLAM 0.2 mg/kg IV/IO/IN/IM; may repeat as needed; KETAMINE 1 mg/kg IV/IO; may repeat once after 5 minutes; max single dose 50mg -OR- KETAMINE 3mg/kg IM; max single dose 150mg
		Added Pearl 'Maximum IM of 3ccs for any fluid in a single muscle group'
	Pediatric Pain Management/Sedation	Added 'KETAMINE 1mg/kg IV/IO; may repeat once after 5 minutes; max single dose 50mg -OR- KETAMINE 3mg/kg IM; max single dose 150mg' to sedation box
		Removed arrow from second box under Pain Management pointing to 'Contact Medical Control for additional doses'. Centered this box in between Paint Management and Sedation with no arrows pointing to it.
		Removed Pearl 'Give pain management cautiously to patients who are bradycardic.'
		Added the following pearls: • If using KETAMINE, consider MIDAZOLAM to prevent reemergence phenomenon. • Monitor ETCO2 for chemical sedation. • Maximum IM of 3ccs for any fluid in a single muscle group.
8/1/2023	Traumatic Arrest Protocol	Protocol added
	Trauma Protocols Section	New section added- Moved Trauma Criteria and Assessment, Spinal Motion Restriction, Amputation, Less Than Lethal Munitions Care Protocols from Universal Section to Trauma Protocols Section
	Pediatric Airway Obstruction	Added the following pearls: • Expedite transport if unable to immediately resolve obstruction • Surgical cricothyrotomy is contraindicated in the pediatric patient

Protocol Change Log

Effective Date	Protocol Title	Summary of Changes
8/1/2023	Resuscitation_Prehospital Death Determination	Replaced 'Blunt trauma arrest with > 10 minute ETA to trauma center OR Penetrating trauma arrest with > 15 minute ET to trauma center' with 'Cardiac Arrest Secondary to Blunt or Penetrating Trauma'
		Replaced 'Contact Medical Control for termination orders' with 'Follow Traumatic Cardiac Arrest Protocol'
07/01/2023	Hyperglycemia/Hypoglycemia	Added the Pearl "Lactated Ringers is the preferred solution for patients when DKA is suspected."
	Foreword	Added ER @ Spanish Springs
01/01/2023	Pediatric Pain Management/Sedation	Updated spelling of Acetaminophen
	Cardiac Post Arrest Care	Replace 'Is patient unconscious' and steps below it with 'Continue supportive care'
	Hypothermia Post ROSC	Remove protocol
	Stroke	Remove 'onset' and change Last Know Normal to Last Known Well
	Pain Management	Add IV to Acetaminophen
	Adult Medications	Updated for Acetaminophen IV
07/01/2022	Stroke	Removed Pearl
	Behavioral Emergency	Change Ketamine to 1 mg/kg IV, may repeat once after 5 min OR 3 mg/kg IM; max dose 300 mg
	Pain Management/Sedation	• Change into two separate protocols – Pain Management; Sedation • Updated language in pearls for each • Sedation update: o Ketamine 1 mg/kg IV/IO may repeat once after 5 min; 3 mg/kg IM single dose; Max dose 300 mg • Pain Management update: o Fentanyl 0.5-1.5 mcg/kg IV/IO/IN/IM max single dose 100 mcg, may repeat q 5 min as needed o Morphine Sulfate 1-5 mg IV/IO may repeat q 10 min as needed
03/15/2022	Operational Appendix	Remove Appendix C and move Radiological Response Aid to Operational Protocols

Protocol Change Log

Effective Date	Protocol Title	Summary of Changes
01/01/2022	Acute Coronary Syndrome	Add to pearls 'Consider MFE pad placement of pads prior to hospital arrival on STEMI patients'
	Pain Management/Sedation	Remove Bloomsbury Sedation Scale Add to pearls: • Strongly consider alternative agents to KETAMINE for patients with a suspected head injury • When administering pain medications to patients with a higher potential for adverse reaction (elderly, intoxicated, opiates or depressants already on board, etc.) use caution and consider the need for a lower starting dose to achieve the desired effect. • Consider chemical sedation for patients presenting with agitation secondary to possible hyper-sympathetic response (excited delirium, drug induced psychosis, etc.).
	References	Add the Richmond Agitation & Sedation Scale to the References with Bloomsbury Sedation Scale
	Behavioral Emergency	Add to pearls: • Strongly consider alternative agents to KETAMINE for patients with a suspected head injury
	Combative Patient Protocol	New protocol under Operational
	Medication Assisted Intubation	Reword Etomidate to '0.3 mg/kg IV/IO, may repeat X 1 to a max dose of 0.6 mg/kg'
	Cardiac-Wide Complex Tachycardia	Amiodarone and Synchronized Cardioversion to same box with OR between, add 'if clinically indicated' and 'Consider Pain Management/Sedation…' as bullet after Synchronized Cardioversion
07/01/2021	Shock-Hemorrhagic	Add to pearls 'if unable to establish IV access, consider TRANEXAMIC ACID IM in 2 doses in 2 separate locations Change dosing for TRANEXAMIC ACID
	Paint Management/Sedation	Add Ketorolac to Pain Management Add to pearls Ketorolac contraindications
	Formulary	Add Ketorolac, including note regarding potential pregnant woman under contraindications

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Foreword

This patient care document has been specifically developed for Washoe County EMS responders. The purpose of this manual is to provide guidance for *ALL* prehospital care providers. In any such protocol, certain assumptions are made regarding the condition of the patient, expected responses to treatment, and the availability of resources. Since these assumptions will not always be true, the emergency medical technician must use these protocols as a guide, as well as, agency specific Medical Director endorsed medications and procedures.

NOTHING contained within these protocols is meant to delay rapid patient transport to a receiving facility. Patient care should be rendered while en-route to the hospital when transport is available.

The majority of these protocols generally reflect a conservative and accepted standard for treatment. The technician in charge at an emergency medical incident is encouraged to use judgment in the application of these protocols. If a treatment plan appears to be insufficient for any reason, medical control consultation is encouraged. The medical control physician directing care in the field retains discretion in ordering specific forms of treatment, even if that treatment is in conflict with these guidelines. Obviously, to proceed with an order directed by medical control requires that both the physician and the provider acknowledge and agree that the patient's condition and extraordinary care are not addressed elsewhere within these medical protocols, and that the order is in the best interest in the care of the patient. Additionally, the provider must feel capable, based on the instructions given by the medical control physician, of correctly performing the directed care. Whenever such care is provided, it is necessary for the patient care report (PCR) documentation to describe the circumstances which necessitated the deviation, as well as document the physician's name who gave the order(s), the treatment change and the time of the order.

Occasionally, a situation may arise in which a physician's order cannot be carried out due to the provider's sense that the administration of an ordered treatment would endanger the patient, the particular medication is not available, or that a physician's order is outside of protocol or NRS statute. If this occurs, the provider must immediately notify the medical control physician as to the reason the order cannot be carried out, and indicate on the PCR what was ordered, the time and the reason the order could not be administered.

Per Nevada Administrative Code 450B.180 a "Patient" is:

Any person who is sick, injured, wounded, or otherwise incapacitated or helpless and who is carried in an ambulance or air ambulance or is cared for by an emergency medical dispatcher, emergency medical responder, emergency medical technician, advanced emergency medical technician, paramedic or registered nurse.

Pediatric Patient Definition

- Pediatric treatment protocols are to be used on children who are age 12 and under. If age is unknown and/or there are obvious signs of puberty, the patient may be treated as an adult.

Commitment to STAR Care

The following is a checklist you can use to analyze almost any patient care issue you might encounter. Go through the list in order from top to bottom, and ask yourself if your care meets each criterion. If it does, chances are that you can defend your actions in almost any forum.

- **Safe -** Were my actions safe -- for me, for my colleagues, for other professionals and for the public?
- **Team-Based -** Were my actions taken with due regard for the opinions and feelings of my co-workers, including those from other agencies?
- **Attentive to Human Needs -** Did I treat my patient as a person? Did I keep him/her warm? Was I gentle? Did I use his/her name throughout the call? Did I tell him/her what to expect in advance? Did I treat his/her family and/or relatives with similar respect?
- **Respectful -** Did I act toward my patient, my colleagues, the first-responders, the hospital staff and the public with the kind of respect that I would have wanted to receive myself?

Foreword

STAR Care (Continued)

- **Customer-Accountable -** If I were face-to-face right now with the customers I dealt with on this response, could I look them in the eye and say "I did my very best for you."
- **Appropriate -** Was my care appropriate--medically, professionally, legally and practically – considering the circumstances I faced?
- **Reasonable -** Did my actions make sense? Would a reasonable colleague of my experience have acted similarly, under the same circumstances?
- **Ethical -** Were my actions fair and honest in every way? Are my answers to these questions?

EMS Agency Medical Directors

Jenny Wilson, MD, REMSA
John Watson, MD, Reno Fire Department, Truckee Meadows Fire Protection District
Lisa Nelson, DO, North Lake Tahoe Fire Protection District, Mt. Rose Ski Patrol
John Hardwick, MD, Sparks Fire Department & Reno-Tahoe Airport Authority Fire Department
Scott Shepherd, MD, Storey County Fire Protection District

Washoe County Hospitals

Incline Village Community Hospital
Northern Nevada Medical Center
Northern Nevada Sierra Medical Center
Renown Regional Medical Center
Renown South Meadows Medical Center
Saint Mary's Regional Medical Center
Veteran's Affairs Sierra Nevada Healthcare System

Phone Numbers

REMSA Dispatch	775-858-6005
Sparks Dispatch	775-353-2231
Reno Dispatch	775-334-2306
TMFPD Dispatch	775-785-4253
RPD/WCSO Dispatch	775-334-3855
Nevada Highway Patrol Dispatch	775-688-2830
ER @ McCarran Northwest	775-900-6700
ER @ Spanish Springs	775-567-5400
Northern Nevada Medical Center ER	775-356-4040
Northern Nevada Sierra Medical Center	775-799-7399
Renown Main ER	775-785-6295
Renown South Meadows ER	775-982-7373
Saint Mary's ER	775-322-9424
Veteran's Affairs (VA) ER	775-328-1200
State of Nevada Elderly Services	888-729-0571 or 775-784-8085 (after hours)
Washoe County Child Protective Services	775-785-8600 or 775- 784-8090 (after hours)
Poison Control Center	1-800-222-1222

From time to time, protocols may be added or revised with approval of Medical Direction. Recommendations are welcome and appreciated at anytime. Recommendations may be submitted to the Northern Nevada Public Health EMS Coordinator for consideration and referral to the Medical Directors via email at EMSProgram@nnph.org.

References

Glasgow Coma Scale		
EYE OPENING	Spontaneous	4
	To voice / verbal command / shout	3
	To pain	2
	No response	1
VERBAL RESPONSE	Orientated / Converses (PEDS: Appropriate words, smiles, coos)	5
	Confused (PEDS: Inappropriate words, cries)	4
	Inappropriate words (PEDS: Cries and/or screams, irritable)	3
	Incomprehensible sounds (PEDS: Grunts, restless, agitated)	2
	No response	1
MOTOR RESPONSE	Obeys verbal commands	6
	Localizes pain	5
	Withdraws to pain (PEDS: Flexion, withdrawal)	4
	Flexes to pain (Decorticate rigidity)	3
	Extends to pain (Decerebrate rigidity)	2
	No response	1
GCS Total = Eye Opening + Verbal Response + Motor Response		

APGAR			
DESCRIPTION	**0**	**1**	**2**
Appearance	Blue, Pale	Body: Pink / Ext: Blue	Completely Pink
Pulse	Absent	< 100	> 100
Grimace	No Response	Grimace	Cries
Activity	Limp	Some Flexion	Action Motion
Respirations	Absent	Slow, Irregular	Strong Cry

Mean **A**rterial **P**ressure (**MAP**)

MAP = ((DBP x 2) + SBP)/ 3
OR
MAP = DBP + 1/3 (SBP – DBP)
OR
MAP = DBP + (PP/3)

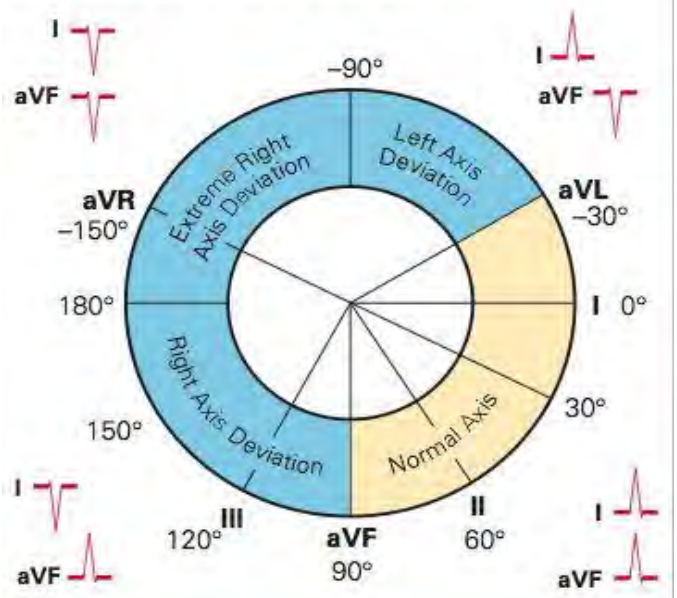
Richmond Agitation & Sedation Scale (RASS)		
Score		**Description**
+4	Combative	Violent, immediate danger to staff
3	Very Agitated	Pulls at or removes tubes, aggressive
2	Agitated	Frequent non purposeful movements, fights ventilator
1	Restless	Anxious, apprehensive but movements not aggressive or vigorous
0	Alert & Calm	
-1	Drowsy	Not fully alert, sustained awakening to voice (eye opening & contact > 10 sec)
-2	Light Sedation	Briefly awakens to voice (eye opening & contact < 10 sec)
-3	Moderate Sedation	Movement or eye-opening to voice (no eye contact)
-4	Deep Sedation	No response to voice, but movement or eye opening to physical stimulation
-5	Unarousable	No response to voice or physical stimulation

Bloomsbury Sedation Scale	
+3	Agitated/restless
+2	Awake/comfortable
+1	Awake/calm
0	Roused by voice, remains calm
-1	Roused by movement/stimulation
-2	Roused by painful stimulation
-3	Unable to rouse/natural sleep

AGE	HEART RATE	RESPIRATIONS	SBP
Neonates (1-28 days)	120-160	40-60	>60
Infant (1-12 months)	100-120	25-50	70-95
Children (1-8 years)	80-100	15-30	80-110
School Age (8-11 years)	65-110	18-30	97-112
Adolescent (12-15 years)	60-90	12-26	112-128
Adult	60-100	12-18	100-135

Electrical Axis of the Heart

The electrical axis is the sum total of all electrical currents generated by the ventricular myocardium during depolarization. Analysis of the axis may help to determine the location and extent of cardiac injury, such as ventricular hypertrophy, bundle branch block, or changes in the position of the heart in the chest (from, e.g., pregnancy or ascites).
The direction of the QRS complex in leads I and aVF determines the axis quadrant in relation to the heart.



♥ **Clinical Tip:** Extreme right axis deviation is also called indeterminate, "no man's land," and "northwest."

FAST-ED Stroke Score

Item	FAST-ED Score	NIHSS Score Equivalence
Facial Palsy		
Normal or minor paralysis	0	0-1
Partial or complete paralysis	1	2-3
Arm Weakness		
No drift	0	0
Drift or some effort against gravity	1	1-2
No effort against gravity or no movement	2	3-4
Speech Changes		
Absent	0	0
Mild to moderate	1	1
Severe, global aphasia, or mute	2	2-3
Eye Deviation		
Absent	0	0
Partial	1	1
Forced deviation	2	2
Denial/Neglect		
Absent	0	0
Extinction to bilateral simultaneous stimulation in only 1 sensory modality	1	1
Does not recognize own hand or orients only to one side of the body	2	2

Suspected Infection	2 or more SIRS Criteria	Minimum One indicator of Acute Organ Dysfunction
Pneumonia	HR > 90 bpm	Acute Altered Mental Status
UTI	Temp < 96.9 OR > 100.4°F	SBP < 90 mmHg OR MAP < 70 mmHg
Bacteremia	RR > 20 bpm	SBP decrease > 40 mmHg from baseline
Abscess/Cellulitis	$PaCO_2$ < 32 mmHg	BS > 140 mg/dl without hx of diabetes
Abdominal	WBC ≤ 4 OR ≥ 14	Acute Hypoxia/Increase in O_2 requirements
Bone/Joint	Bands > 10%	Arterial hypoxemia (PaO_2/FiO_2 < 300)
Endocarditis		Acute oliguria (< 0.5 mL/kg/hr for 2 hrs)
Meningitis		Creatinine > 2 mg/dl or increase in 0.5 above baseline
		Coagulopathy INR > 1.5, PTT > 60 sec
		Thrombocytopenia Platelets < 100K
		Bilirubin > 2 mg/dl
		Lactate > 2 mmol/L

UNIVERSAL TREATMENT PROTOCOLS

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Patient with signs and symptoms of:

- Shock
- Cardiovascular instability
- Hyperkalemic arrhythmias

AND

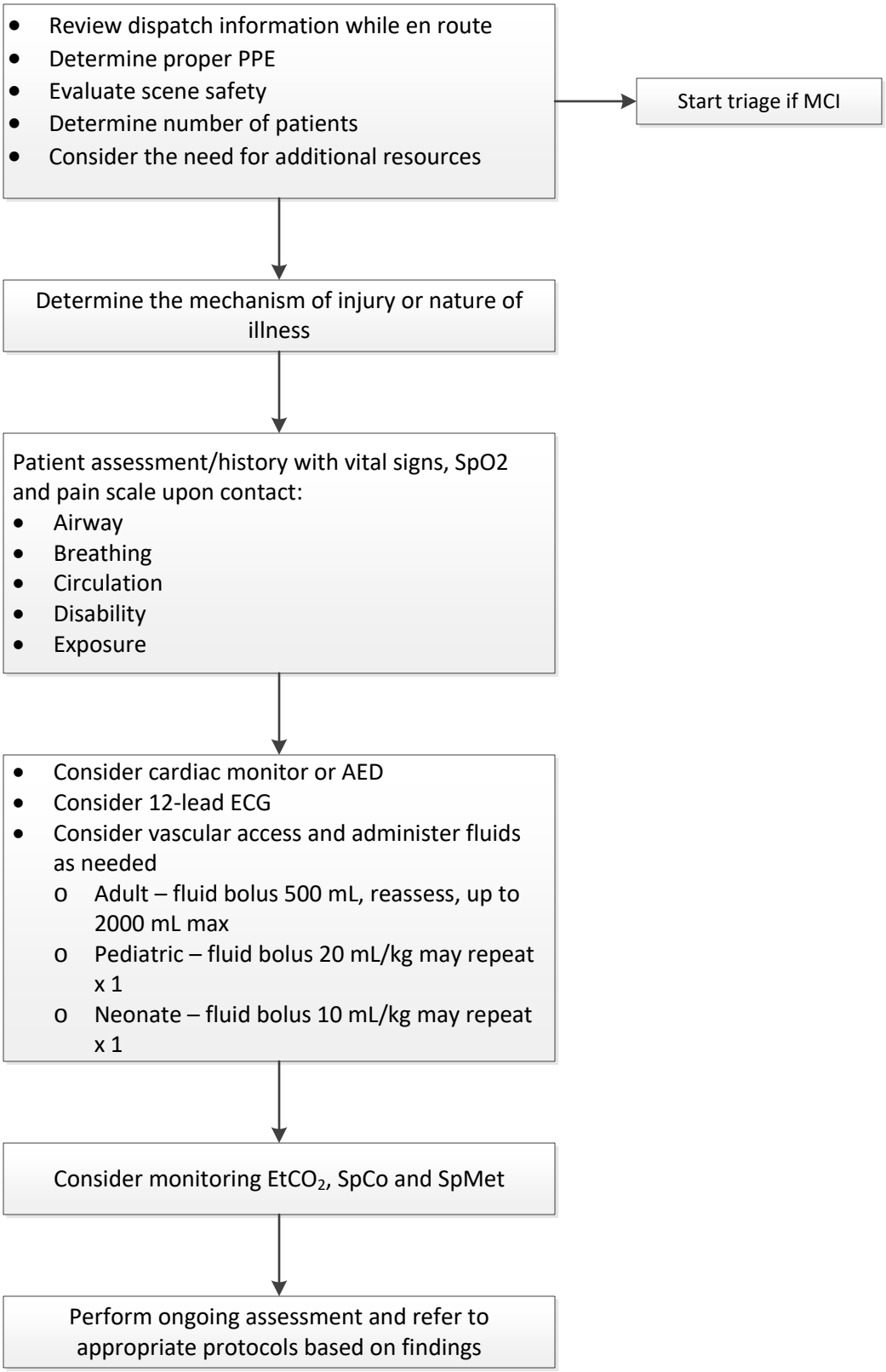
- Have a documented diagnosis of Congenital Adrenal Hyperplasia or another form of adrenal insufficiency.

- Assess oxygenation and administer O_2 as needed
- Cardiac monitor
- Manage airway
- Determine blood glucose level
- Obtain IV or IO access
- Administer either:
  - HYDROCORTISONE SODIUM SUCCINATE
    - 2 mg/kg IV/IO/IM for children
    - 100 mg IV/IO/IM for adolescents and adults
  - **IM route is preferred**

  OR

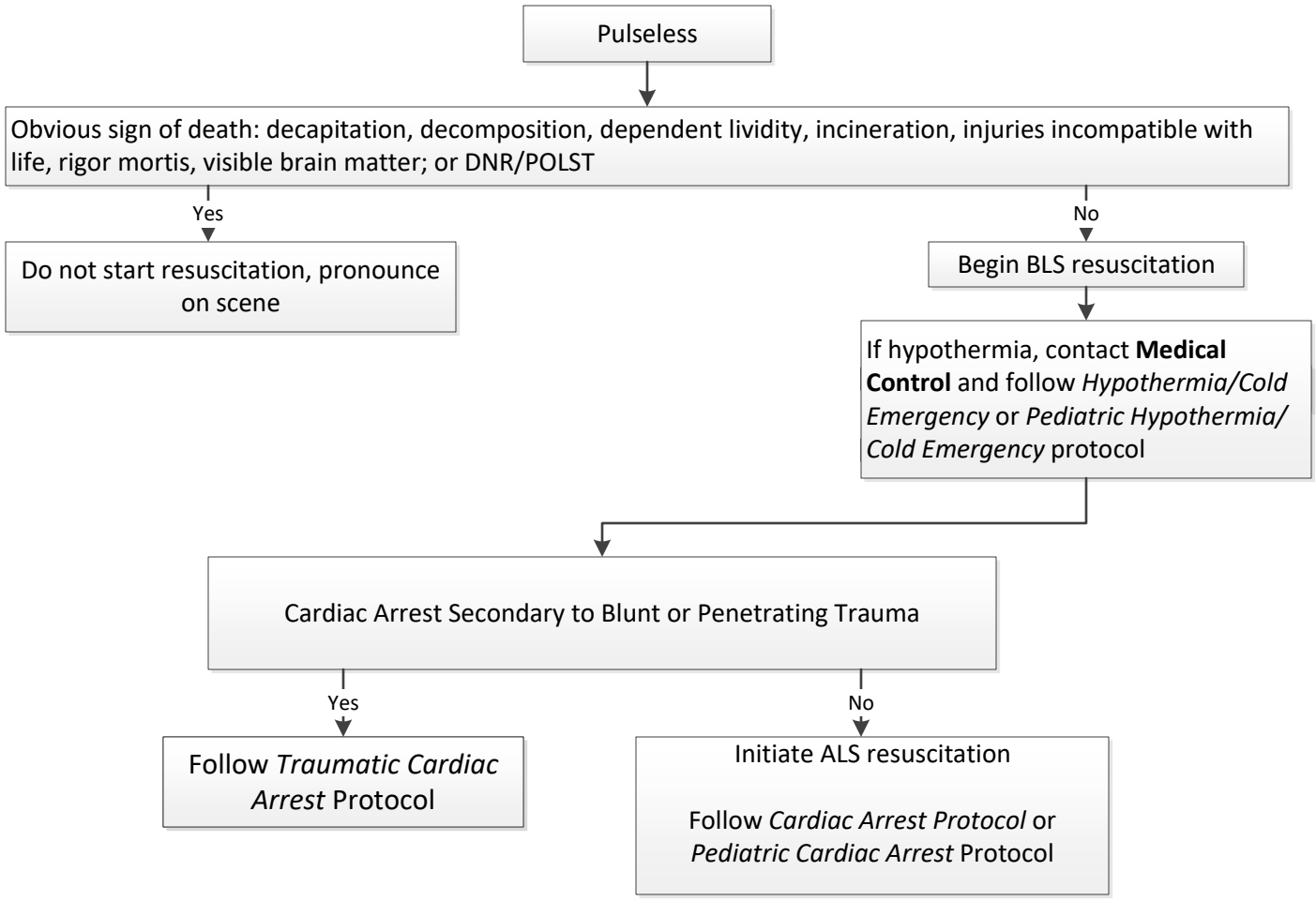
  - METHYLPREDNISOLONE
    - 2 mg/kg IV/IO/IM for pediatrics, max dose 125mg
    - 125 mg IV/IO/IM for adults

General Patient Assessment



Resuscitation/Prehospital Death Determination

Washoe County Regional Protocols



When death has been established:

- If possibility of criminal implications, try to leave patient in position found.
- Secure the body and surrounding area until law enforcement arrives.
- Obvious death as described above does NOT require a cardiac monitor strip.
- All other cases of pronounced death MUST have a cardiac monitor strip. Document time of death, name of physician who pronounced death, and the names of law enforcement personnel who take custody of patient if coroner not available.

Pearls:

- The paramedic may cease resuscitation if initiated prior to arrival and patient shows obvious and accepted signs of death or if resuscitation is initiated prior to arrival and DNR or POLST is presented.
- Arrests resulting from electrical injury; treatments should be early, aggressive and persistent. Resuscitation efforts have high success rates even when resuscitation attempts are prolonged.

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TRAUMA PROTOCOLS

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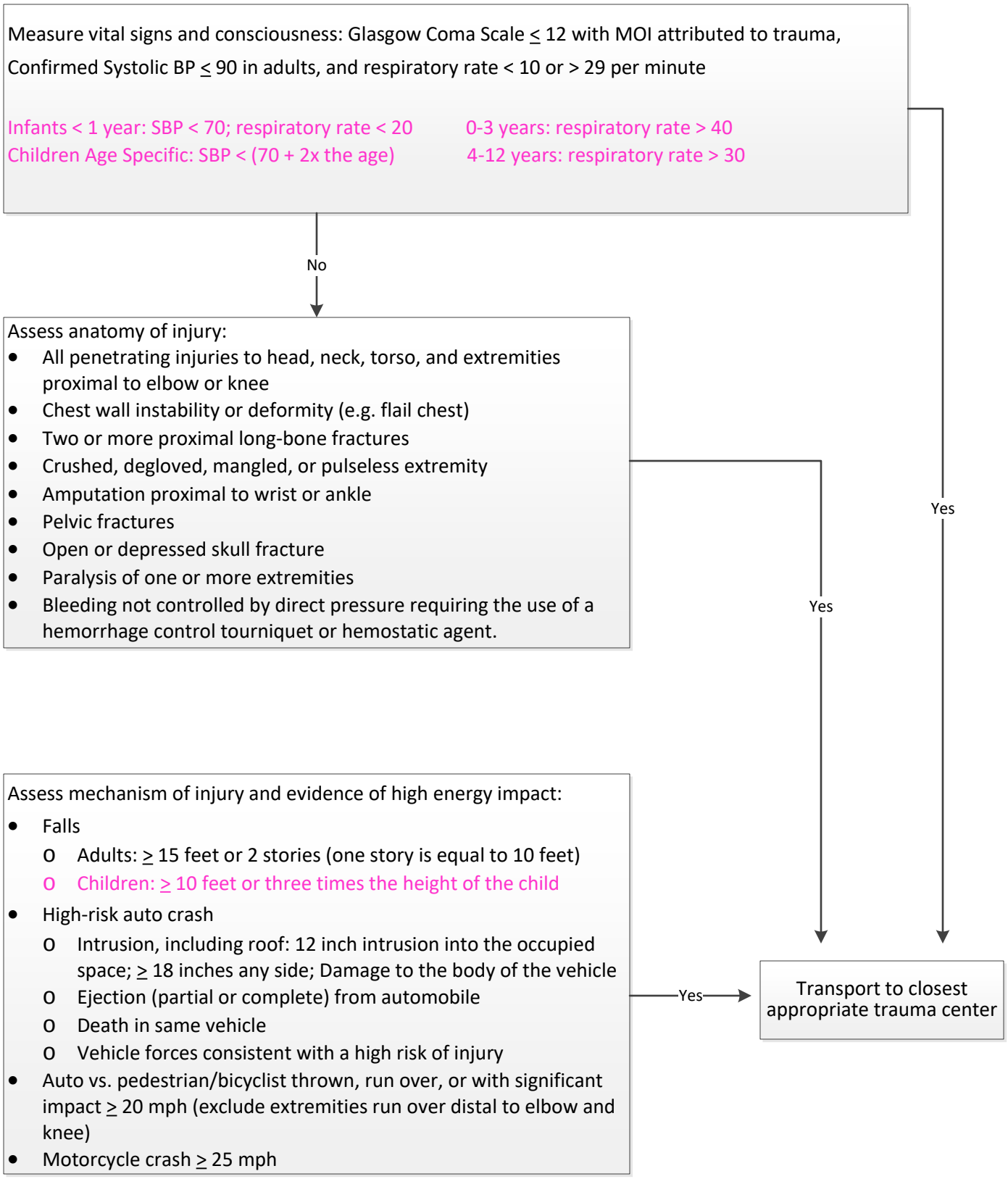
Trauma Criteria and Assessment

Washoe County Regional Protocols

Patient with trauma means a person who has sustained injury and meets the triage criteria used to evaluate the condition of the patient (NAC450B.798). Criteria in Pink specific to Pediatrics.



Consider contacting **Medical Control** for direction:

Older Adults

- Risk of injury/death increases after age 55 years
- Age ≥ 65 with SBP < 100
- Low impact mechanisms (e.g. ground level falls) may result in severe injury

Children

- Should be triaged preferentially to the appropriate pediatric capable trauma center

Anticoagulants and bleeding disorders

- Patients with head injury are at high risk for rapid deterioration

Burns

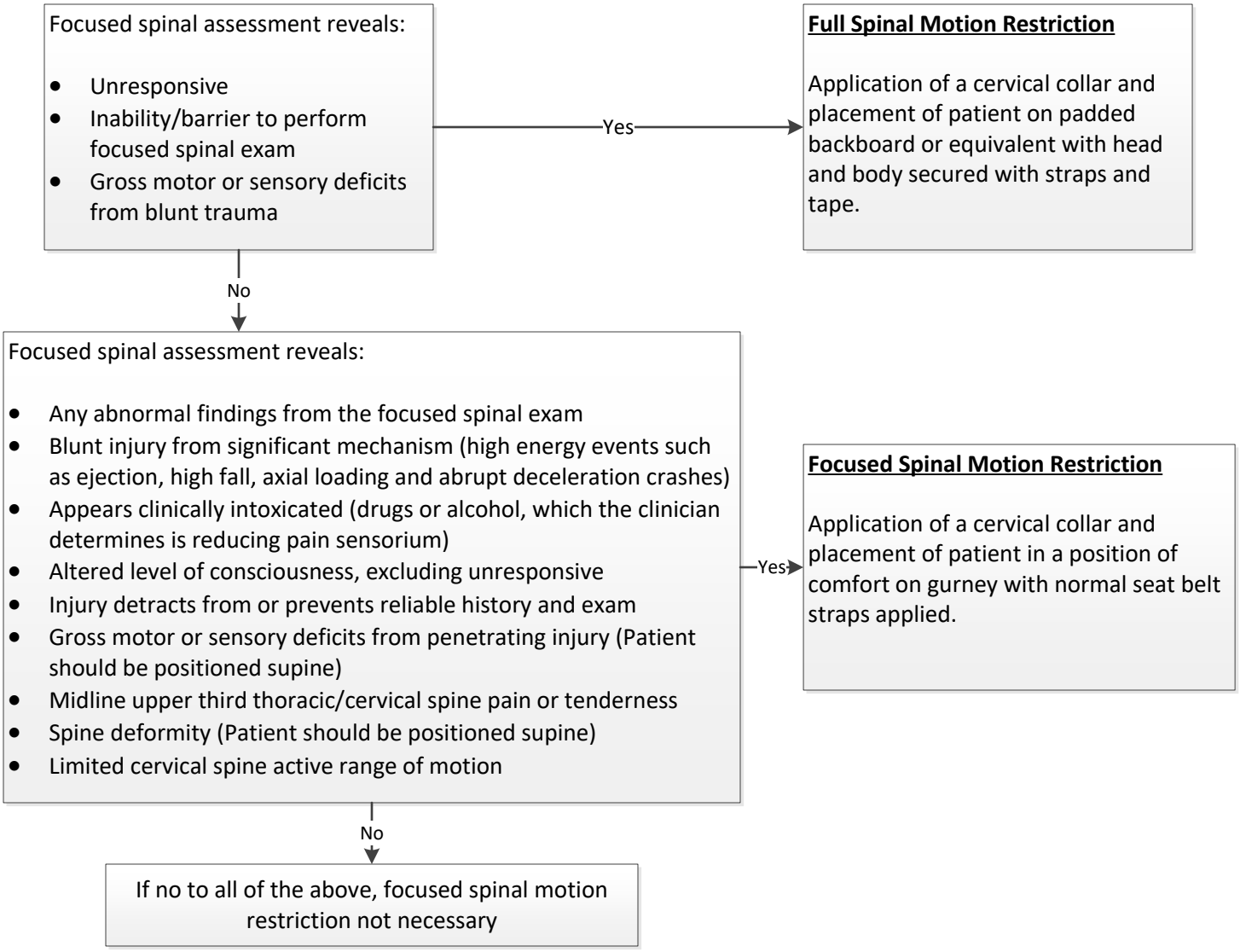
- Without other trauma mechanism: triage to burn facility
- With trauma mechanism: triage to trauma center

Pregnancy > 20 weeks

Spinal Motion Restriction

Conduct a focused spinal exam:

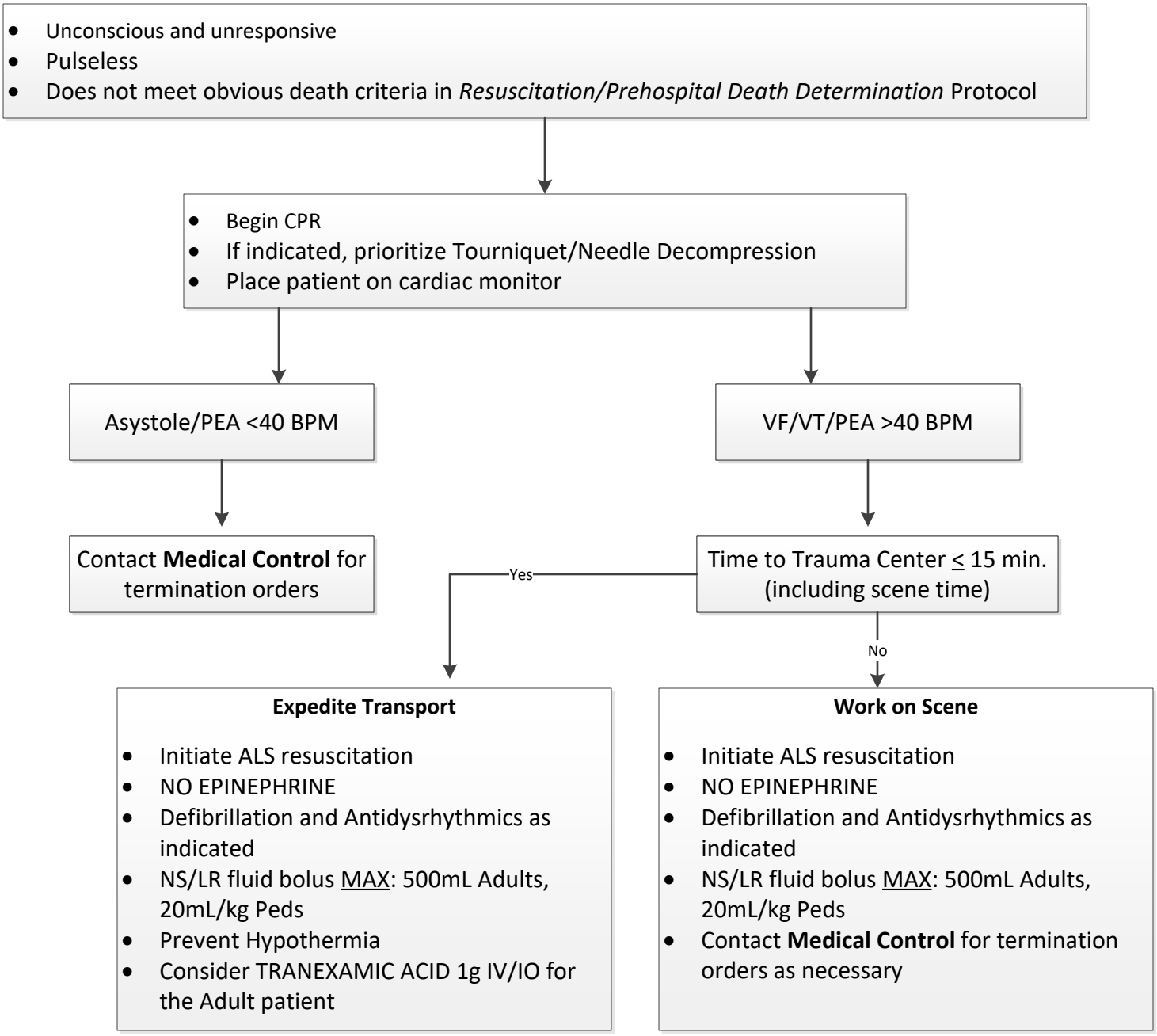
- Can the patient focus on the exam or are they in severe distress from other injuries or emotional stressors? (distracting injury)
- Assess distal CMS/bi-lateral grips/push-pull.
- Palpate the entire spine on the boney processes one at a time from C1 to L5. Patient should not have focal midline tenderness to palpation or obvious deformity.
- Ask the patient to rotate their head 45 degrees from side to side without assistance, which should be pain free.



Pearls:

- Consider modified restriction in any patient with arthritis, cancer, dialysis, kyphosis or other underlying spinal or bone disease or who may have increased risk of spinal compromise.
- Any patient may be motion restricted based on EMS provider discretion.

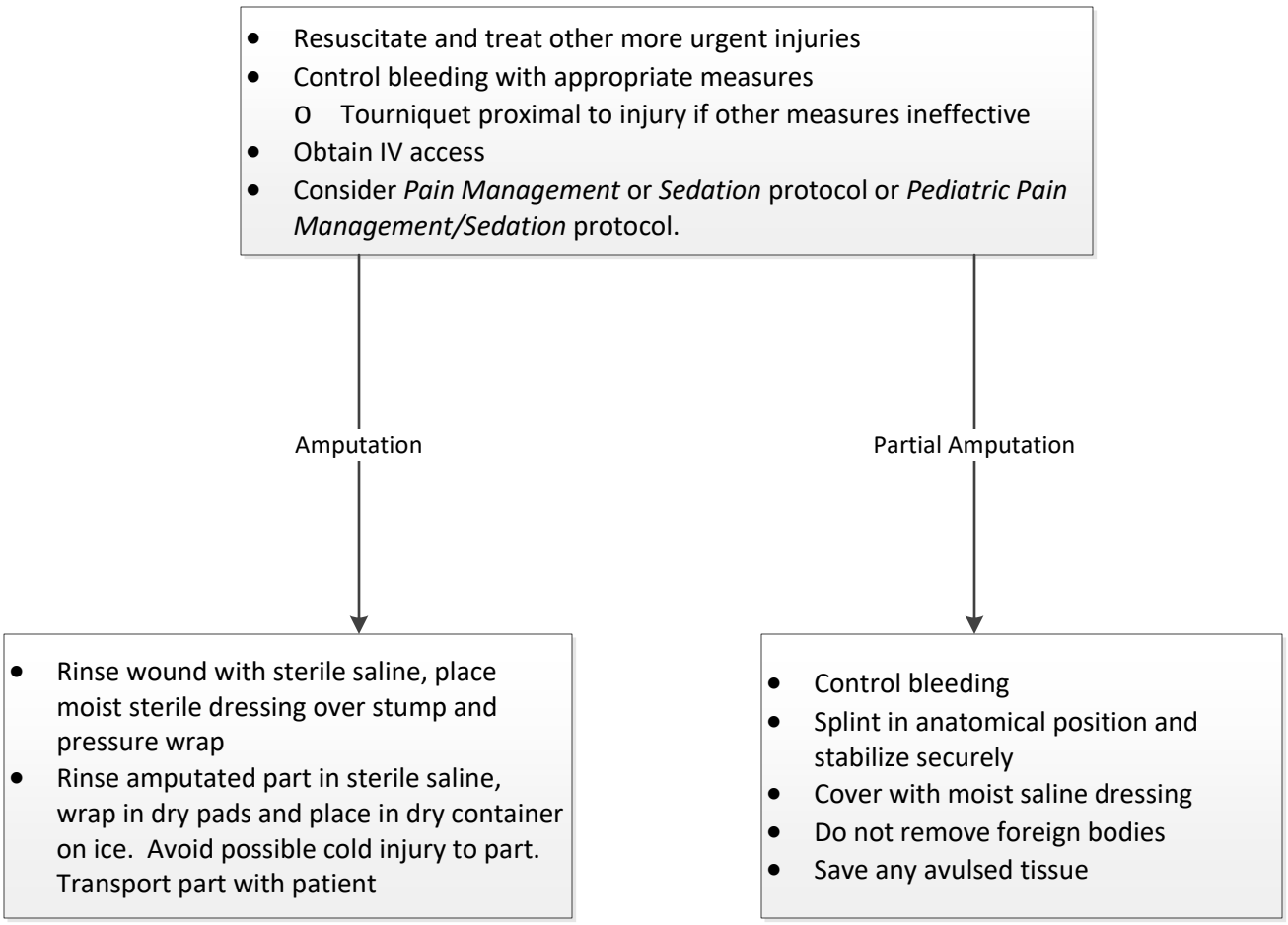
Traumatic Cardiac Arrest



Pearls:

- Consider Mechanism of Injury when prioritizing interventions

Amputation


Resuscitate and treat other more urgent injuries
Control bleeding with appropriate measures
Tourniquet proximal to injury if other measures ineffective
Obtain IV access
Consider Pain Management or Sedation protocol or Pediatric Pain Management/Sedation protocol.
Amputation
Partial Amputation
Rinse wound with sterile saline, place moist sterile dressing over stump and pressure wrap
Rinse amputated part in sterile saline, wrap in dry pads and place in dry container on ice. Avoid possible cold injury to part. Transport part with patient
Control bleeding
Splint in anatomical position and stabilize securely
Cover with moist saline dressing
Do not remove foreign bodies
Save any avulsed tissue

Some patients may bypass the nearest trauma center and be directly transferred to a burn center based on the destination protocol.

Chemical Burns/Hazmat Contamination

- Protect rescuer from contamination
- Remove all clothing and solid chemical which might provide continuing contamination
- Decontaminate patient using running water for 15 minutes if patient is stable
- Assess and treat associated injuries and evaluate for systemic symptoms
- Wrap burned area in clean dry cloth
- Keep patient warm after decontamination
- Contact hospital as soon as possible with type of chemical contamination for consideration of additional decontamination prior to entry into ED

Consider *Pain Management* protocol

Electrical Burn/Lightning

- Protect rescuers from live electric wires
- Separate victim from electrical source when safe for rescuers
- Initiate CPR as needed
  - For victims in cardiac arrest, treatment should be early, aggressive, and persistent
  - Victims with respiratory arrest may require only ventilation and oxygenation to avoid secondary hypoxic cardiac arrest
  - Resuscitation attempts may have high success rates and efforts may be effective even when the interval before the resuscitation attempt is prolonged
- Place patient on cardiac monitor
- Obtain vascular access
- Treat any thermal burns as outlined above
- Assess for other injuries

- Consider *Pain Management* protocol
- Treat dysrhythmias per protocol

Burns

Some patients may bypass the nearest trauma center and be directly transferred to a burn center based on the destination protocol.

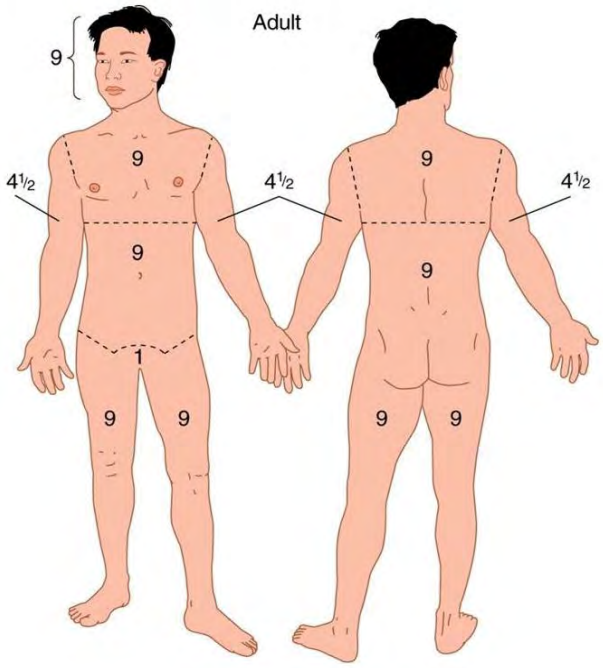
Thermal Burns

- Remove clothing which is smoldering and non-adherent to the patient
- Assess oxygenation and administer Oxygen as needed
- Assess and treat associated trauma/smoke inhalation
- Remove rings, bracelets and other constricting objects
- Determine burn body surface area (BSA)
  - If ≤ 10% body surface area burned, use moist saline dressing for patient comfort
  - If burn is moderate to severe (> 10% BSA), cover with clean, dry dressings
- Obtain vascular access

Administer IV fluids as follows:

- If transport time is greater than 15 minutes administer 500 mL per hour
- If transport time is less than 15 minutes, run IV at wide open rate
- LR is preferred

Consider *Pain Management* protocol



Pearls:

- Consensus Burn Formula:
  Flame, Scald, Chemical – 2ml/kg x %TBSA
  Electrical - 4 mL/kg x TBSA
  - Administer 50% of total fluids in first 8 hours from time of injury
  - Administer 50% of total fluids over next 16 hours
- BSA is calculated for partial thickness and full thickness burns.

Crush Injury

A crush injury is when a patient or part of the patient's body is entrapped or compressed for a time greater than 30 minutes. It may also be applied to a patient who, due to fall or overdose, has had no movement in an extremity for greater than 4 hours.

- Administer fluid bolus
  - 20 mL/kg for adults, followed by maintenance infusion of 500-1500 mL/hour
  - It is recommended a minimum of 500-1000 mL be given prior to releasing the patient or extremity from the compression
- SODIUM BICARBONATE 1 mEq/kg in 1000 mL of NS wide open (consider this part of fluid bolus)
- If Hyperkalemia suspected, see *Hyperkalemia* protocol
- Extremity management
  - Do not use ice packs or elevation of extremities

- Consider *Pain Management* or *Sedation* protocol as needed
- FENTANYL is recommended over MORPHINE due to vasodilatory effects of MORPHINE SULFATE

Pearls:

- Compartment syndrome is usually due to a crush injury and because of prolonged compression or pressure the interstitial pressure within a closed anatomical space exceeds the perfusion pressure. It occurs most commonly in the pelvis and lower extremities, but may also occur in the upper extremities or trunk. Compartment syndrome may result in ischemic swelling, muscle infarction, nerve injury and permanent loss of extremity function.

Less than Lethal Munitions Care

Washoe County Regional Protocols

Less than lethal munitions are discriminate weapons that are explicitly designed and employed to incapacitate personnel while minimizing fatalities and undesired damage to property and the environment. Unlike weapons that permanently destroy targets through blast, fragmentation, or penetration, less than lethal munitions have relatively reversible effects on personnel.

- Any patient who has encountered less than lethal munitions needs to have a full assessment to identify any injuries or medical conditions which would require treatment and should be transported to the Emergency Department for further evaluation and care, unless the patient has the capacity and competence to refuse care and sign an AMA.
- In any patient, who has been involved in an encounter with law enforcement and who experienced a great deal of physical activity and who has been placed in restraints, the provider should consider the possibility of "In Custody Death." The recent use of drugs, alcohol, obesity, or medical history may increase the risk for sudden cardiac arrest.
- Assess and treat with appropriate protocol according to findings and patient signs and symptoms.

Pepper Spray (Oleoresin Capsicum)/ CS Gas (Tear Gas) Exposure Care

- Be aware of cross contamination when treating patients
- Severe complications are possible with the following patients:
  - Elderly
  - Cardiac
  - COPD
  - Asthma
- Flush the affected eye(s) with normal saline.
  - Be careful not to flush into an unaffected eye
- Capsicum exposure can also be neutralized with commercial wipes or spray
- Always wear gloves & eye protection when flushing contaminated patients
- If the patient is experiencing eye pain secondary to pepper spray, apply appropriate ophthalmic anesthetic agent to numb the affected eye(s)

→ Treat respiratory complaints per *Respiratory Distress* Protocol

Taser Dart Care

- Assess the patient for secondary injuries after Taser application
- Energy from a Taser can ignite flammable liquids and gasses
- If the Taser dart has penetrated the eye or other sensitive area such as the face, neck, or groin:
  - Immobilize the dart; cut the wires right above the dart and transport
- To remove the darts in other areas:
  - Pull the skin taut and pull the dart(s) straight out
- Clean the site around the wound
- Advise the patient to beware for signs of infection

Kinetic Impact Munition Care

- The common kinetic impact munitions include bean bag rounds, plastic or wooden projectiles, and rubber sting balls
- All kinetic impact munitions have the potential to cause severe injury/death
- Persons struck by these munitions require a thorough assessment
- Some kinetic munitions contain pepper spray or tear gas- use the same cautions listed for these substances

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ADULT TREATMENT PROTOCOLS

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Acute Aortic Dissection (Suspected)

- OXYGEN: Maintain SpO2 ≥ 94%.
- 12-Lead ECG – If suspected STEMI, refer to *Acute Coronary Syndrome (Suspected)* Protocol.

↓

- Obtain Vascular Access.
- Aspirin is contraindicated in these patients.
- Consider *Pain Management* with **Fentanyl** and/or **Morphine**.
- Refer to *Nausea/Vomiting* Protocol as needed.

↓

- Contact **Medical Control** for possible administration of METOPROLOL 5 mg slow IV.

Treatment Goals:
HR ≤ 60
SBP ≤ 120

Pearls:

- **Presenting Symptoms:** Abrupt onset of severe "ripping" or "tearing" chest/back/abdominal pain that can present with paresthesia or numbness in extremities. Differing bilateral blood pressures, absent/diminished peripheral pulses, or mottling in extremities.
- Patients who present as restless, agitated, and/or in extreme pain should be aggressively managed with opiates.
- 12-Lead ECG should be obtained as soon as reasonably possible.
- If Hypotensive, refer to *Cardiogenic Shock Protocol* and expedite transport.
- Dissection is referred to as the 'great mimicker.'

Acute Coronary Syndrome (Suspected)

Washoe County Regional Protocols

12-lead ECG

- Vascular Access
- Oxygen - Keep $SpO_2 \geq 94\%$
- ASPIRIN – 324 mg PO

NITROGLYCERIN:

- If SBP > 100, 0.4 mg SL; may repeat q 5 min until pain free
- Consider 1 inch of NITROGLYCERIN PASTE if ETA to hospital > 15 minutes

Note: Avoid NITROGLYCERIN if suspected or known use of sildenafil (Viagra) or vardenafil (Levitra) within the previous 24 hours or tadalafil (Cialis) within the previous 48 hours

Consider *Pain Management/Sedation* with FENTANYL and/or MORPHINE

Refer to *Nausea/Vomiting* protocol as needed

If SBP > 140 & HR > 100 in a STEMI patient; contact **Medical Control** for possible administration of METOPROLOL 5 mg slow IV

STEMI Criteria

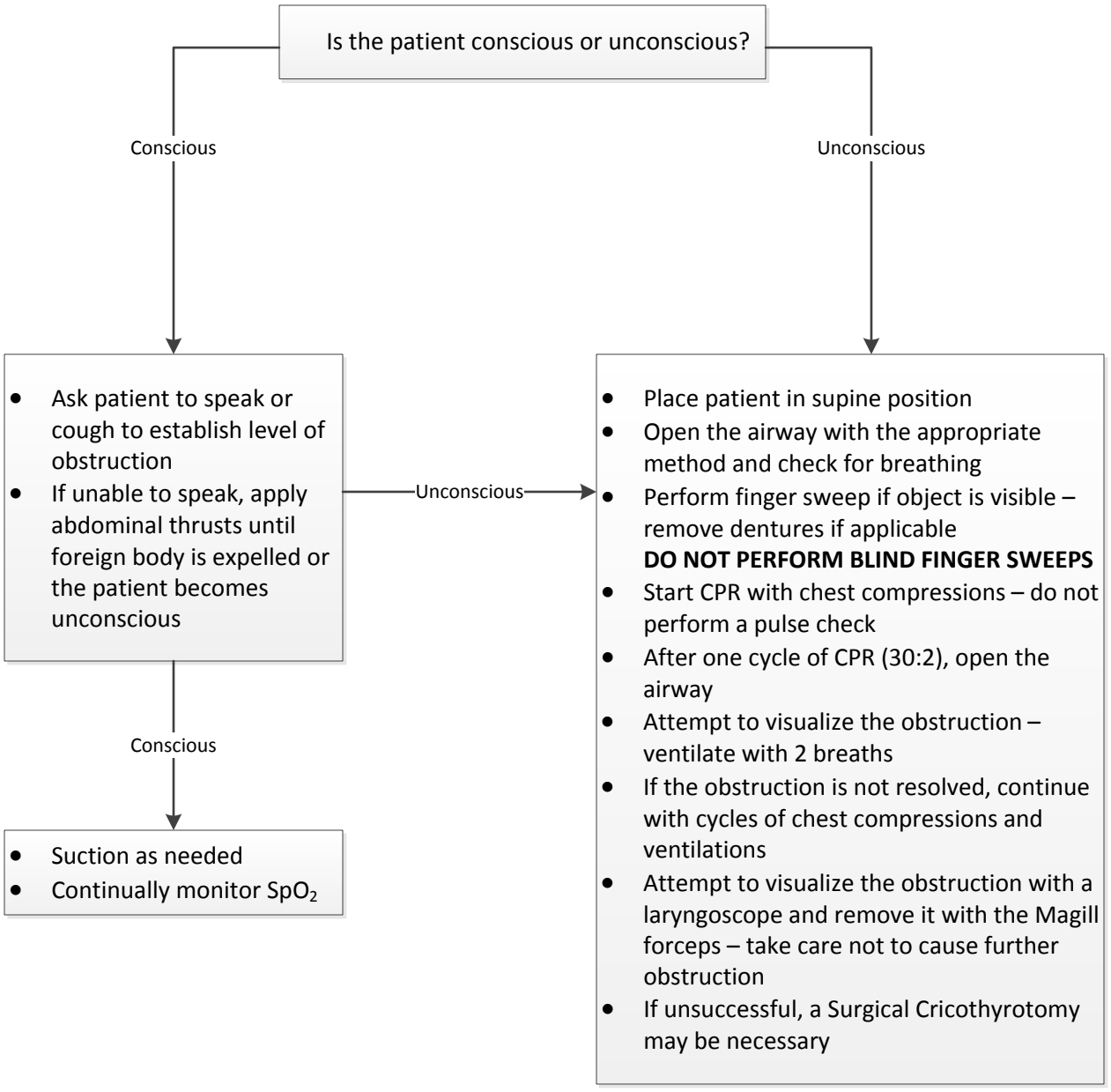
ST segment elevation in two or more contiguous leads;

- ≥ 1mm elevation in leads I, II, III, AVF, AVL, V1, V4, V5, V6
- ≥ 2mm elevation in leads V2, V3

Pearls:

- NITROGLYCERIN and MORPHINE are contraindicated in patients with RVI, consider fluid bolus.
- Diabetic, geriatric and female patients often have an atypical presentation.
- Perform a 12-lead ECG on all patients 35 years of age or older experiencing vague jaw/chest/abdominal discomfort.
- Consider 15-lead ECG or alternate lead placement for inferior MI / Posterior MI, suspected ACS with normal 12-lead, or ST depression in the precordial leads. For a 15-lead, use leads V4 for V4R, V5 for V8, and V6 for V9. Immediately relabel the 15-lead print out to avoid confusion.
- Consider MFE pad placement of pads prior to hospital arrival on STEMI patients.
- If suspected Aortic Dissection, reference *Acute Aortic Dissection (Suspected)* Protocol.

Airway Obstruction



Pearls:

- If the patient presents with trismus and noisy respirations, insert a NPA and attempt to assist ventilations with a BVM.
- Avoid hyperventilation.
- Maintain $EtCO_2$ at 35-45.

Allergy/Anaphylaxis/Dystonia

Anaphylaxis is defined as an acute onset of an illness (over minutes to several hours) involving the skin, mucosal tissue, or both (e.g., generalized hives, pruritus or flushing, swollen lips-tongue-uvula) and respiratory compromise (e.g., dyspnea, wheeze-bronchospasm, stridor, reduced peak expiratory flow, hypoxemia) and/or reduced BP or associated symptoms of end-organ dysfunction (e.g., hypotonia [collapse] syncope, incontinence).

- Assess oxygenation and administer oxygen as needed
- Assess severity of allergic reaction

Allergy/Anaphylaxis

MILD - Swelling, itching, redness, hives

- DIPHENHYDRAMINE 25-50 mg IM/IV/PO, if established

MODERATE - Mild plus wheezing and difficulty swallowing, mild hypotension:

- Obtain IV access; NS fluid bolus
- DIPHENHYDRAMINE 25-50 mg slow IV push
- ALBUTEROL unit dose HHN, as needed
- Consider EPINEPHRINE, 0.3 mg 1:1,000 IM (if not contraindicated) - with rapid progression of signs/symptoms or history of severe allergic reaction
- If reaction is worsening despite treatment, move to *SEVERE*

SEVERE - Impending respiratory failure, severe hypotension

- Secure Airway
- EPINEPHRINE 0.3 mg (0.3 mL) 1:1,000 IM (if not contraindicated)
- DIPHENHYDRAMINE 25-50 mg slow IV push
- METHYLPREDNISOLONE 125 mg IV/IO
- EPINEPHRINE 0.1 mg (1 mL) 1:10,000 IV repeated up to three times followed by 100 mL NS
- Treat signs and symptoms of shock as necessary

Dystonia

- Obtain IV access
- DIPHENHYDRAMINE 25-50 mg IV/IM

Behavioral Emergency

Patient restraint – when patient is a threat to themselves, bystanders or EMS personnel

- Patients may be restrained with soft restraints
- Restraining opposing muscle groups (swimmers position) is most effective; never restrain in prone/hog-tied position
- Assess distal CMS after restraint, every 10 minutes
- Maintain and monitor the oxygenation
- Obtain vascular access as needed
- Apply cardiac monitor as needed – **Required with chemical restraint**
- Document reasons for restraint
- Incarcerated person may be restrained at the discretion of Law Enforcement
  - For handcuffed patients, request Law Enforcement accompaniment

Consider use of a chemical restraint:

- DROPERIDOL 2.5-5 mg slow IV/IO/IM q 5 min; max 10 mg
- HALOPERIDOL 5-10 mg IV/IM q 5-10 min; max 15 mg
- MIDAZOLAM 2-5 mg slow IV/IO/IM/IN q 5 mins titrated to effect; Total dose 10 mg
- KETAMINE 1 mg/kg IV/IO may repeat once after 5 minutes OR 3 mg/kg IM single dose; max dose 300 mg

Pearls:

- Do NOT CO-administer DROPERIDOL and HALOPERIDOL.
- KETAMINE is contraindicated for patients with a history of schizophrenia.
- Use caution when using KETAMINE for suspected alcohol intoxication.
- Strongly consider alternative agents to KETAMINE for patients with a suspected head injury.
- If using KETAMINE, consider MIDAZOLAM to prevent reemergence phenomenon.
- Hostile, angry or unwilling patients who are competent may refuse service.
- Ensure the patient is searched for weapons prior to transport.

Cardiac - Arrest

- Unconscious and unresponsive
- Pulseless
- Does not meet *Resuscitation/Prehospital Death Determination* protocol

↓

- Begin CPR- pulse check/rhythm interpretation every 2 minutes
  - Continue CPR following all pulse checks as indicated by patient condition
- Place patient on cardiac monitor or AED
  - Utilize MFE pads and CPR assist devices
- Manage airway as indicated by patient condition
- Consider reversible causes

VF, pVT, TdP

↓

- Defibrillate
- 2 min CPR prior to medication administration
- Obtain vascular access
- Intubation or insertion of supraglottic airway device
- Utilize $EtCO_2$ as soon as possible

↓

EPINEPHRINE 1.0 mg IV/IO every 3-5 min

- Defibrillate
- 2 min CPR

↓

If VF/pVT

AMIODARONE 300 mg IV/IO, may repeat at 150 mg in 3-5 min, for sustained VF, pVT

<u>OR</u>

LIDOCAINE 1.0-1.5 mg/kg IV/IO, followed by 0.5-0.75 mg/kg IV/IO every 5 min to 3 mg/kg max

If the patient converts to a perfusing rhythm after administration of LIDOCAINE, start LIDOCAINE infusion at 2-4 mg/min IV/IO

If TdP

MAGNESIUM SULFATE 2 gm IV/IO over 5 min

Asystole/PEA

↓

- Obtain vascular access
- Intubation or insertion of supraglottic airway device
- Utilize $EtCO_2$ as soon as possible

↓

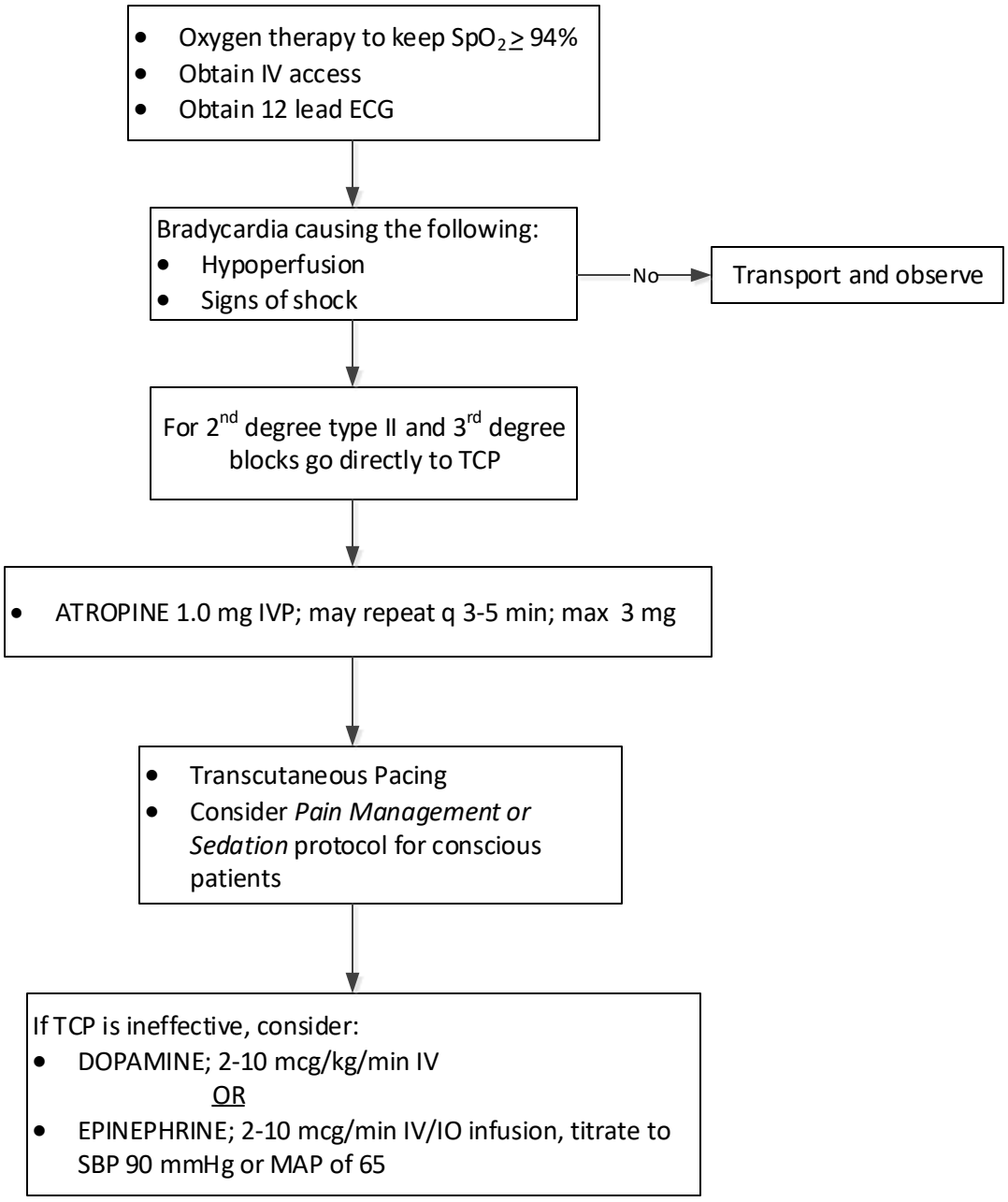
EPINEPHRINE 1.0 mg IV/IO every 3-5 min

- Check pulse if organized rhythm
- Consider consultation of **Medical Control** for termination of efforts
- Minimum of 3 rounds of medication are required prior to contact

Pearls:

- Joule settings for defibrillation are 120J/150J/200J.
- EPINEPHRINE dose via ETT is 2.5 mg 1:1,000, diluted in 10 mL NS.
- LIDOCAINE dose via ETT is 3 mg/kg x 2.
- Routine use of LIDOCAINE is not recommended.
- Prophylactic use of post conversion AMIODARONE is not recommended.
- For sustained TdP post MAGNESIUM SULFATE administration, continue with AMIODARONE as indicated.
- Use caution when administering two or more ventricular antidysrhythmics , as it may have a proarrhythmic effect.

Cardiac - Bradycardia

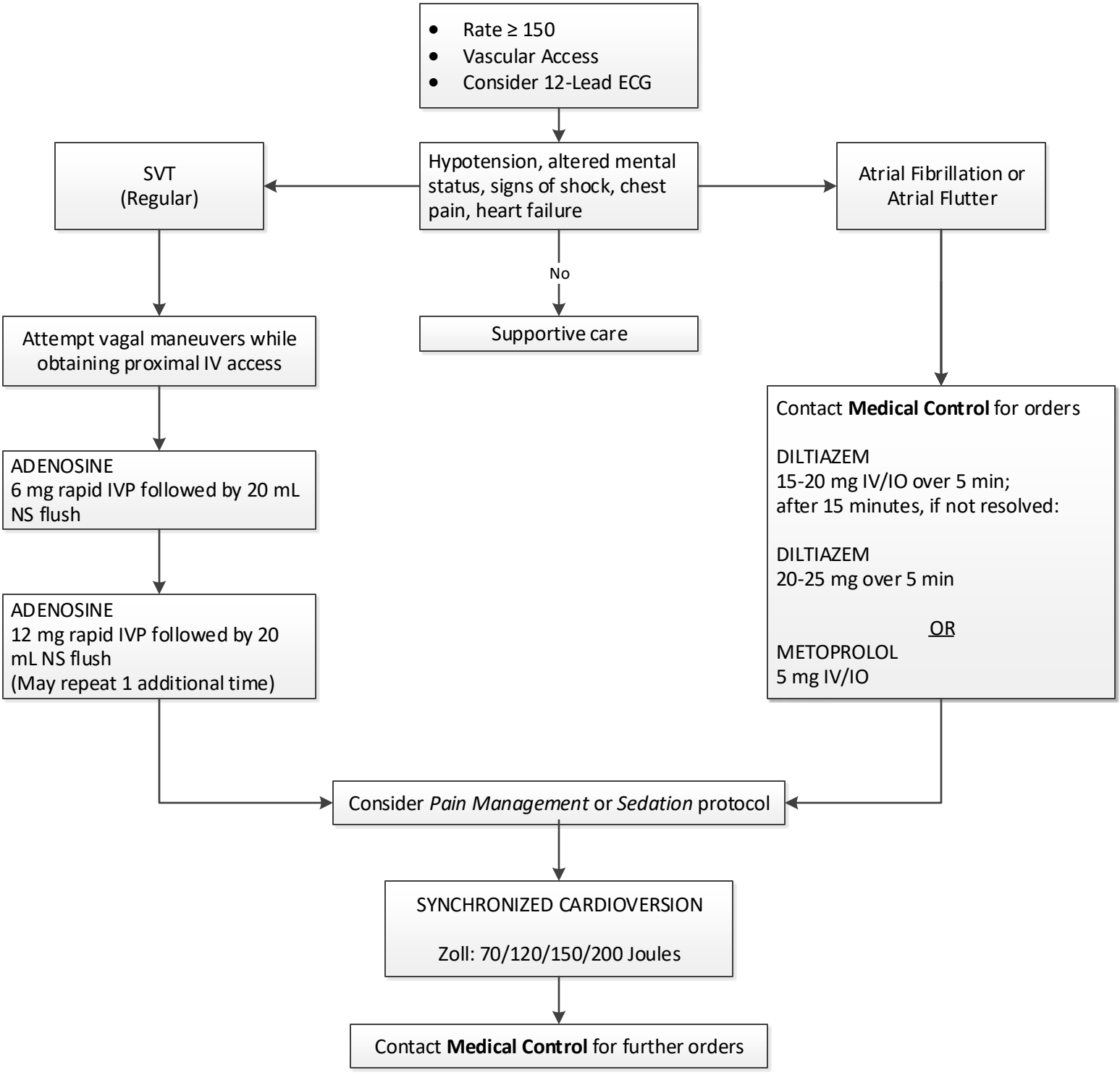


Pearls:

- **M**ean **A**rterial **P**ressure (**MAP**): MAP = ((DBP x 2) + SBP)/ 3.
- ATROPINE administration should not delay TCP in patients with poor perfusion.
- ATROPINE is contraindicated in the presence of acute coronary ischemia or MI.
- Consider calling **Medical Control** for GLUCAGON for patients with suspected beta blocker or calcium channel blocker overdose.
- Consider calling **Medical Control** for CALCIUM CHLORIDE for patients with suspected calcium channel blocker overdose.
- Repeat 12-lead ECG for evolving STEMI.
- Identifying signs and symptoms of poor perfusion caused by bradycardia are paramount.
- Signs and symptoms of bradycardia may be mild and are typically < 50 BPM.
- Do not delay pacing while waiting for IV access.
- Hypoxemia is a common cause of bradycardia; be sure to oxygenate the patient and provide ventilation support as needed.

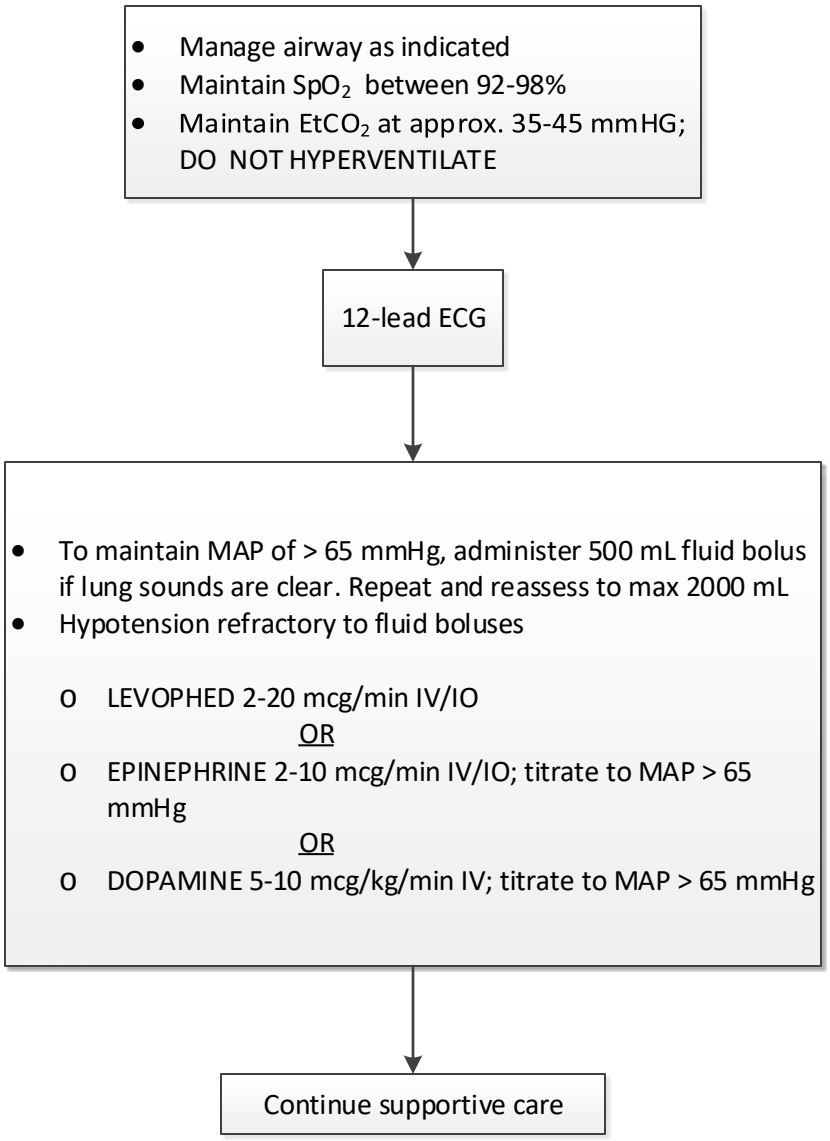
Cardiac - Narrow Complex Tachycardia w/Pulses

Washoe County Regional Protocols



Pearls:

- Should consider DILTIAZEM maintenance infusion 5-15 mg/hr titrated to heart rate when contacting **Medical Control**.
- Determining onset of atrial fibrillation or atrial flutter guides treatment options when contacting **Medical Control**.
- May go directly to cardioversion at any time if severely symptomatic or patient deteriorating.

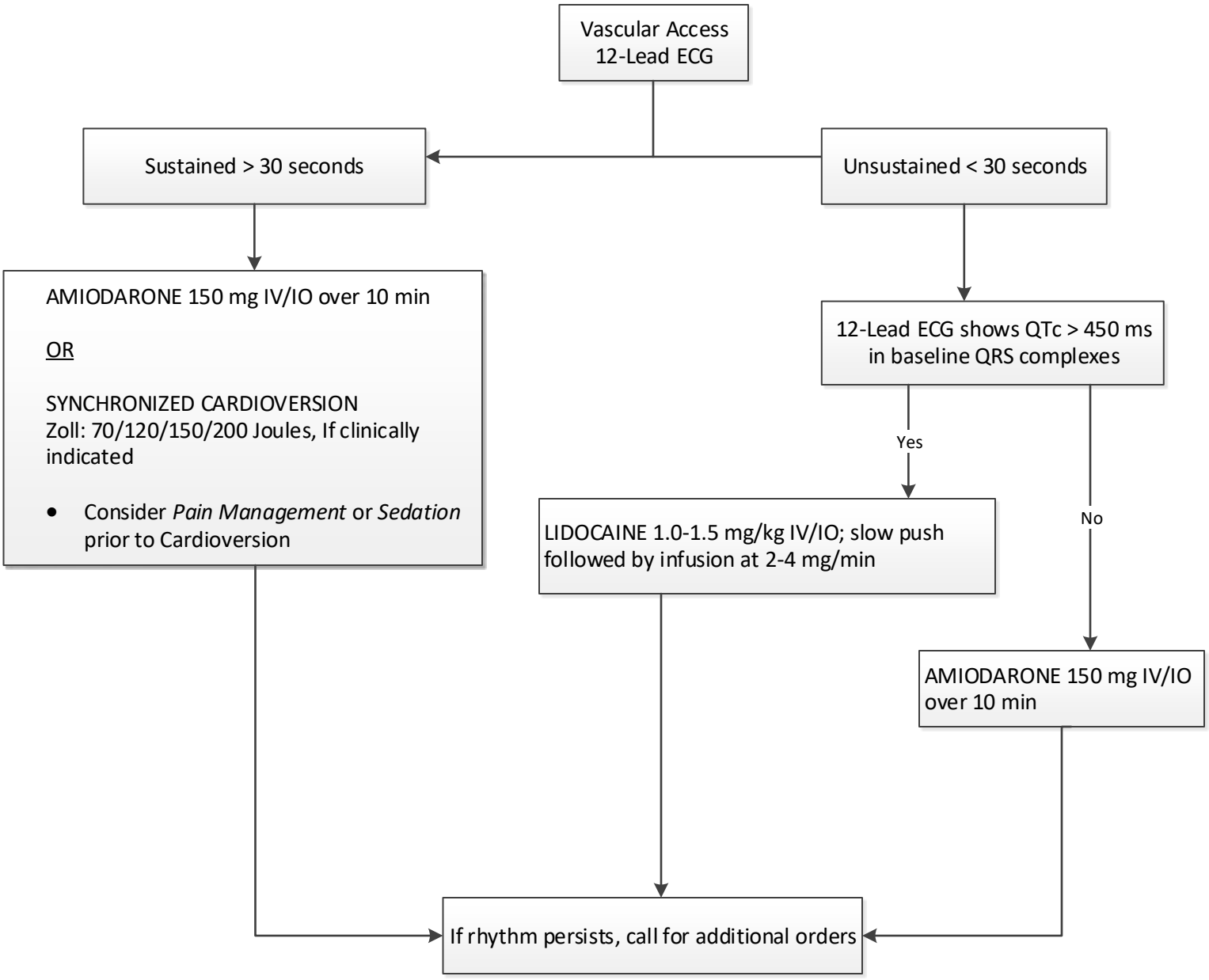


Pearls:

- **M**ean **A**rterial **P**ressure (**MAP**): MAP = ((DBP x 2) + SBP)/ 3.
- Do not cool post traumatic arrest or pregnant patients.
- Initial $EtCO_2$ may be elevated immediately post resuscitation but will normalize.
- If ROSC in previously hypothermic patient (core temp < 93°F or 34°C), refer to *Hypothermia/Cold Emergency* protocol.
- Use caution in treating immediate post arrest arrhythmias, as they may resolve spontaneously.
- All post arrest patients, excluding trauma, should be transported to nearest PCI capable facility.

Cardiac - Wide Complex Tachycardia with Pulses

Washoe County Regional Protocols



Pearls:

- If patient is hemodynamically unstable, consider Cardioversion as primary treatment.
- For Torsades de Pointes, 2g MAGNESIUM SULFATE diluted in NS IV/IO, over 5 min.
- Consider ADENOSINE if regular, monomorphic, and undifferentiated.
- If cardioversion is successful prior to AMIODARONE administration with continued ventricular ectopy, consider AMIODARONE 150 mg IV/IO over 10 minutes.
- If suspected SVT with aberrancy, see *Narrow Complex Tachycardia* protocol.
- It is recommended not to mix antidysrhythmic medications during the course of patient treatment.
- Unsustained WCT can be considered frequent runs or salvos of WCT.

Childbirth/Labor/Obstetrical Emergency

Normal Presentation

- Puncture amniotic sac, if not already broken
- Deliver and support the head
- Suction mouth, then nose; if meconium present, repeat several times
- Deliver upper shoulder, then lower shoulder
- Deliver remainder of the baby
- Clamp and cut umbilical cord
- If multiple births, repeat steps
- Deliver placenta

Breech Presentation

- Position patient on elbows and knees with hips elevated
- Support body of baby during delivery of head
- If head does not deliver but body is out, insert gloved hand into vagina and form a 'V' to protects baby's airway from vaginal wall

Cord Presentation

- Position patient in position of comfort with pelvis elevated
- Wrap cord and keep it moist
- Insert gloved hand to lift baby off cord; obtain and document cord pulse

Limb Presentation

- Position patient in position of comfort with pelvis elevated

Nuchal Presentation

- Use palm of one hand to push against the motion of the infant and use the fingers of the other hand to unloop the cord from around the neck
- If you are unable to slip the cord around the head, clamp the cord in two places and gently cut the cord between the clamps
- Continue delivery

Uncontrolled Postpartum Hemorrhage

- Administer 500 mL NS; repeat as needed not to exceed 2000 mL
- Fundal massage
- OXYTOCIN IV infusion 20 units in 1000 mL NS; Give 10 units (500 mL) over 10-20 minutes, then maintenance infusion 2.5 units (125 mL) per hour

Pearls:

- Document all times (delivery, contraction duration and frequency).
- Some bleeding is normal; copious amounts of blood or free bleeding is abnormal.
- Record APGAR at **one** and **five** minutes after birth as a measure of overall cardiopulmonary and neurologic function.

Hyperglycemia/Hypoglycemia

- Establish baseline level of consciousness
- Manage the airway and breathing as indicated by the patient's condition
- Consider possible reversible causes prior to placement of an advanced airway
- Consider cardiac monitor and 12-Lead ECG

If BGL is < 60 mg/dl:

- Consider ORAL GLUCOSE if the patient is alert/ able to protect their own airway
- Establish IV access as applicable
- 12.5-25 gm DEXTROSE D50% IV/IO, reassess/ repeat as needed

  AND/OR
- 125 mL DEXTROSE D10% IV/IO, reassess/ repeat as needed
- Titrate to achieve blood glucose of ≥ 60 mg/dl and/or level of consciousness
- Consider THIAMINE 100 mg slow IV/IM for chronic alcoholism/malnutrition
- If unable to obtain an IV, administer GLUCAGON 1 mg IM
- If GLUCAGON is ineffective, establish an IO
  - Administer 125 mL DEXTROSE D10% IO, reassess/repeat as needed

    OR
  - Administer 12.5-25 gm DEXTROSE D50% IO, reassess/repeat as needed
- Reassess BGL after each intervention as necessary

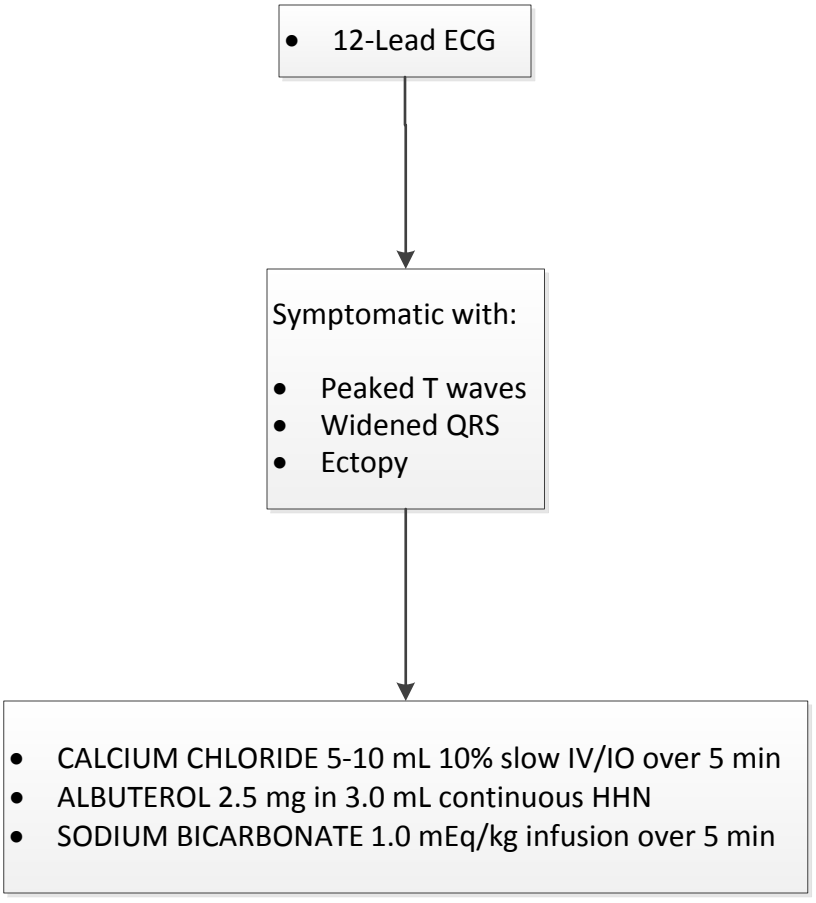
If BGL is > 250 mg/dl

- Consider Fluid bolus up to 20 mL/kg, reassess
- Consider monitoring $EtCO_2$

Pearls:

- Consider DKA or Hyperglycemic Hyperosmolar Syndrome on the patient that is a known person with diabetes and had a recent illness or injury.
- Lactated Ringers is the preferred fluid for hyperglycemic patients when DKA is suspected.

Hyperkalemia (Suspected)



Pearls:

- CALCIUM CHLORIDE is contraindicated in patients with suspected digitalis toxicity.
- Patients predisposed to hyperkalemia may include *Crush Injury*, chronic renal failure, and TCA overdoses.
- Hyperkalemia is defined as potassium level higher than 5.5 mmol/l.
- Potassium of 5.5 - < 6.0 mEq/L – Tall tented T waves.
- Potassium of 6.0 - < 6.5 mEq/L – Increasing PR and QT intervals.
- Potassium of 6.5 - < 7.0 mEq/L – Flattening of P waves and ST segments.
- Potassium of 7.0 - < 7.5 mEq/L – Widened QRS complexes.
- Potassium of 7.5 - < 8.0 mEq/L – Deepening S waves and merging of S and T waves.
- Potassium of 8.0 - < 10.0 mEq/L – Sinewave shaped complexes and idioventricular rhythm.
- Potassium of $\geq$ 10 mEq/L - PEA often sine wave in appearance, VF, VT and Asystole.

Hyperthermia/Heat Emergency

Heat Exhaustion

- Body temperature up to 104°F/40°C
- Minor CNS changes, weakness, dizziness, fainting
- Nausea, headache, dilated pupils, no appetite
- Skin clammy, pale and moist
- Muscle cramps/pain

Heat Stroke

- Body temperature 104°F/40°C or greater
- Altered mental status or loss of consciousness
- Convulsions, seizures
- Tachycardia, hypotension
- Skin (hot, red, dry)
- Severe vomiting or diarrhea

- Remove patient from hot environment and remove clothing
- Begin active cooling of patient with appropriate measures
- Consider cardiac monitor and attempt to obtain body temperature
- Consider vascular access

Treat signs and symptoms of shock as necessary

Treat seizures per the *Seizure* protocol

Pearls:

- Heat exhaustion can rapidly progress to heat stroke if untreated.
- Heat stroke requires very aggressive cooling.
- Active cooling includes application of cold packs (not directly on skin), fanning, air conditioner or air movement.
- Intense shivering may occur as patient is cooled, discontinue aggressive cooling methods.
- Sweating generally disappears as body temperatures rise over 104°F/40°C.
- Wet sheets without good airflow may increase body temperature.
- Patients predisposed to heat emergencies include:
  - Elderly or pediatric
  - Alcohol or drug use
  - Antidepressant, antipsychotics and antiepileptic medications
  - Diuretics, beta blockers or antihistamines

Hypothermia/Cold Emergency

Remove wet clothing and protect from environment

Localized cold injury

- Monitor and reassess
- General wound care
- DO NOT rub skin to warm
- DO NOT allow refreezing

Systemic hypothermia

- Monitor temperature
- Maintain supine position
- Avoid rough movement and excess activity
- Active warming measures
- Vascular access
- Cardiac monitor
- Consider warm NS bolus 500 mL IV/IO; repeat to effect SBP > 90 max 2L
- Monitor and reassess

Transport all severely hypothermic patients regardless of response to treatments. Follow appropriate protocols for other treatment/ transport decisions.

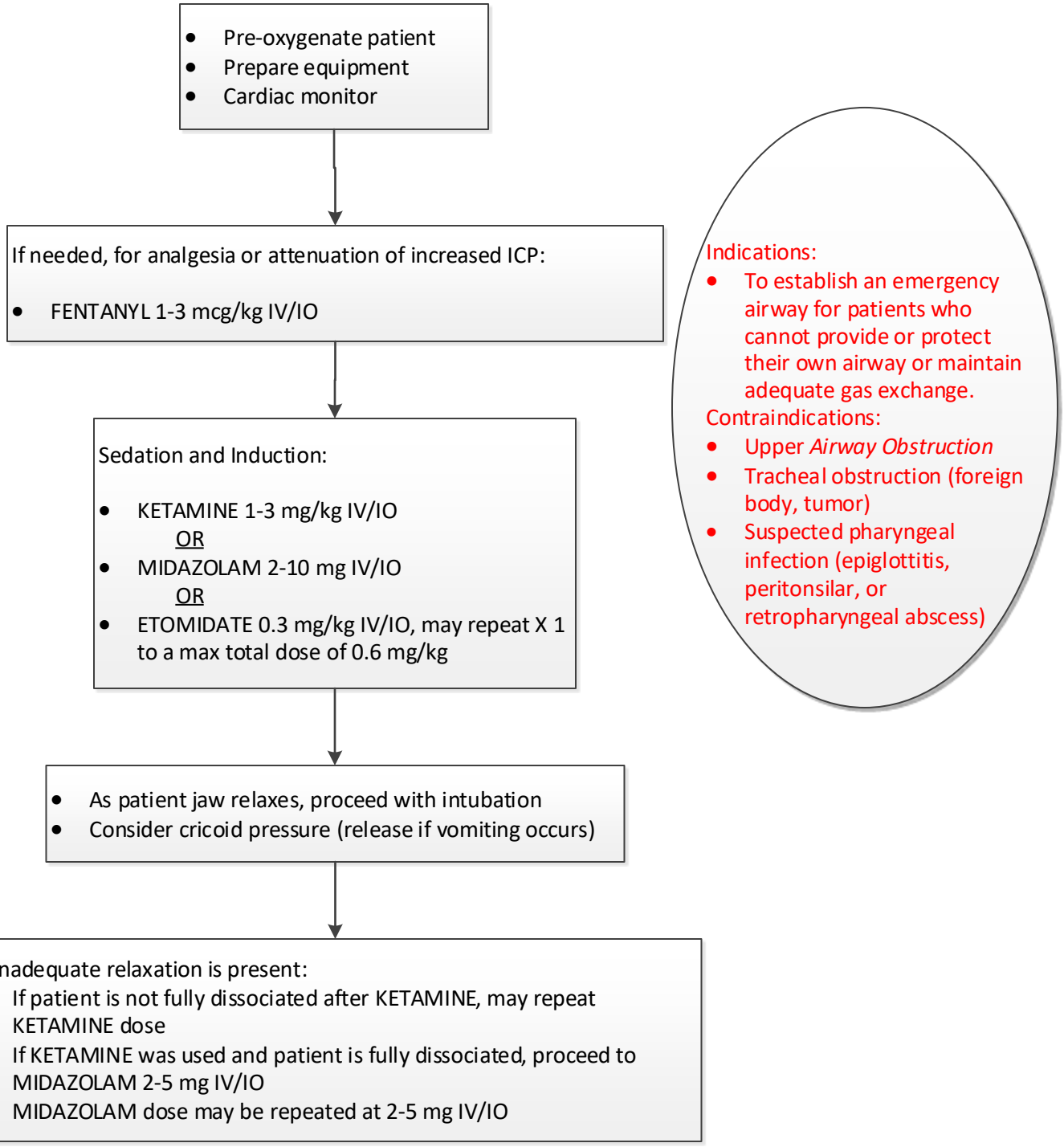
Patient with pulse	
Core Temperature	Treatment
93.2^{O}F – 96.8^{O}F	Passive re-warming and active external re-warming
86^{O}F – 93.2^{O}F	Passive re-warming and active external re-warming to trunk areas only

Patient without a pulse	
Start CPR, defibrillate once if indicated	
Core Temperature	Treatment
< 86^{O}F	CPR, withhold IV medications, limit to one shock for VF/VT/Torsades
> 86^{O}F	CPR, give IV medications at longer intervals, repeat defibrillation for VF/VT/Torsades, passive re-warming and active external re-warming to trunk areas only

Pearls:

- Extremes of age are more prone to cold emergencies.
- If temperature is unknown, treat the patient based on suspected temperature.
- For the severely hypothermic patient, perform procedures gently and monitor cardiac rhythm closely.
- Active warming includes hot packs that can be used on the armpit and groin; care should be taken not to place the packs directly on the skin.
- If available, core temperature is preferred.

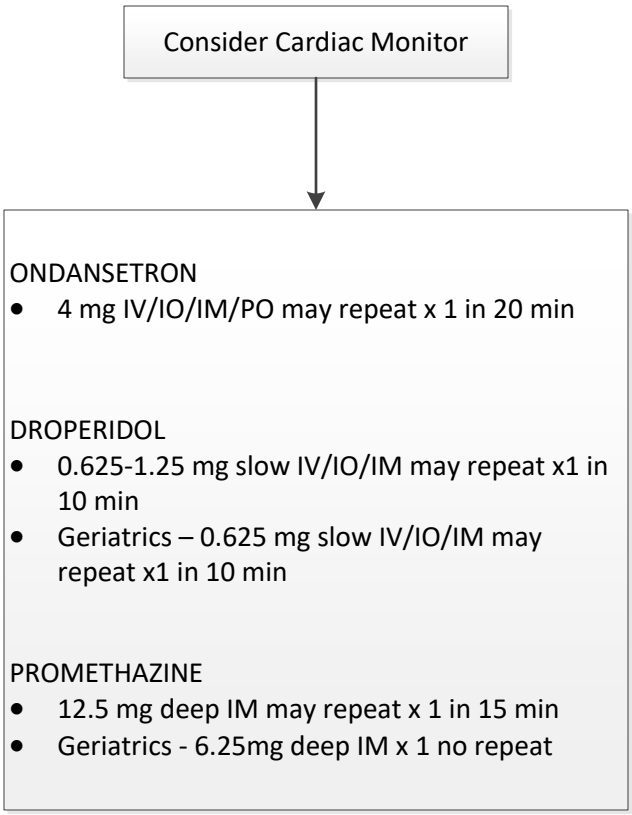
Medication Assisted Intubation



Pearls:

- Pharmacological agents are used to assist the provider in performing intubation in patients with high intubation difficulty due to excessive gag reflex. In these instances, protecting the airway is a potentially life-saving maneuver. These patients may include: Isolated *Head Trauma*, *CVA/Stroke*, *Multisystem Trauma*, *Overdose*, Status Epilepticus, *Acute Pulmonary Edema*, *Respiratory Failure*, *Severe Burns*, or based on anticipated clinical course.
- This should only be used when other airway control methods are ineffective or contraindicated.
- If using KETAMINE, consider MIDAZOLAM to prevent reemergence phenomenon.
- Reserve ETOMIDATE for non-septic, non-pediatric patients, and/or for those with suspected head injury.

Nausea/Vomiting



Pearls:

- Consider cardiac origin and perform a 12-Lead ECG.
- Avoid DROPERIDOL for patients presenting with suspected MI, ACS, or uncorrected hypotension
- Do NOT co-administer DROPERIDOL and PROMETHAZINE
- Use antiemetics with caution in patients with a known history of prolonged QT interval. In general, prolonged QT is defined as a QTc > 450 ms.

Overdose/Poisoning

Poison Control - (800) 222-1222 OR (775) 982-4129

- Determine cause of overdose/poisoning, treat as appropriate
- Cardiac Monitor

Carbon monoxide (CO)

- Place patient on CO monitor, do not rely on pulse oximeter readings
- If patient's SpCO is:
  - 0 – 5 % - Considered normal for non-smokers. When > 3% with symptoms, consider high flow oxygen and recommend transport. If asymptomatic, no further medical evaluation necessary of SpCO. Counsel patients on signs and symptoms to watch for, offer transport to ED, if refused, complete AMA.
  - 5 – 10 % - Considered normal for smokers, abnormal for non-smokers. If symptoms are present, consider high flow oxygen and recommend transport to ED.
  - 10 – 15 % - Abnormal in any patient. Assess for symptoms, consider high flow oxygen and recommend transport to ED.
  - > 15 % - Significantly abnormal in any patient. Administer high flow oxygen and recommend transport to ED.
  - > 30 % - Consider transport/referral to hyperbaric facility (consider referral to hyperbaric facility if > 25% for patients with ALOC or pregnant).
- If patient has altered LOC, neurological impairment, or > 25% SpCO, treat with 100% O_2 and transport to nearest appropriate facility
- Continue supportive therapies as needed

Opiates

- Titrate NALOXONE to restore adequate respirations
  - 0.5 - 2 mg IV/IO/IM/IN may repeat to max total dose of 10 mg

Tricyclic Anti-Depressants

For patients with any of the following:
- Dysrhythmias or QRS of $\geq$ 120 ms
- Hypotension
- Seizure
- Cardiac Arrest

- Administer SODIUM BICARBONATE 1.0 mEq/kg IV immediately call for orders for additional dose
- If patient is intubated, ventilate patient to maintain $EtCO_2$ level of 28-30 mmHg

Organophosphate Poisoning (Insecticide)

- ATROPINE 1-2 mg every 3-5 minutes until cessation of secretions

Agents:

- ACETAMINOPHEN: Initially normal or N/V. Tachypnea and AMS may occur later. Renal dysfunction, liver failure and/or cerebral edema may manifest.
- **Beta blocker overdose**: call for possible administration of GLUCAGON.
- **Calcium channel blocker**: call for possible administration of CALCIUM CHLORIDE and/or GLUCAGON.
- Depressants: Decreased HR, BP, temp and RR.
- Anticholinergic: Increased HR, increased temperature, dilated pupils and AMS changes.
- Insecticides: May include S/S of organophosphate poisoning.
- Solvents: N/V, cough, AMS.
- Stimulants: Increased HR, BP, temperature, dilated pupils, seizures, and possible violence.
- TCA: Decreased mental status, dysrhythmias, seizures, hypotension, coma, death.

Poison Control - (800) 222-1222 OR (775) 982-4129

Cyanide Exposure

For known cyanide poisoning in the absence of exposure to smoke, refer to the cyanide antidote parameters contained within the *Smoke Inhalation* protocol

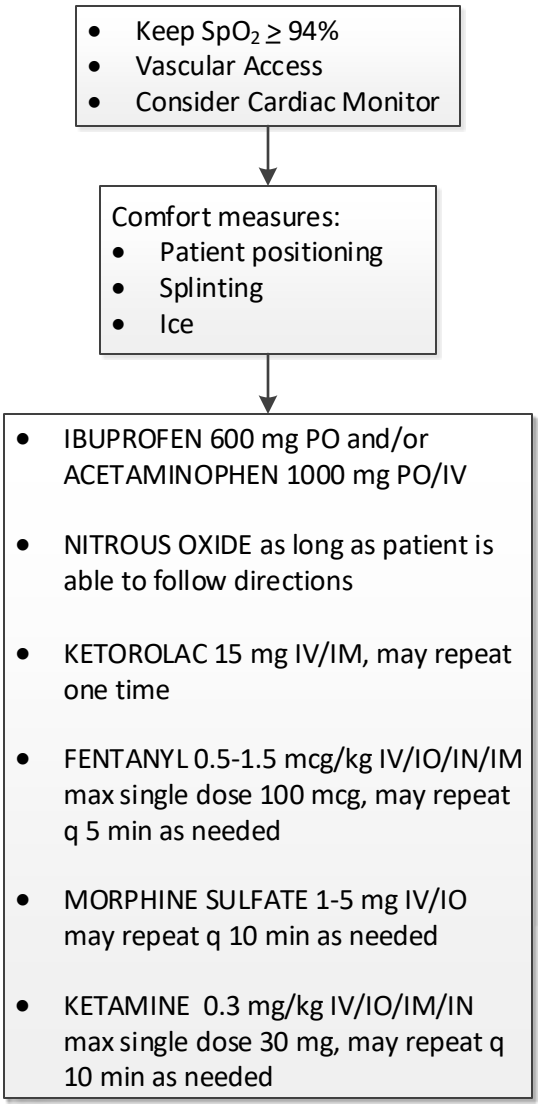
Pearls:

- Powdered HYDROXOCOBALAMIN will be reconstituted with 200 cc 0.9% NS or lactated ringers. Repeatedly invert for 60 seconds PRIOR TO administration. Do Not Shake.
- CALCIUM CHLORIDE is contraindicated in patients with suspected digitalis toxicity.
- If patient is suspected to have narcotic overdose/hypoglycemia, administer NALOXONE/GLUCOSE prior to BIAD device/ intubation.
- Consider a second line if possible for administration and avoidance of possible medication incompatibilities.
- For suspected ingestion, consider NG tube placement.
- Cyanide toxicity should be suspected for any patient being treated for Carbon Monoxide toxicity from smoke inhalation. Conscious patients with symptoms will require **Medical Control** contact prior to administration.
- Overdose or toxin patients with significant ingestion/exposure should be closely monitored and aggressively treated. Do not hesitate to contact **Medical Control** if needed.
- In the case of cyanide poisoning, altered mental status may be profound. Profound altered mental status can be defined as a deficit that includes disorientation, bewilderment and difficulty following commands.

Pain Management

Washoe County Regional Protocols

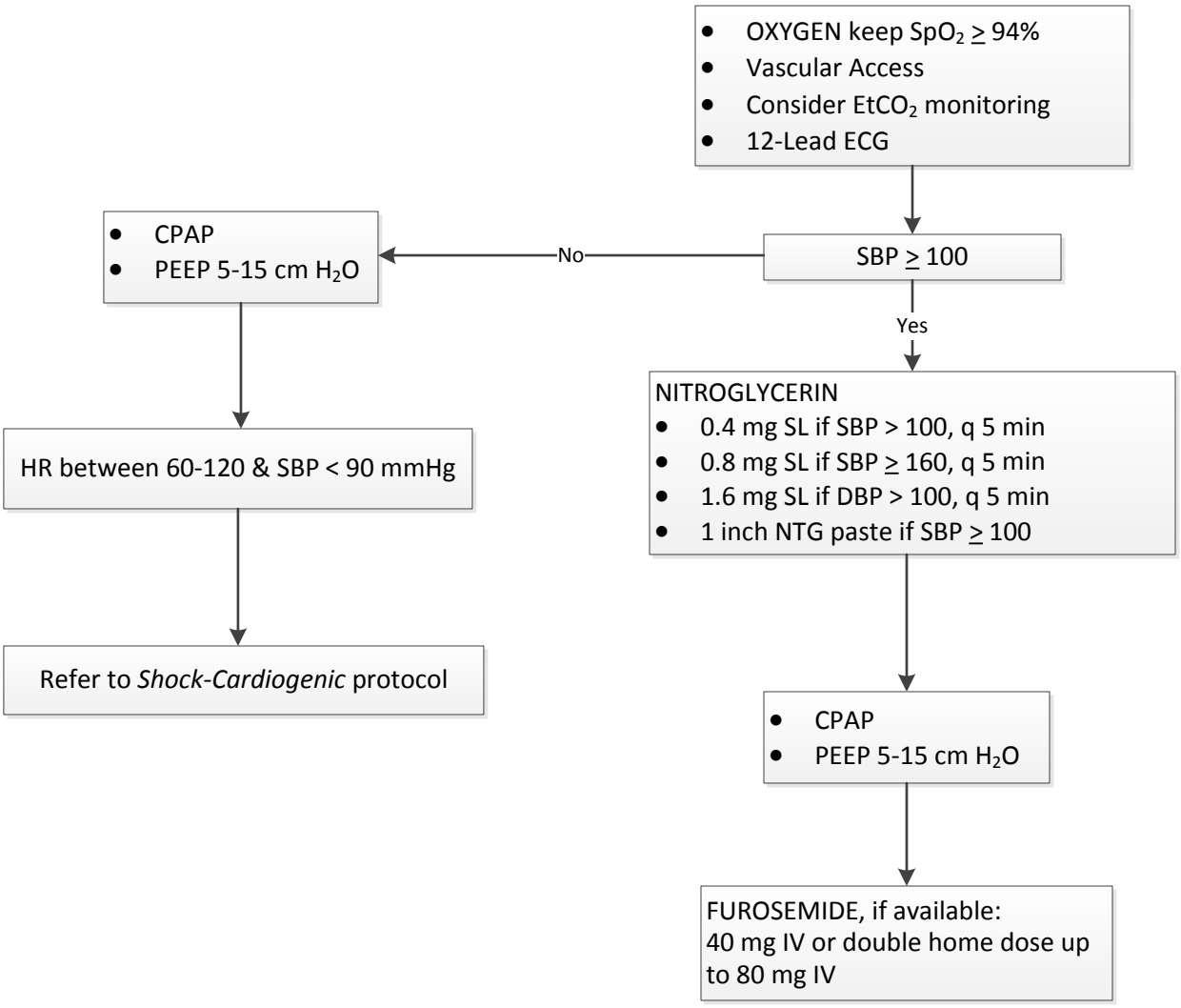
Assess and document patient's condition and vital signs before and after treatment (at minimum every 15 minutes). Pain should be assessed using a combination of physiologic indicators, including but not limited to, 1-10 pain scale and Richmond Agitation & Sedation Scale.



Pearls:

- KETAMINE is inadvisable in those with evidence of head trauma, traumatic mechanism with high likelihood of head trauma or patients with potential acute intracranial pathology otherwise (intracranial hemorrhage, CVA).
- Consider KETAMINE if patient is hypotensive.
- KETOROLAC is contraindicated in patients with kidney or liver disease, head injury, Hx of or recent internal bleeding (bleeding disorder or ulcers), taking blood thinners, recent surgery or is a surgical candidate, is or may be pregnant, or breastfeeding. Do not administer to elderly patients (over 65 years of age).
- Strongly consider alternative agents to KETAMINE for patients with a suspected head injury.
- Consider prophylactic ONDANSETRON use when administering pain medication.
- When administering pain medications to patients with a higher potential for adverse reaction (elderly, intoxicated, opiates or depressants already on board, etc.) use caution and consider the need for a lower starting dose to achieve the desired effect.
- Ophthalmic anesthetics may be used for ocular injuries, 1-2 drops, as needed.

Pulmonary Edema



Pearls:

- Avoid administering NITROGLYCERIN to any patient who is currently using phosphodiesterase inhibitors.
- Consider NITROGLYCERIN PASTE for subsequent doses after placing CPAP mask (i.e. do not remove mask to administer SL doses).
- Allow patient to dangle legs, if possible.

Respiratory Distress

Washoe County Regional Protocols

- Cardiac monitor
- Consider 12-lead ECG
- SpO_2 and $EtCO_2$ monitoring

Asthma/reactive airway disease

- ALBUTEROL 2.5 mg in 3.0 mL HHN; repeat until improvement
- DUONEB 2nd & 3rd HHN **additional HHNs use ALBUTEROL
- Consider CPAP

- Impending Respiratory Failure:
- EPINEPHRINE
  - 0.3 – 0.5 mg (0.3 – 0.5 mL) IM 1:1,000
  - 0.1 mg IV 1:10,000 repeat as needed, max 0.3 mg
- METHYLPREDNISOLONE 125 mg IV/IO
- MAGNESIUM SULFATE 2 gm IV over 20 min

Chronic lung disease with deterioration

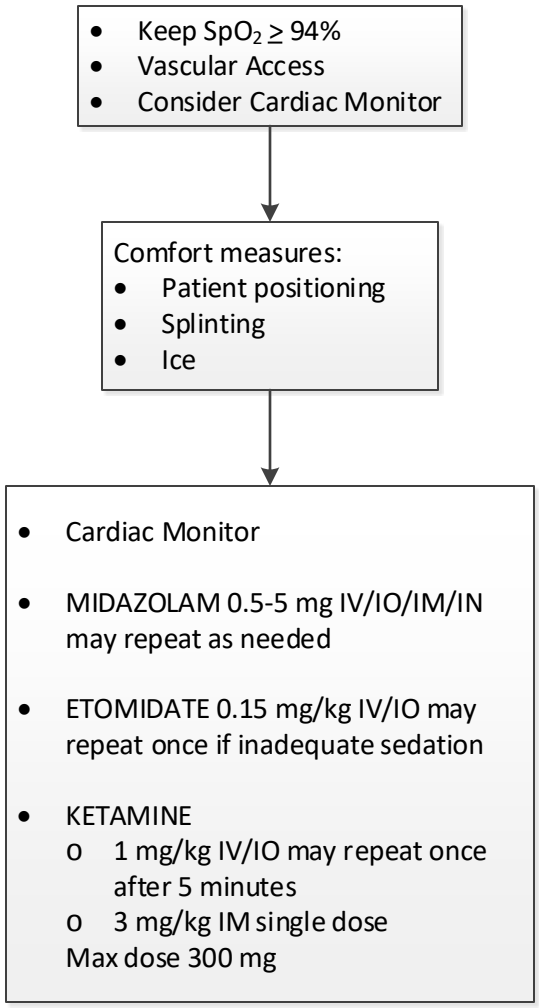
- ALBUTEROL 2.5 mg in 3.0 mL HHN; repeat until improvement
- DUONEB 2nd & 3rd HHN **additional HHNs use ALBUTEROL
- Consider CPAP
- METHYLPREDNISOLONE 125 mg IV/IO

Pearls:

- Duoneb equivalent can be achieved by combining 0.5 mg IPRATROPRIUM in 2.5 mg ALBUTEROL.
- Signs of impending respiratory failure include: altered mental status, inability to maintain respiratory effort, cyanosis.
- If patient > 45 years or previous cardiac history, consider contacting **Medical Control.**

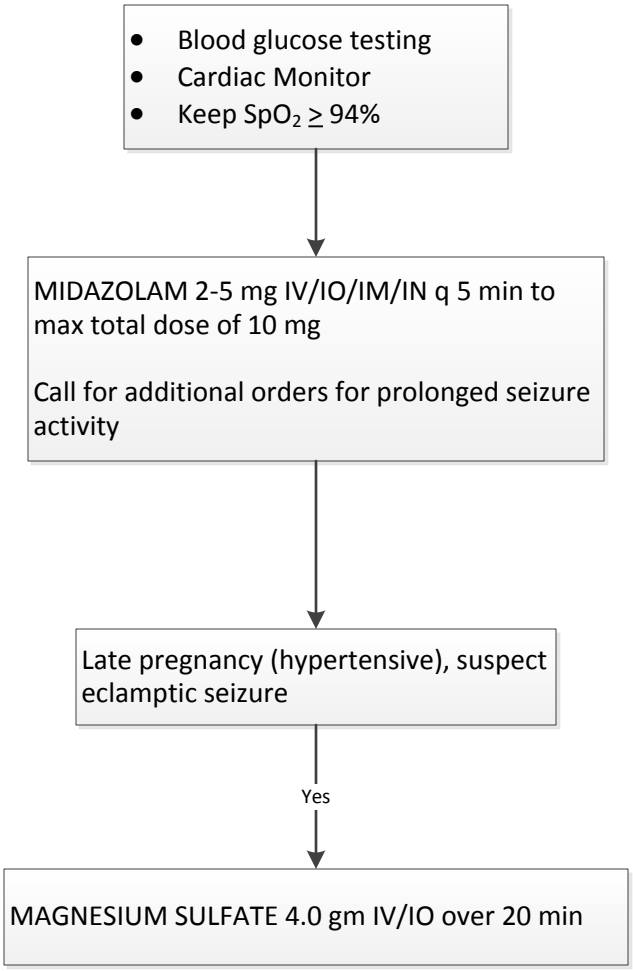
Sedation

Assess and document patient's condition and vital signs before and after treatment (at minimum every 15 minutes). Pain should be assessed using a combination of physiologic indicators, including but not limited to, 1-10 pain scale and Richmond Agitation & Sedation Scale.



Pearls:

- KETAMINE is inadvisable in those with evidence of head trauma, traumatic mechanism with high likelihood of head trauma or patients with potential acute intracranial pathology otherwise (intracranial hemorrhage, CVA).
- Consider KETAMINE if patient is hypotensive.
- Strongly consider alternative agents to KETAMINE for patients with a suspected head injury.
- When administering sedation medications to patients with a higher potential for adverse reaction (elderly, intoxicated, opiates or depressants already on board, etc.) use caution and consider the need for a lower starting dose to achieve the desired effect.



Pearls:

- **Eclamptic seizure/ob patients** showing signs of Magnesium Sulfate toxicity (respiratory depression, hypotension or bradycardia):
  - Consider administering 5 mL 10% Calcium Chloride slow IV/IO push over 5 minutes.
- Benzodiazepines are effective in terminating seizures; do not delay IM/IN administration while initiating an IV.
- Status epilepticus is defined as two or more seizures successively without an intervening lucid period, or a seizure lasting over five minutes.
- Consider $EtCO_2$ monitoring.

Sepsis

Suspect Sepsis if suspected infection and 2 or more of the following:

- Temperature > 100.4°F or < 96.8°F
- Respiratory rate > 20
- Heart rate > 90

Suspect Severe Sepsis if one of the following in addition to the above:

- Acute Hypoglycemia or Hyperglycemia
- Systolic BP < 90 mmHg or Mean Arterial Pressure (MAP) < 65 mmHg
- $EtCO_2$ < 25 mmHg

- Keep $SpO_2 \geq 94\%$
- Vascular access-Large bore IV preferred, obtain two if possible
- Cardiac Monitor
- Consider $EtCO_2$ monitoring
- Obtain Blood Glucose Level
- Follow Advanced Airway Management as indicated by patient's condition
- Place patient supine and elevate legs if possible
- Assess lung sounds
  - If clear, administer 30 mL/kg fluid bolus to max of 3000 mL
  - Reassess lung sounds after each 500 mL given
  - LR is preferred

If unable to maintain SBP > 90 mmHg or MAP > 65 mmHg, following fluid administration:

LEVOPHED 2-20 mcg/min IV/IO infusion titrate to MAP > 65 mmHg

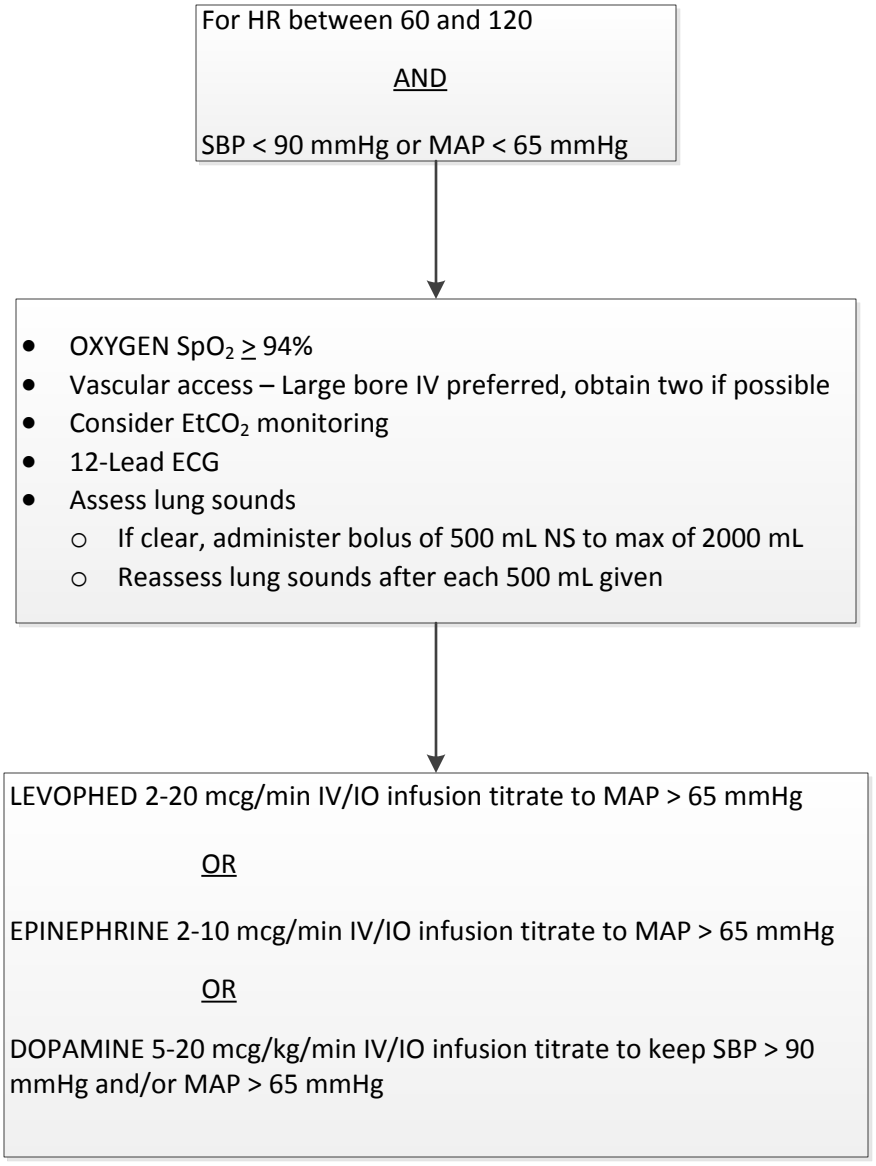
OR

EPINEPHRINE Infusion 2-10 mcg/min IV/IO infusion; titrate to keep SBP > 90 mmHg

- Blood pressure assessed every 5 min while titrating EPINEPHRINE infusion to maintain MAP > 65 mmHg or systolic blood pressure of > 90 mmHg
- Monitor ECG continuously

Pearls:

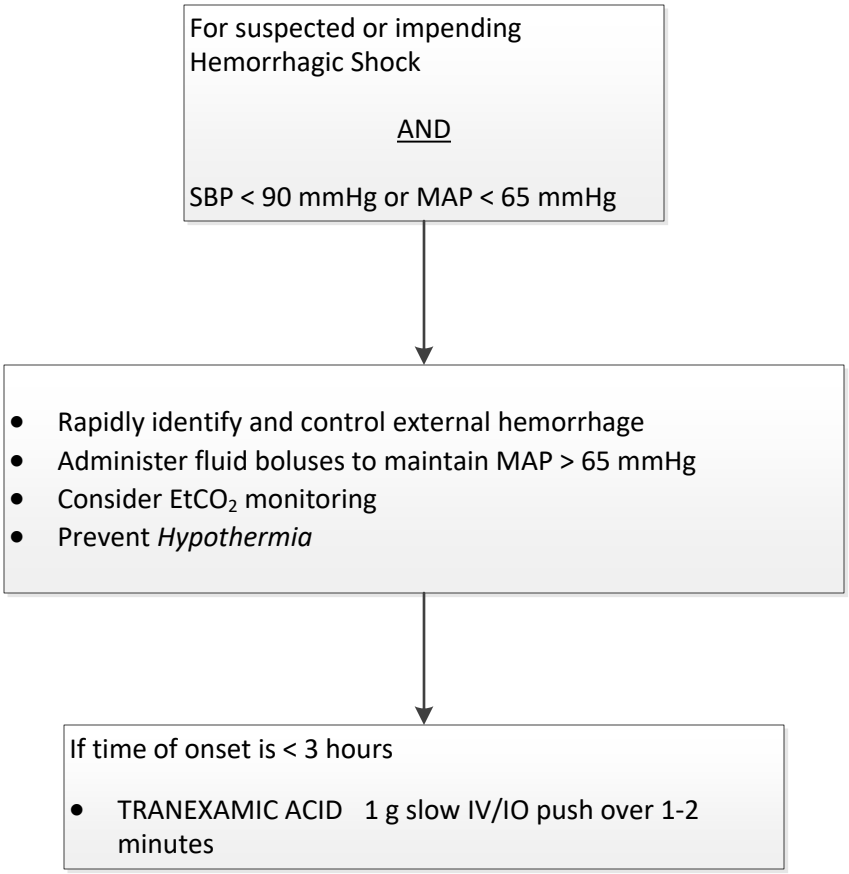
- Hypotension can be defined as a SBP of < 90 mmHg or MAP < 65 mmHg. This is not always reliable and should be interpreted in context and patient's typical BP, if known.
- Shock may be present with a normal BP initially.
- Mean Arterial Pressure (MAP): MAP = ((DBP x 2) + SBP)/3.
- ACETAMINOPHEN 1gm PO for fever.



Pearls:

- Hypotension can be defined as a SBP of < 90 mmHg or MAP < 65 mmHg. This is not always reliable and should be interpreted in context and patient's typical BP, if known.
- Shock may present with a normal BP initially.
- Mean Arterial Pressure (MAP): MAP = ((DBP x 2) + SBP) / 3.

Shock – Hemorrhagic



Pearls:

- If unable to establish IV access, consider TRANEXAMIC ACID IM in 2 doses in 2 separate locations.
- Hypotension can be defined as a SBP of < 90 mmHg or MAP < 65 mmHg. This is not always reliable and should be interpreted in the context of the patient's typical BP, if known.
- Shock may present with a normal BP initially.
- Mean Arterial Pressure (MAP): MAP = ((DBP x 2) + SBP) / 3.
- For suspected pelvis injury, secure with circumferential compression or commercial device.
- Causes of massive hemorrhage may include, but are not limited to, trauma, postpartum hemorrhage, GI bleeding and esophageal varices.

Smoke Inhalation

Individuals may present with soot around nose and mouth after exposure to smoke from a structure fire or other sources (vehicle fire, industrial gases, confined spaces, etc.)

- Keep $SpO_2 \geq 94\%$
- Ventilation management
- Cardiac monitor

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- Vascular Access
- NS bolus 500 mL up to max 2000 mL for hypoperfusion

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Other treatment protocols as indicated

If the patient presents with cardiac arrest, hypotension, altered mental status or other signs and symptoms consistent with Cyanide (CN) poisoning, administer:

HYDROXOCOBALAMIN 5.0 g IV over 15 min

* Depending on the severity of the poisoning and the patient's response, a second dose of 5.0 g may be administered by IV infusion up to a total dose of 10.0 g. The rate of infusion for a second dose may range from 15 min (for patients in extremis) to 2 hours, as clinically indicated.

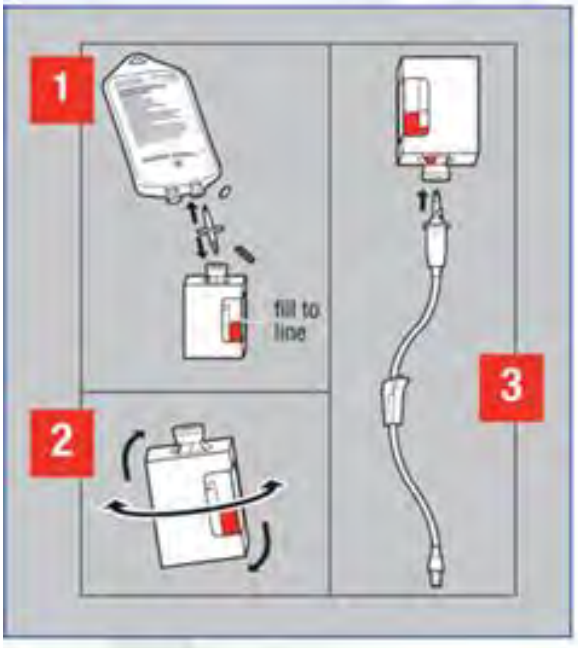
Complete Starting Dose: 5 g

1. **Reconstitute:** Place the vial in an upright position. Add 200 mL of 0.9% Sodium Chloride injection* to the vial using the transfer spike. **Fill to the line.**

   *0.9% Sodium Chloride injection is the recommended diluent (diluent not included in the kit). Lactated Ringers injection and 5% Dextrose injection have also been found to be compatible with hydroxocobalamin and may be used if 0.9% Sodium Chloride is not readily available

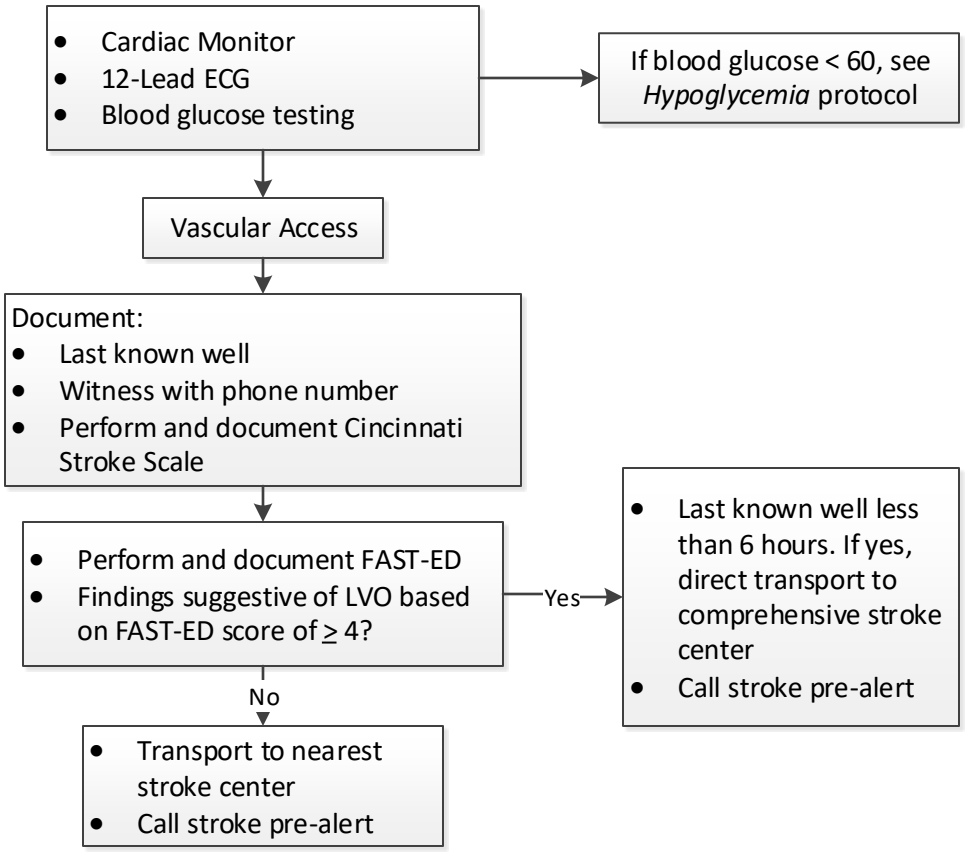
2. **Mix:** The vial should be repeatedly inverted or rocked, not shaken, for at least **60 seconds** prior to infusion.
   - CYANOKIT solutions should be visually inspected for particulate matter and color prior to administration
     - Discard solution if particulate matter is present or solution is not dark red

3. **Infuse Vial:** Use vented intravenous tubing, hang and infuse over **15 minutes.**



Pearls:

- Signs and symptoms consistent with Cyanide (CN) poisoning include:
  - Weakness, dizziness, headache, stupor, dilated pupils, dyspnea
  - Tachypnea, tachycardia, nausea, vomiting, tightness in the chest
  - Altered LOC, cardiovascular collapse, combativeness, confusion
  - Plasma Lactate concentration ≥ 8 mmol/L
  - Late signs: Cardiac arrest, apnea, bradypnea, hypotension, seizures
- Low $EtCO_2$ can be indicative of an elevated serum lactate level (less than 25).
- If the medication is not available on scene do not delay transport waiting for it.
- Decide early on if you want to intubate as burned airways swell, making intubation difficult.



FAST-ED Stroke Score

Item	FAST-ED Score	NIHSS Score Equivalence
Facial Palsy		
Normal or minor paralysis	0	0-1
Partial or complete paralysis	1	2-3
Arm Weakness		
No drift	0	0
Drift or some effort against gravity	1	1-2
No effort against gravity or no movement	2	3-4
Speech Changes		
Absent	0	0
Mild to moderate	1	1
Severe, global aphasia, or mute	2	2-3
Eye Deviation		
Absent	0	0
Partial	1	1
Forced deviation	2	2
Denial/Neglect		
Absent	0	0
Extinction to bilateral simultaneous stimulation in only 1 sensory modality	1	1
Does not recognize own hand or orients only to one side of the body	2	2

Stroke Pre-Alert Criteria

Indication	Contraindication
✓ Positive Stroke Assessment	✗ Stroke or head trauma in last 3 months
✓ ≥ 18 Years Old	✗ Recent intracranial or intraspinal surgery in last 3 months
✓ Within last 6 hours onset of "last seen well"	✗ Major surgery in past 2 weeks
	✗ Active bleeding

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PEDIATRIC TREATMENT PROTOCOLS

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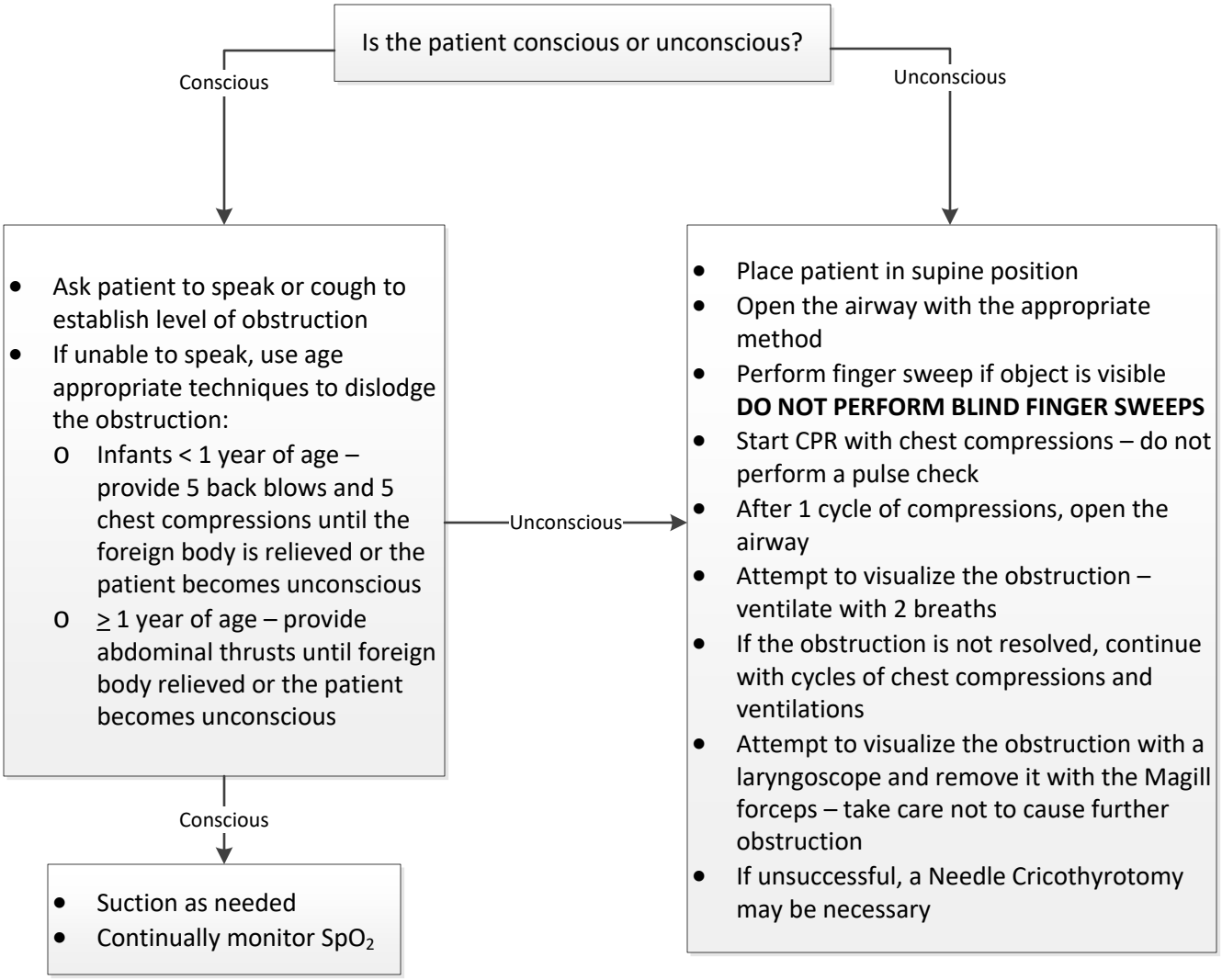
Pediatric Airway Obstruction



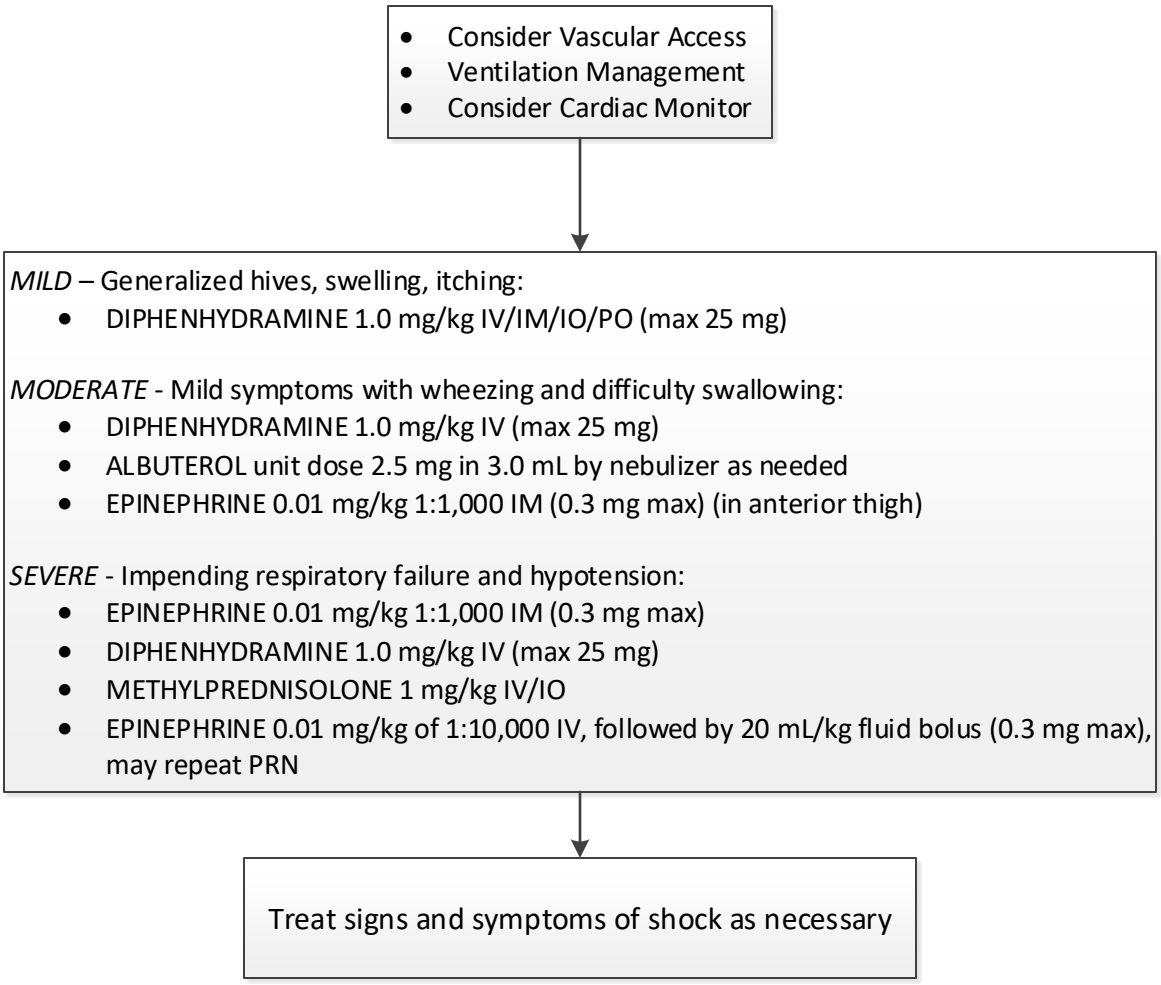
Pearls:

- **Expedite transport if unable to immediately resolve obstruction.**
- Surgical cricothyrotomy is contraindicated in the pediatric patient.
- If the patient presents with trismus and noisy respirations, insert a NPA and attempt to assist ventilations with a BVM.
- Avoid hyperventilation.
- Maintain $EtCO_2$ at 35-45.

Pediatric Allergy/Anaphylaxis

Washoe County Regional Protocols

Anaphylaxis is defined as an acute onset of an illness (over minutes to several hours) involving the skin, mucosal tissue, or both (e.g., generalized hives, pruritus or flushing, swollen lips-tongue-uvula) and respiratory compromise (e.g., dyspnea, wheeze-bronchospasm, stridor, reduced peak expiratory flow, hypoxemia) and/or reduced blood pressure (BP) or associated symptoms of end-organ dysfunction (e.g., hypotonia [collapse] syncope, incontinence).



Pediatric Behavioral Emergency

Patient restraint – when patient is a threat to themselves, bystanders or EMS personnel

- Patients may be restrained with soft restraints
- Restraining opposing muscle groups (swimmers position) is most effective; never restrain in prone/hog-tied position
- Assess distal CMS after restraint, every 10 minutes
- Obtain vascular access as needed
- Apply cardiac monitor and monitor ETCO2 - **required with chemical restraint.**
- Document reasons for restraint
- Incarcerated person may be restrained at the discretion of Law Enforcement
  - For handcuffed patients, request Law Enforcement accompaniment

MIDAZOLAM 0.2 mg/kg IV/IO/IN/IM; may repeat as needed.

KETAMINE 1 mg/kg IV/IO; may repeat once after 5 minutes; Max single dose 50mg.

-OR-

KETAMINE 3 mg/kg IM; Max single dose 150 mg.

Pearls:

- KETAMINE is contraindicated for patients with a history of schizophrenia.
- Use caution when using KETAMINE for suspected alcohol intoxication.
- Strongly consider alternative agents to KETAMINE for patients with a suspected head injury.
- If using KETAMINE, consider MIDAZOLAM to prevent reemergence phenomenon.
- Hostile, angry or unwilling patients who are competent may refuse service.
- Maximum IM of 3ccs for any fluid in a single muscle group.
- Ensure the patient is searched for weapons prior to transport.

Pediatric Burns

Some patients may bypass the nearest trauma center and be directly transferred to a burn center based on the destination protocol.

Chemical Burns/Hazmat Contamination

- Protect rescuer from contamination
- Remove all clothing and solid chemical which might provide continuing contamination
- Decontaminate patient using running water for 15 minutes if patient is stable
- Assess and treat associated injuries and evaluate for systemic symptoms
- Wrap burned area in clean dry cloth
- Keep patient warm after decontamination
- Contact hospital as soon as possible with type of chemical contamination for consideration of additional decontamination prior to entry into ED

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Consider *Pediatric Pain Management/Sedation* protocol

Electrical Burn/Lightning

- Protect rescuers from live electric wires
- Separate victim from electrical source when safe for rescuers
- Initiate CPR as needed
  - For victims in cardiac arrest, treatment should be early, aggressive, and persistent
  - Victims with respiratory arrest may require only ventilation and oxygenation to avoid secondary hypoxic cardiac arrest
  - Resuscitation attempts may have high success rates and efforts may be effective even when the interval before the resuscitation attempt is prolonged
- Place patient on cardiac monitor
- Obtain vascular access
- Treat any thermal burns as outlined above
- Assess for other injuries
- Consider contacting pediatric center for guidance

↓

- Consider *Pediatric Pain Management/Sedation* protocol
- Treat dysrhythmias per protocol

Pediatric Burns

Washoe County Regional Protocols

Some patients may bypass the nearest trauma center and be directly transferred to a burn center based on the destination protocol.

Thermal Burns

- Remove clothing which is smoldering and non-adherent to the patient
- Assess oxygenation and administer OXYGEN as needed
- Assess and treat associated trauma
- Remove rings, bracelets and other constricting objects
- Determine burn body surface area (BSA)
  - If ≤ 10% body surface area burned, use moist saline dressing for patient comfort
  - If burn is moderate to severe (> 10% BSA), cover with clean, dry dressings
- Obtain vascular access
- Administer IV fluids as follows:
  - ≤ 5 years old – 125 mL per hour
  - 6-12 years old – 250 mL per hour
  - LR is preferred

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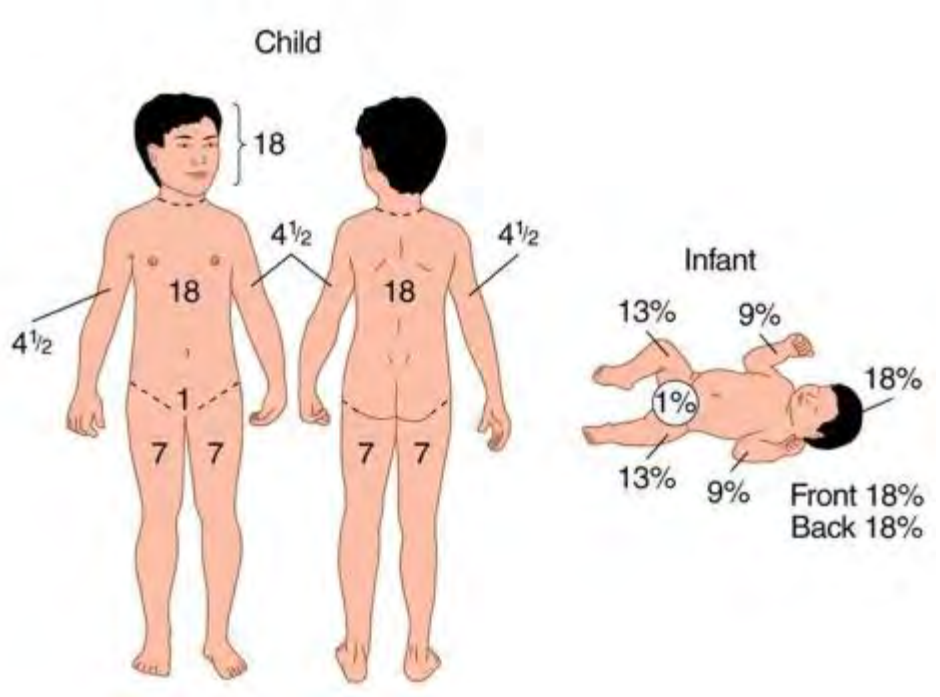
Consider *Pediatric Pain Management/Sedation* protocol



Pearls:

- Consensus Burn Formula:
  Flame, Scald, Chemical - 3ml/kg x %TBSA
  Electrical – 4ml/kg x %TBSA
  - Administer 50% of total fluids in first 8 hours from time of injury
  - Administer 50% of total fluids over next 16 hours
- BSA is calculated for partial thickness and full thickness burns.

Pediatric Cardiac - Arrest

- Unconscious and unresponsive
- Pulseless
- Does not meet *Resuscitation/Prehospital Death Determination* protocol

- Begin CPR - pulse check/rhythm interpretation every 2 minutes
  - Continue CPR following all pulse checks as indicated by Pt condition
- Place patient on cardiac monitor or AED
- Manage airway as indicated by patient condition
- Consider reversible causes

VF, pVT, TdP

- Defibrillate at 2 J/kg
- Obtain vascular access

EPINEPHRINE 0.01 mg/kg 1:10,000 IV/IO or 0.1 mg/kg 1:1,000 ETT every 3- 5 minutes

- Consider BIAD or ETT

Shockable rhythm

Yes

- Defibrillate at 4 J/kg
- Subsequent defibrillations increase in 2 J/kg increments to a max of 10 J/kg not to exceed the adult dose
- AMIODARONE 5 mg/kg IV/IO; may repeat x 2 if refractory VF/VT (max 15 mg/kg)

OR

- LIDOCAINE 1.0 mg/kg IV/IO (max 3 mg/kg)
- If no IV/IO access LIDOCAINE 2.5 mg/kg ETT, may repeat x 1. If IV/IO access is established after ETT dose, may repeat at 1 mg/kg IV/IO
- If the patient converts to a perfusing rhythm after administration of LIDOCAINE start LIDOCAINE infusion at 20-50 mcg/kg/min

If TdP

MAGNESIUM SULFATE 25-50 mg/kg
Max of 2 g

- Check pulse if organized rhythm
- Use Asystole/PEA as indicated
- Consider consultation of **Medical Control** for termination of efforts
  - Minimum of 3 rounds of medication are required prior to contact

Asystole/PEA

Obtain vascular access

- EPINEPHRINE 0.01 mg/kg 1:10,000 IV/IO or 0.1 mg/kg 1:1,000 ETT every 3- 5 minutes
- Consider BIAD or ETT

Shockable rhythm

Yes

Use VF, pVT, TdP as indicated

Pearls:

- Hypoxia is the leading cause of cardiac arrest in pediatric patients.
- Use caution when administering two or more ventricular antidysrhythmics, as it may have a proarrythmic effect.
- Efforts should be directed at high quality and continuous compressions with limited interruptions and early defibrillation when indicated.
- DO NOT HYPERVENTILATE.
- Reassess and document ETT placement using auscultation and $EtCO_2$ capnography.
- Adult paddles/pads may be used on children weighing greater than 15 kg.

Pediatric Cardiac - Bradycardia

- Ventilation Management (Primary cause of Bradycardia in pediatrics is hypoxia)
- Cardiac Monitor
- Establish vascular access

↓

HR < 60 bpm causing hypotension, altered mental status, poor perfusion, or shock

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- CPR
- EPINEPHRINE 0.01 mg/kg IV/IO 1:10,000 q 3-5 min; MAX single dose 1 mg
- ETT 0.1 mg/kg 1:1,000

↓

If Refractory:

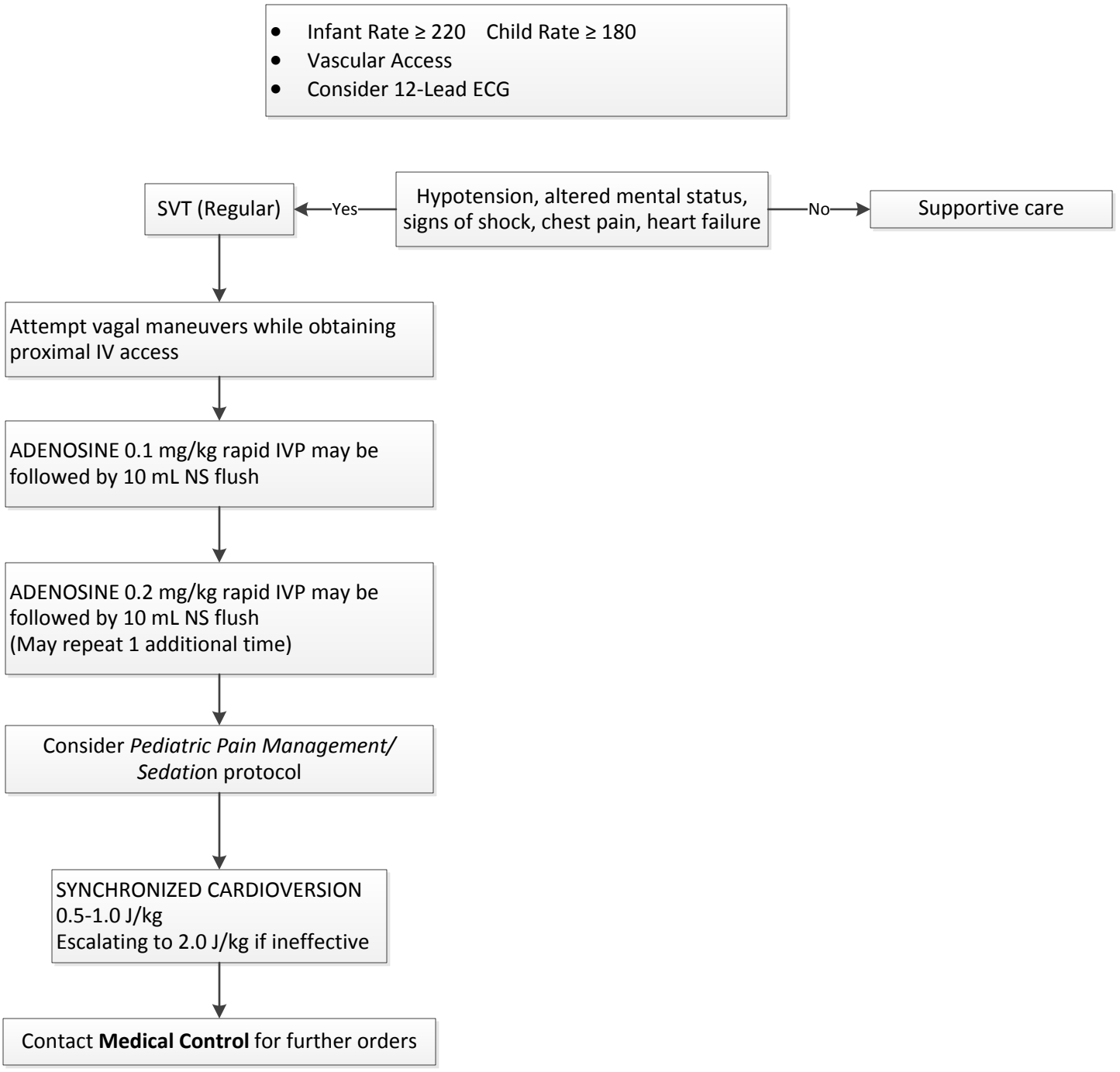
- ATROPINE for primary AV Block or increased vagal tone 0.02 mg/kg IV/IO q 5 min
  - Min single dose 0.1 mg – max single dose 0.5 mg
  - ETT: 0.04 mg/kg
- Consider transcutaneous pacing with sedation

Pearls:

- Emergency TCP is indicated in bradycardia due to complete heart block or sinus node dysfunction unresponsive to ventilation, oxygenation, chest compressions, and medications, especially if it is associated with congenital or acquired heart disease.

Pediatric Cardiac - Narrow Complex Tachycardia with Pulses

Washoe County Regional Protocols

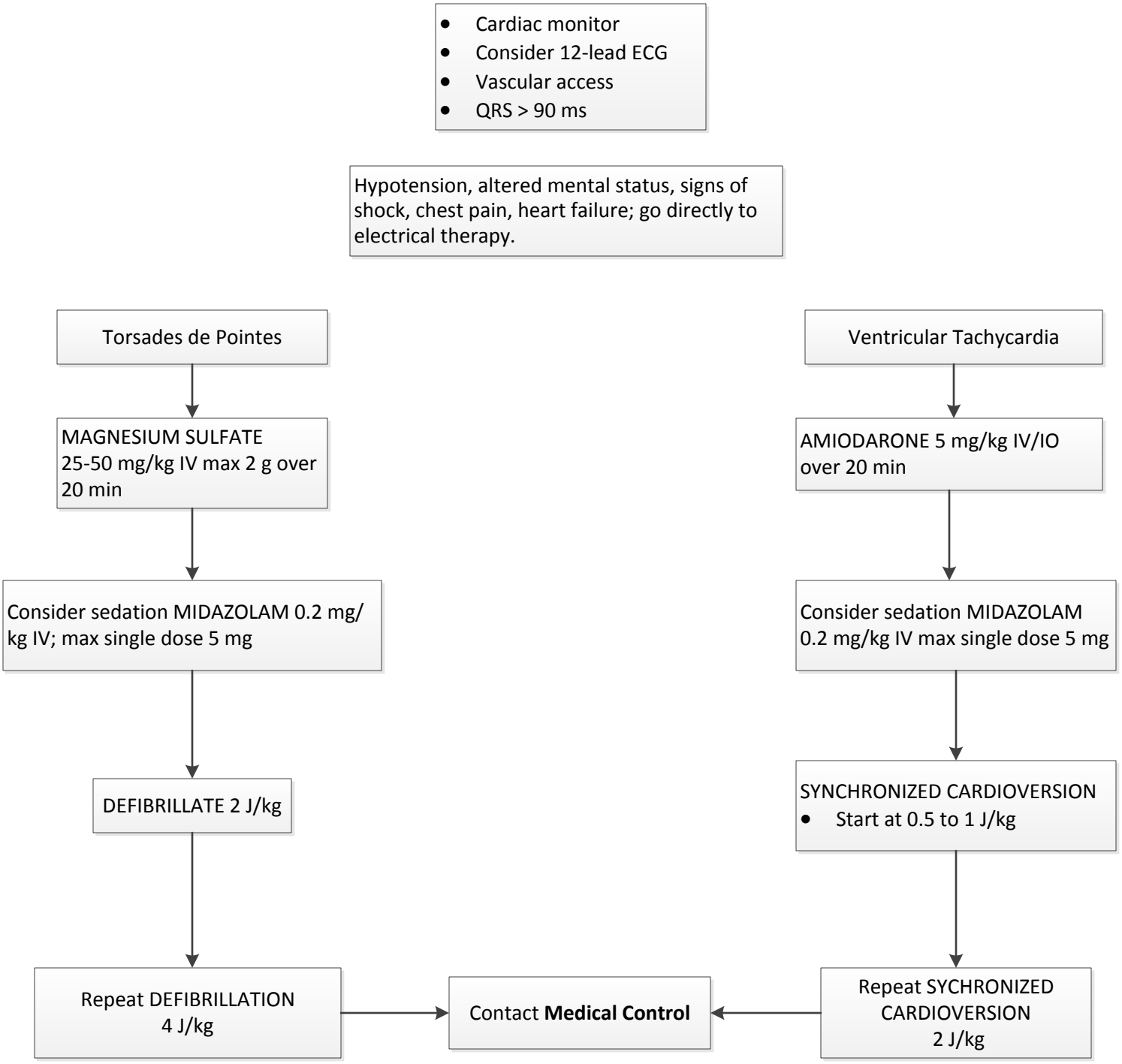


Pearls:

- QRS width > 90 ms is considered wide and possibly SVT with aberrancy and rarely VT.
- May go directly to Cardioversion at any time if severely symptomatic or patient deteriorating.
- Consider alternate causes such as fever, dehydration, caffeine/energy drink consumption, electrolyte imbalance, drug use.

Pediatric Cardiac - Wide Complex Tachycardia with Pulses

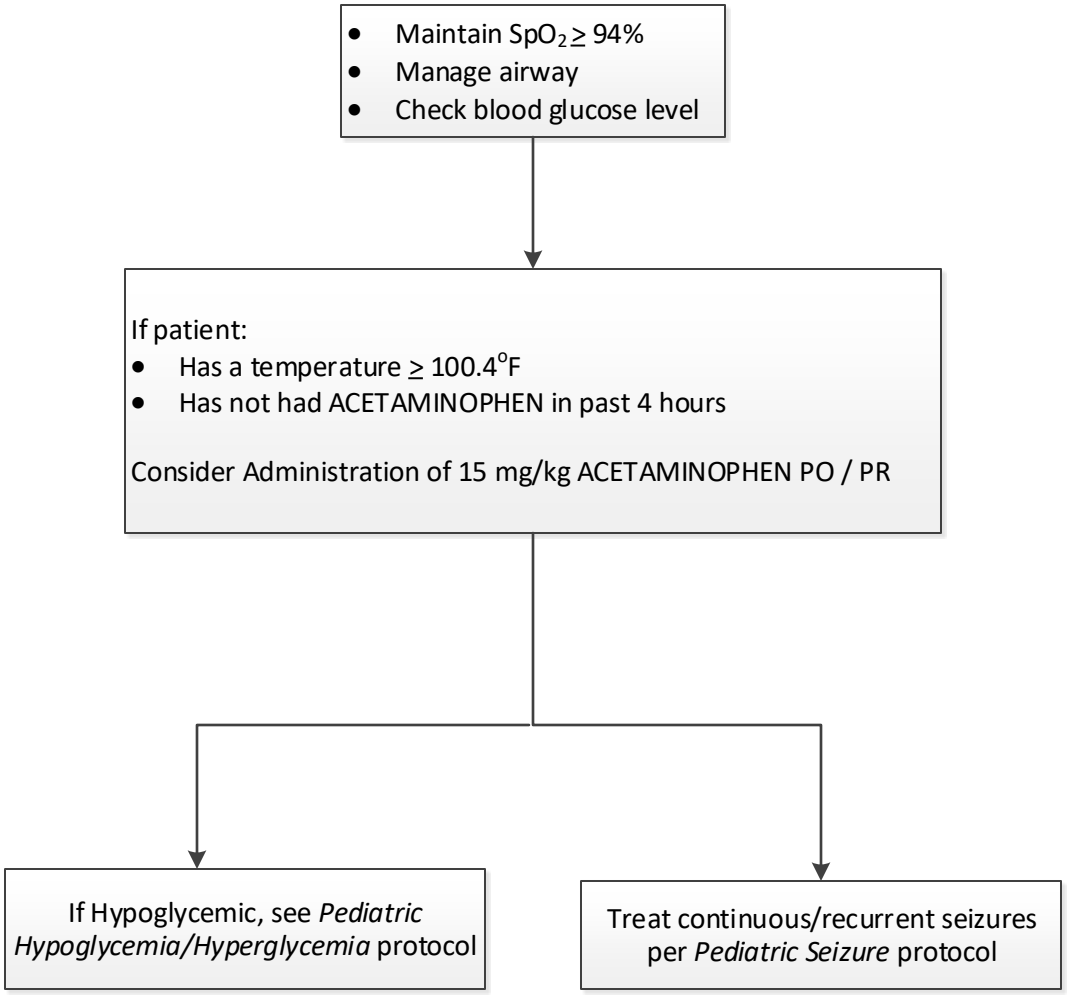
Washoe County Regional Protocols



Pearls:

- Consider most wide complex tachycardias in children as an aberrantly conducted SVT. Obtain 12 lead ECG if practical, but do not delay treatment.
- May go directly to defibrillation in Torsade de Pointes if severely symptomatic.

Pediatric Fever



Pearls:

- Do not utilize cooling measures in a pediatric patient < 28 days of age.
- Excessive fluid boluses provided to febrile children may lead to complications – administration of IV fluid boluses should be undertaken with extreme caution.
- Consider a pediatric patient to have meningitis or sepsis until proven otherwise.
- Cocaine, amphetamines and salicylates may elevate body temperatures.
- Sweating generally disappears as body temperatures rise over 104°F.
- Intense shivering may occur as patient is cooled.
- Remove clothing and begin passive cooling. Do not use cold packs or ice to cool the patient.
- Dropping the temperature of a patient too quickly may cause seizures.

Pediatric Hyperglycemia/Hypoglycemia

- Establish baseline level of consciousness
- Manage the airway and breathing as indicated by the patient's condition
- Consider possible reversible causes prior to placement of an advanced airway
- Consider Cardiac Monitor

- BGL < 60 mg/dl (< 40 mg/dl in Neonates)
- ORAL GLUCOSE if the patient is alert/ able to protect their own airway
  - ≤ 28 days D10, 2 mL/kg IV/IO/UV
  - > 28 days D10 or D25, 2 mL/kg IV/IO
- Max single dose 25 gm
- If no IV Access, GLUCAGON:
  - 0.5 mg IM (< 20 kg)
  - 1.0 mg IM (> 20 kg)
- Reassess BGL after each intervention as necessary; titrate to effect

If BGL > 250 mg/dl NS bolus 10-20 mL/kg over 1 hour

Pearls:

- Neonate considerations for infants ≤ 28 days old (4 weeks).
- Heel stick for patients < 6 months old.
- Fluid management in DKA is complex and may contribute to risk of cerebral edema.

Pediatric Hyperthermia/Heat Emergency

Heat Exhaustion

- Body temperature up to 104°F/40°C
- Minor CNS changes, weakness, dizziness, fainting
- Nausea, headache, dilated pupils, no appetite
- Skin clammy, pale and moist
- Muscle cramps/pain
- NS bolus 20 mL/kg IV/IO; maintain age appropriate SBP ≥ 70 + (2 x age); max 60 mL/kg

Heat Stroke

- Body temperature 104°F/40°C or greater
- Altered mental status or loss of consciousness
- Convulsions, seizures
- Tachycardia, hypotension
- Skin (hot, red, dry)
- Severe vomiting or diarrhea
- NS bolus 20 mL/kg IV/IO; maintain age appropriate SBP ≥ 70 + (2 x age); max 60 mL/kg

- Consider Cardiac Monitor and attempt to obtain body temperature
- Remove patient from hot environment and remove clothing
- Begin active cooling of patient

Treat seizures per the *Pediatric Seizure* protocol

Pearls:

- **Heat exhaustion can rapidly progress to heat stroke if untreated.**
- Heat stroke requires very aggressive cooling.
- Active cooling includes application of cold packs (not directly on skin), fanning, air conditioner or air movement.
- Intense shivering may occur as patient is cooled, discontinue aggressive cooling methods.
- Sweating generally disappears as body temperatures rise over 104°F/40°C.
- Wet sheets without good airflow may increase body temperature.
- Neonate ≤ 28 days fluid bolus 10 mL/kg IV/IO.

Pediatric Hypothermia/Cold Emergency

- Remove wet clothing and protect from environment
- Monitor temperature

Localized cold injury

- General wound care
- DO NOT rub skin to warm
- DO NOT allow refreezing

Systemic hypothermia

- Active warming measures
- Vascular access
- Cardiac Monitor
- Consider warm NS bolus 20 mL/kg IV/IO; maintain age appropriate SBP $\geq$ 70 + (2 x age), max 60 mL/kg

Transport all severely hypothermic patients regardless of response to treatments. Follow appropriate protocols for other treatment/transport decisions.

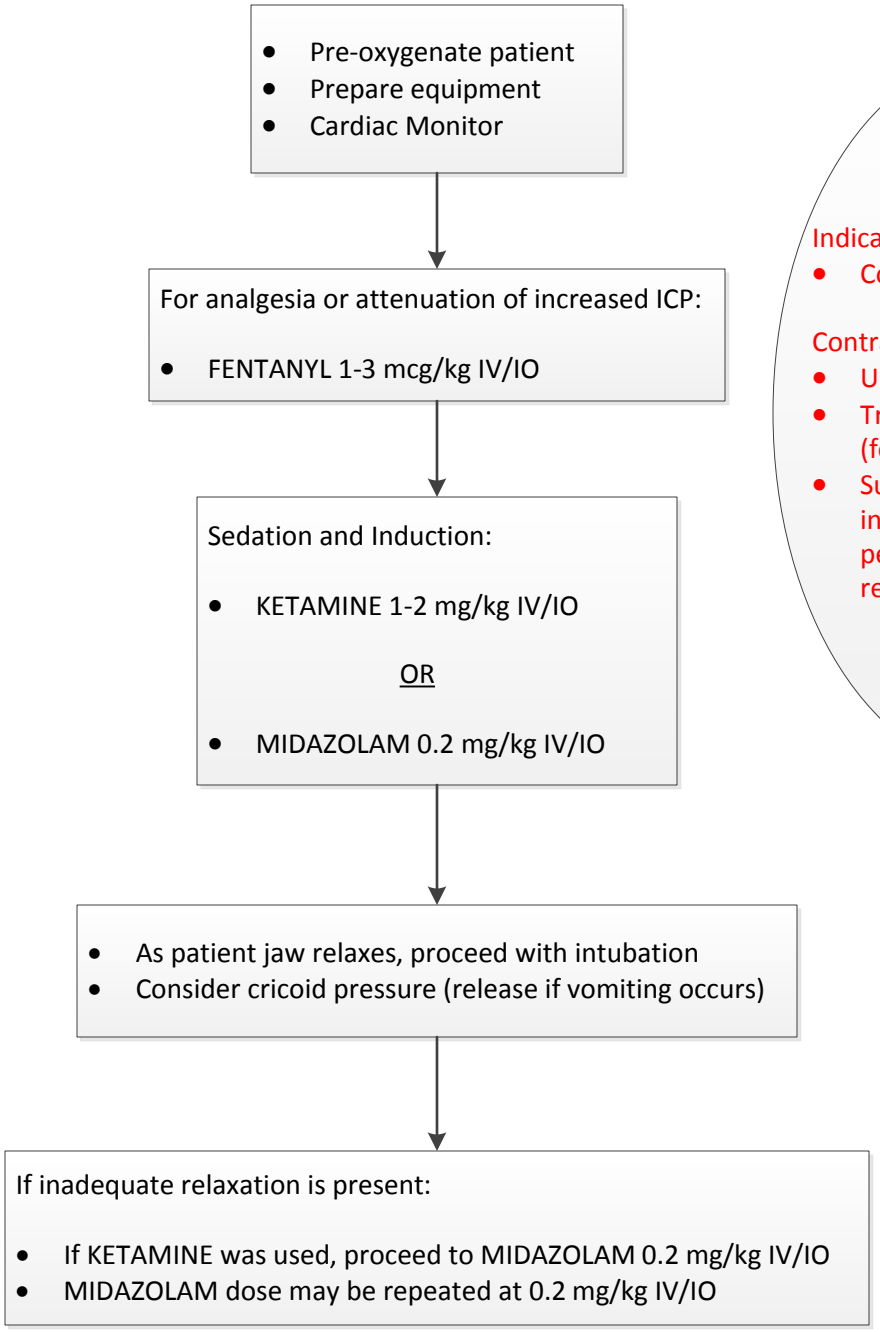
Patient with pulse	
Core Temperature	Treatment
93.2^{O}F – 96.8^{O}F	Passive re-warming and active external re-warming
86^{O}F – 93.2^{O}F	Passive re-warming and active external re-warming to trunk areas only

Patient without a pulse	
Start CPR, defibrillate once if indicated	
Core Temperature	Treatment
< 86^{O}F	CPR, withhold IV medications, limit to one shock for VF/VT/Torsades
> 86^{O}F	CPR, give IV medications at longer intervals, repeat defibrillation for VF/VT/Torsades, passive re-warming and active external re-warming to trunk areas only

Pearls:

- Extremes of age are more prone to cold emergencies.
- If temperature is unknown, treat the patient based on suspected temperature.
- For the severely hypothermic patient, perform procedures gently and monitor cardiac rhythm closely.
- Active warming includes hot packs that can be used on the armpit and groin; care should be taken not to place the packs directly on the skin.
- If available, core temperature is preferred.

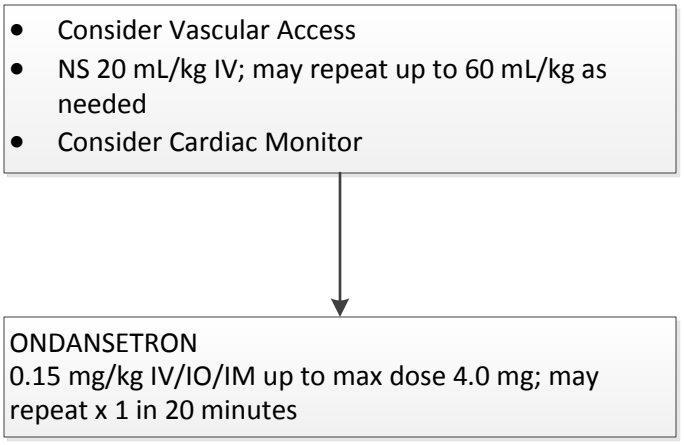
Pediatric Medication Assisted Intubation



Indications:
- Contact Medical Control

Contraindications:
- Upper *Airway Obstruction*
- Tracheal obstruction (foreign body, tumor)
- Suspected pharyngeal infection (epiglottitis, peritonsilar or retropharyngeal abscess)

Pearls:
- Pharmacological agents are used to assist the provider in performing intubation in patients with high intubation difficulty due to excessive gag reflux. In these instances, protecting the airway is a potentially life-saving maneuver. These patients may include: Isolated *Head Trauma*, *Multisystem Trauma*, *Overdose*, Status Epilepticus, *Respiratory Failure*, *Severe Burns*, or based on anticipated clinical course.
- Most pediatric airways can be effectively managed with BLS interventions.


Consider Vascular Access
NS 20 mL/kg IV; may repeat up to 60 mL/kg as needed
Consider Cardiac Monitor
ONDANSETRON
0.15 mg/kg IV/IO/IM up to max dose 4.0 mg; may repeat x 1 in 20 minutes

Pediatric Neonatal Resuscitation

- Provide warmth
- Assure open airway
- Clear secretions if needed
- Dry baby
- Stimulate
- If fetal demise is recognized after cord is clamped and cut, and known gestational age is ≤ 22 weeks, treat as a miscarriage and provide supportive care to family.

HR < 100, gasping, or apnea?

No → Labored breathing or persistent cyanosis?

Yes

- PPV 40-60/min
- Monitor SpO_2
- Cardiac Monitor

HR < 100?

No → Post-Resuscitation care

Yes

Ventilation Management - Corrective steps may include intubation

HR < 60?

- CPR 3:1 ratio
- Intubate
- PPV
- 100% O_2
- Vascular Access

HR < 60?

EPINEPHRINE 0.01 mg/kg (0.1 mL/kg) 1:10,000 IV/IO q 3-5 min as needed for HR < 60 (ETT dosing 1 mL/kg)

Consider NS 10 mL/kg x 1

→ Consider contacting **Medical Control**

Yes

- Position and clear airway
- Monitor SpO_2
- O_2 as needed

Pediatric Neonatal Resuscitation

APGAR	Score=0	Score=1	Score=2
Activity/Muscle Tone	Absent	Arms/legs flexed	Active Movement
Pulse	Absent	Below 100	Above 100
Grimace/Reflex Irritability	No response	Grimace	Sneeze, cough, pulls away
Appearance/Skin Color	Blue-Grey, pale all over	Normal, except extremities	Normal over entire body
Respiration	Absent	Slow, irregular	Good, crying

Targeted pre-ductal SpO_2 after birth

1 minute	60% - 65%
2 minute	65% - 70%
3 minute	70% - 75%
4 minute	75% - 80%
5 minute	80% - 85%
10 minute	85% - 95%

Pearls:

- Neonate considerations for infants ≤ 28 days (4 weeks).
- Deep suctioning is no longer recommended.
- Most newborns requiring resuscitation will respond to BVM, compressions and Epi. For those that do not, consider hypovolemia, pneumothorax, and/or hypoglycemia (BG < 40).
- Document all times (delivery, contraction, duration, frequency).
- Record APGAR at one and five minutes after birth.
- Ideal placement of pulse oximetry is on the right hand for pre-ductal SpO_2. See attached chart for target ranges.
- Pre-term newborns are susceptible to oxygen toxicity.
- Transport mother and infant together whenever possible.
- Maintaining temperature of newborn is essential.

Pediatric Overdose/Poisoning

Poison Control - (800) 222-1222 OR (775) 982-4129

- Determine cause of poisoning/overdose, treat as appropriate
- Cardiac Monitor

Carbon monoxide (CO)

- Place patient on CO monitor, do not rely on pulse oximeter readings
- If patient's SpCO is:
  - 0 – 5 % - Considered normal for non-smokers. When > 3% with symptoms, consider high flow oxygen and recommend transport. If asymptomatic, no further medical evaluation necessary of SpCO. Counsel patients on signs and symptoms to watch, offer transport to ED, if refused complete AMA.
  - 5 – 10 % - Considered normal for smokers, abnormal for non-smokers. If symptoms are present, consider high flow oxygen and recommend transport to ED.
  - 10 – 15 % - Abnormal in any patient. Assess for symptoms, consider high flow oxygen and recommend transport to ED.
  - > 15 % - Significantly abnormal in any patient. Administer high flow oxygen and recommend transport to ED.
  - > 30 % - Consider transport/referral to hyperbaric facility (consider referral to hyperbaric facility if > 25% for patients with ALOC or pregnant).
- If patient has altered LOC, neurological impairment, or > 25% SpCO, treat with 100% O_2 and transport to nearest appropriate facility
- Continue supportive therapies as needed

Opiates

NALOXONE 0.1 mg/kg IV/IO/IM/IN, max single dose 0.5 mg; may repeat to a max dose of 10 mg

Tricyclic Anti-Depressants

- For patients with any of the following:
  - Dysrhythymias, or QRS of ≥ 120 ms
  - Hypotension
  - Seizure
  - Cardiac Arrest
- Administer SODIUM BICARBONATE 1.0 mEq/kg IV
- If patient is intubated, ventilate patient to maintain $EtCO_2$ level of 28-30 mmHg

Organophosphate Poisoning (Insecticide)

ATROPINE 0.02 mg/kg IV/IO q 3-5 minutes as needed to decrease secretions and ventilator resistance; min single dose 0.1 mg

Agents:

- Acetaminophen: Initially normal or N/V. Tachypnea and AMS may occur later. Renal dysfunction, liver failure and/or cerebral edema may manifest.
- Depressants: Decreased HR, BP, temp and RR.
- Anticholinergic: Increased HR, increased temperature, dilated pupils and AMS changes.
- Insecticides: May include S/S of organophosphate poisoning.
- Solvents: N/V, cough, AMS.
- Stimulants: Increased HR, BP, temperature, dilated pupils, seizures, and possible violence.
- TCA: Decreased mental status, dysrhythmias, seizures, hypotension, coma, death.
- **Beta Blocker Overdose**: call for possible administration of GLUCAGON.
- **Calcium channel blocker**: call for possible administration of CALCIUM CHLORIDE and/or GLUCAGON.

Pediatric Overdose/Poisoning

Poison Control - (800) 222-1222 OR (775) 982-4129

Cyanide Exposure

For known cyanide poisoning in the absence of exposure to smoke, refer to the cyanide antidote parameters contained within the *Pediatric Smoke Inhalation* protocol

Pearls:

- Powdered HYDROXOCOBALAMIN will be reconstituted with 200 cc 0.9% normal saline or lactated ringers. Then repeatedly invert for 60 seconds PRIOR TO administration. DO NOT SHAKE.
- If patient is suspected to have narcotic overdose/hypoglycemia, administer NALOXONE/GLUCOSE prior to BIAD device/ intubation.
- CALCIUM CHLORIDE is contraindicated in patients with suspected digitalis toxicity.
- Cyanide toxicity should be suspected for any patient being treated for Carbon Monoxide toxicity from smoke inhalation. Conscious patients with symptoms will require **Medical Control** prior to administration.
- Consider a second line if possible for administration and avoidance of possible medication incompatibilities.
- For suspected ingestion, consider NG tube placement.
- Overdose or toxin patients with significant ingestion/exposure should be closely monitored and aggressively treated. Do not hesitate to contact **Medical Control** if needed.
- In the case of cyanide poisoning, altered mental status may be profound. Profound altered mental status can be defined as a deficit that includes disorientation, bewilderment and difficulty following commands.

Pediatric Pain Management/Sedation

Washoe County Regional Protocols

Assess and document patient's condition and vital signs before and after treatment (at minimum every 15 minutes). Pain should be assessed using a combination of physiologic indicators, including but not limited to, 1-10 pain scale, and Bloomsbury Sedation Scale.

- Keep $SpO_2 \geq 94\%$
- Vascular Access
- Consider Cardiac Monitor

Comfort measures:
- Patient positioning
- Splinting
- Ice

Pain Management

- ACETAMINOPHEN 15 mg/kg PO
- IBUPROFEN 10 mg/kg PO
- NITROUS OXIDE as long as the patient is able to follow directions
- FENTANYL 1.0 mcg/kg IN/IM/Slow IV/IO may repeat q 5 as needed
- MORPHINE SULFATE 0.1 mg/kg IV/IO/IM max single dose 5 mg, may repeat q 10 as needed
- KETAMINE 0.3 mg/kg IV/IO/IM/IN max single dose 30 mg, may repeat q 15 min as needed

Sedation

MIDAZOLAM 0.2 mg/kg IV/IO/IN/IM may repeat as needed

KETAMINE 1mg/kg IV/IO; may repeat once after 5 minutes; Max single dose 50mg

-OR-

KETAMINE 3mg/kg IM; Max single dose 150mg.

Contact **Medical Control** for additional doses

Pearls:
- Ophthalmic anesthetics may be used for ocular injuries, 1-2 drops, as needed.
- Consider prophylactic ONDANSETRON use when administering pain medication.
- Pain severity (1-10) is a vital sign to be recorded before and after medication administration and patient hand off.
- Monitor BP and respirations closely as sedative and pain control agents may cause hypotension and/or respiratory depression.
- Consider patient's age, weight, clinical condition, use of drugs/alcohol, exposure to opiates, when determining initial opiate dosing. Weight based dosing may provide a standard means of dosing calculation, but does not predict response.
- Exercise caution when administering opiates and benzodiazepines; this combination results in deeper sedation with significant risk of respiratory compromise.
- If using KETAMINE, consider MIDAZOLAM to prevent reemergence phenomenon.
- Monitor ETCO2 for chemical sedation.
- Maximum IM of 3ccs for any fluid in a single muscle group.

- Cardiac monitor
- SpO_2 and $EtCO_2$ monitoring

Bronchospasm/Asthma/Reactive Airway Disease

ALBUTEROL 2.5 mg in 3.0 mL via HHN until symptoms improve

Duoneb 2nd & 3rd HHN ** additional HHNs use ALBUTEROL

If patient's condition deteriorates, consider:
EPINEPHRINE 0.01 mg/kg 1:1,000 IM anterior thigh q 15 mins; MAX 0.3 mg

Impending Respiratory Failure:
EPINEPHRINE 0.01 mg/kg of 1:10,000 q 3-5 mins IV/IO; MAX 1 mg

- ETT: 0.1 mg/kg 1:1,000 EPINEPHRINE q 3-5 mins

METHYLPREDNISOLONE 1 mg/kg IV/IO; MAX 125 mg

Status Asthmaticus
MAGNESIUM SULFATE 25-50 mg/kg mixed in 100 mL NS IV infusion over 20 mins; MAX 2 gm

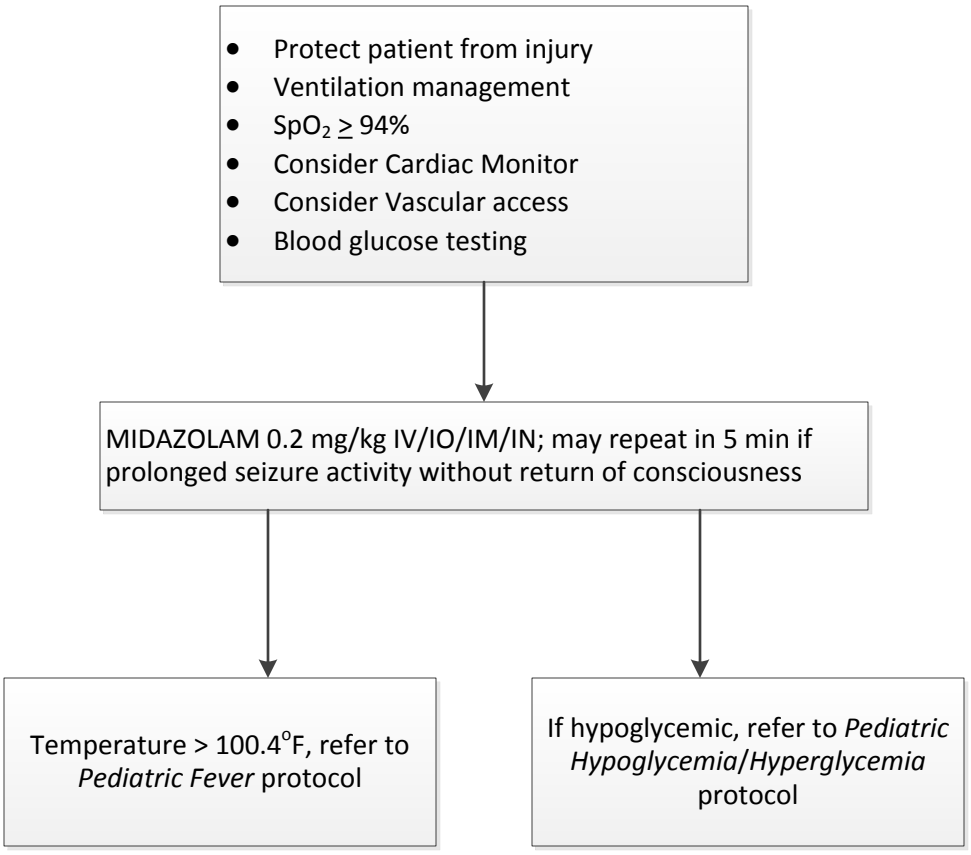
Suspected Croup

< 6 months 0.25 mL 2.25% RACEMIC EPINEPHRINE in 3 cc NS via HHN
OR
< 6 months 0.25 mg of EPINEPHRINE in 3 cc NS via HHN (may repeat x 1 in 20 minutes)

> 6 months 0.5 mL 2.25% RACEMIC EPINEPHRINE in 3 cc via HHN
OR
> 6 months 0.5 mg of EPINEPHRINE in 3 cc via HHN (may repeat x 1 in 20 minutes)

Pearls:
- Duoneb equivalent can be achieved by combining 0.5 mg IPRATROPRIUM in 2.5 mg ALBUTEROL.
- Be prepared to assist ventilations as needed.
- Pulse oximetry and end tidal continuous waveform capnography must be monitored.
- Allow the patient to assume a position of comfort.
- Respiratory distress secondary to drowning may require PEEP and/or nebulizer treatment.
- Croup may respond positively to cold environment and nebulized saline.

Pediatric Seizure



Pearls:

- Benzodiazepines are well tolerated in pediatrics; do not delay IM/IN administration while initiating an IV.
- Status epilepticus is defined as two or more seizures successively without an intervening lucid period, or a seizure lasting over five minutes.
- Grand mal seizures (generalized) are associated with loss of consciousness, incontinence and or trauma.
- Focal seizures affect only part of the body and are not usually associated with a loss of consciousness.
- Be prepared to address airway issues and support ventilations as needed.

Pediatric Smoke Inhalation

Washoe County Regional Protocols

Individuals may present with soot around nose and mouth after exposure to smoke from a structure fire or other sources (vehicle fire, industrial gases, confined spaces, etc.)

- Keep $SpO_2 \geq 94\%$
- Ventilation management
- Cardiac Monitor

↓

- Vascular Access
- NS bolus 20 mL/kg up to 60 mL/kg for hypoperfusion

↓

Other treatment protocols as indicated

If the patient presents with cardiac arrest, hypotension, altered mental status or other signs and symptoms consistent with Cyanide (CN) poisoning, administer:

HYDROXOCOBALAMIN 70 mg/kg IV over 15 minutes

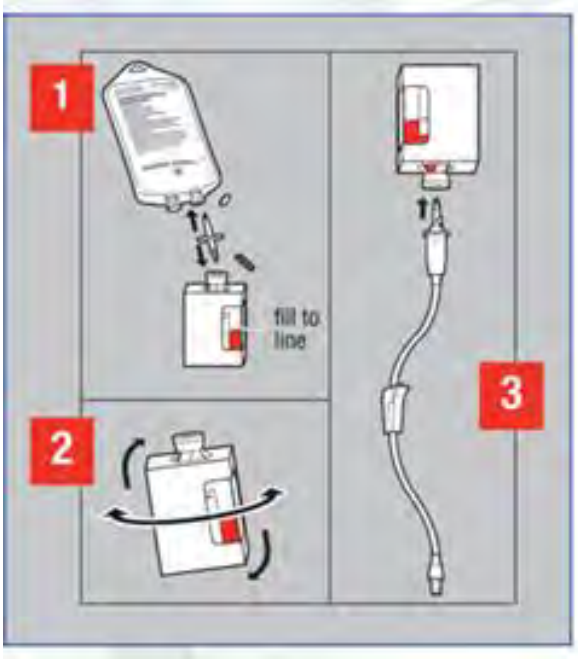
Complete Starting Dose: 5 g

1. **Reconstitute:** Place the vial in an upright position. Add 200 mL of 0.9% Sodium Chloride injection* to the vial using the transfer spike. **Fill to the line.**

   *0.9% Sodium Chloride injection is the recommended diluent (diluent not included in the kit). Lactated Ringers injection and 5% Dextrose injection have also been found to be compatible with hydroxocobalamin and may be used if 0.9% Sodium Chloride is not readily available

2. **Mix:** The vial should be repeatedly inverted or rocked, not shaken, for at least **60 seconds** prior to infusion.
   - CYANOKIT solutions should be visually inspected for particulate matter and color prior to administration
     - Discard solution if particulate matter is present or solution is not dark red

3. **Infuse Vial:** Use vented intravenous tubing, hang and infuse over **15 minutes.**



Pearls:

- Signs and symptoms consistent with Cyanide (CN) poisoning include:
  - Weakness, dizziness, headache, stupor, dilated pupils, dyspnea
  - Tachypnea, tachycardia, nausea, vomiting, tightness in the chest
  - Altered LOC, cardiovascular collapse, combativeness, confusion
  - Plasma Lactate concentration ≥ 8 mmol/L
  - Late signs: Cardiac arrest, apnea, bradypnea, hypotension, seizures
- Low $EtCO_2$ can be indicative of an elevated serum lactate level (less than 25).
- If the medication is not available on scene do not delay transport waiting for it.
- Decide early on if you want to intubate as burned airways swell, making intubation difficult.

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OPERATIONAL PROTOCOLS

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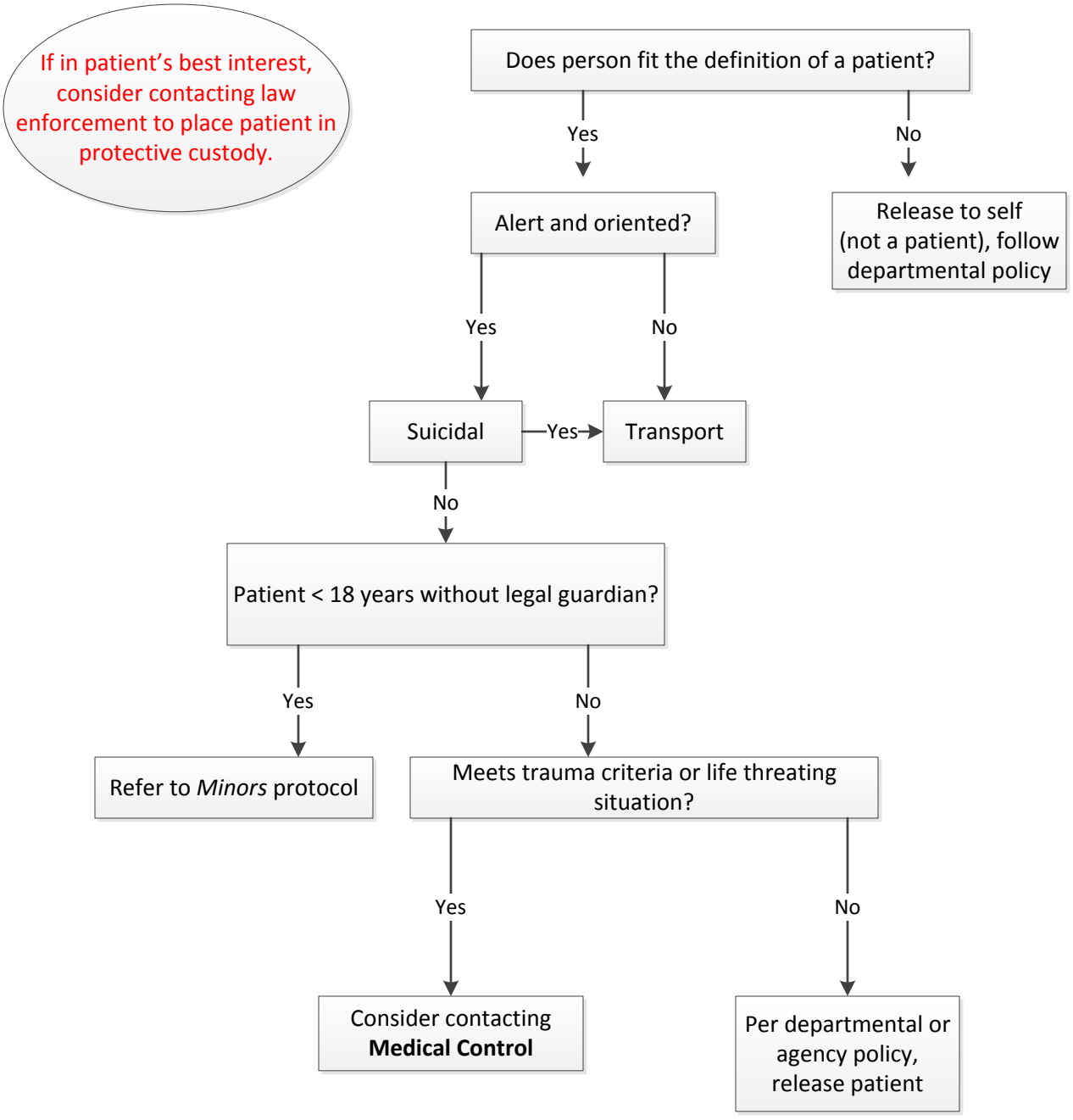
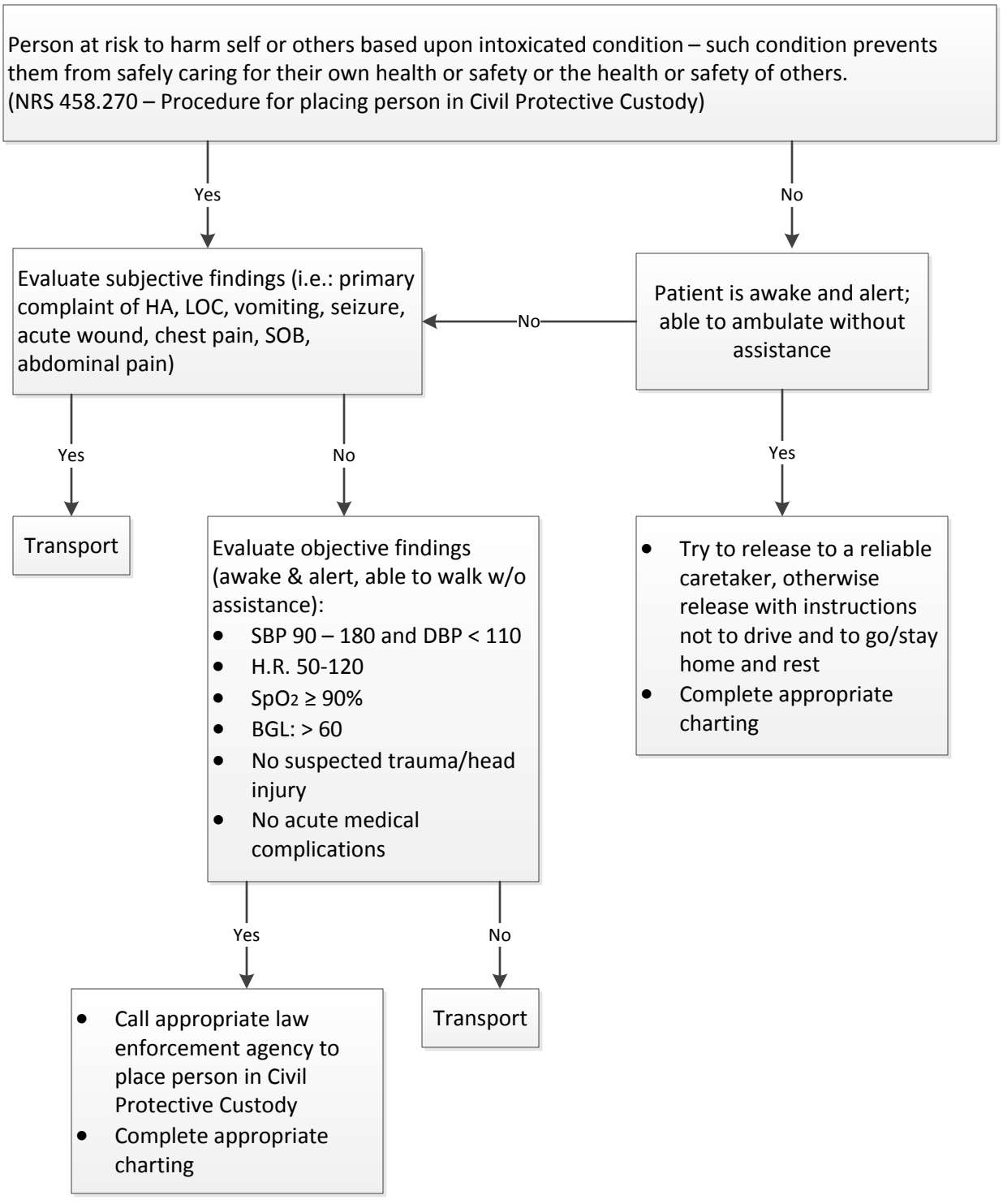
AMA Decision Tree

This applies only to the patient who has capacity and is competent: Patient is stable and able to understand and reiterate to you the problem, risks, and consequences of refusal of care.



Civil Protective Custody



Combative Patient

Patients who exhibit an agitated state and/or may be a harm to themselves or others, or interfere with their own care may be physically or chemically restrained to prevent injury/harm to the patient or crew. Physical or chemical restraint must be performed in a safe and humane manner and used only as a last resort. Attempts at verbal de-escalation should be used prior to restraints.

PROCEDURE

- Consider law enforcement assistance, as necessary.
- When appropriate, attempt less restrictive management of the patient, including verbal de-escalation.
- Patients requiring physical restraint should be place in the "swimmers" position using soft restraints.
- No devices such as backboards or other devices may be placed on top of the patient and no restraint should ever be placed across a patient's chest.
- It a patient is restrained by law enforcement personnel with handcuffs or other devices EMS cannot remove, a law enforcement officer should accompany the patient to the hospital in the transporting ambulance.
- The patient must be under constant observation by the EMS crew at all times. This includes continuous pulse oximetry. Cardiac monitor should be applied if medications are administered.
- Patients who are placed in physical restraints should have circulation checks performed every 10 minutes and documented.
- Documentation should include the reason for restraint and the type of restraint.
- The use of chemical sedation is at the discretion of the attending paramedic, when clinically indicated.

Pearls:

- Causes of combativeness may be due to comorbid medical conditions or hypoxia, hypoglycemia, drug and/or alcohol intoxication, drug overdose, or brain trauma.
- Excited/Agitated Delirium is characterized by extreme restlessness, irritability, and/or high fever. Patients exhibiting these signs are at a high risk of sudden death.
- Medications should be administered cautiously in patients under the influence of drugs and/or alcohol, as they may cause respiratory depression.
- Rapid intravenous administration of KETAMINE or BENZODIAZEPINES increases the risk of respiratory depression/apnea.
- Strongly consider alternative agents to KETAMINE for patients with a suspected head injury.
- Administer HALOPERIDOL with caution to patients who are already taking psychotropic medications, which may precipitate serotonin syndrome or malignant hyperthermia.
- When administering medications for sedation, basic and advanced airway equipment should be at the patient's side and readily available.

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Contact Medical Control When:

- EMS judgment suggests consultation with Medical Control Physician necessary
- EMS provider needs assistance in termination of resuscitation or requesting deviation from protocols
- Protocol requires base physicians contact for medication administration or other procedures
- Patient condition not addressed in protocols

Communication Failure:

- Protocol becomes standing order if:
  - Medical Control cannot be contacted (radio/phone failure)
  - Medical Control physician does not answer after reasonable time
- In the event Medical Control cannot be contacted, care will be delivered in the best interest of the patient.
- Medical crew will follow agency specific guidelines for reporting and review

Document:

- Report in accordance with agency policy
- Treatment requests/approved physician orders
- Time of contact and Medical Control physician's name

Destination

The final destination hospital has profound clinical, personal and financial implications for our patients. Hospitals in the Reno/ Sparks area offer different specialty services and patients may be better served at specific facilities.

Stable patients should be transported to the hospital of their choice. If the patient does not have a preference, the patient should be transported to the closest appropriate facility.

Base Hospitals

- **Renown Regional Medical Center (RRMC)**
- **Saint Mary's Regional Medical Center (SMRMC)**
- **Northern Nevada Medical Center (NNMC)**
- **Northern Nevada Sierra Medical Center (NNSMC)**
- **Renown South Meadows Medical Center (RSMMC)**
- **Reno Veteran's Administration (VA) hospital** is considered a Base Hospital ONLY for those patients needing transport to that facility.
- **Incline Village Community Hospital (IVCH)** is not a base hospital, but is an acceptable destination for patients who request it.
- **Northern Nevada ER at McCarran (NNERM)** is not a base hospital, but is an acceptable destination for patients who request it and who meet the criteria below.
- **Northern Nevada ER at Spanish Springs (NNERSS)** is not a base hospital, but is an acceptable destination for patients who request it and who meet the criteria below.
- Other out-of-area hospitals are acceptable destinations with certain restrictions (i.e. closest hospital to the scene, other appropriate facilities are not bypassed or the patient does not meet trauma criteria).

Freestanding Emergency Department Destination Criteria

- Patients who require a medical or psychiatric evaluation and do not have evidence of any potentially life-threatening illness or injury at the time of transport may be transported to a freestanding emergency department if;
- The patient has vital signs within the range below, unless accepted by the freestanding emergency department and the patient does not meet any of the following exclusions criteria:
  - Violent or uncooperative
  - Patients > 20 weeks gestation
  - Any patient in need of time-critical intervention that can be provided only at a hospital-based emergency department. For example, but not limited to, STEMI, Stroke, or ACS.
  - Any condition covered by another destination directive:

Trauma Field Triage Criteria	Stroke Protocol	Burns Protocol
Pediatric Destination Protocol	Cardiac Arrest	

- Alternate transportation and destination decisions should be consistent with medical necessity and with consideration for patient preference when the patient's condition allows.

Adult normal vital signs:

Heart Rate 50-120	Respiratory Rate 10-20	Room air pulse oximetry $\geq$ 90%
Systolic BP 90-180	Diastolic BP < 110	Baseline Mental Status

TRANSPORT REQUIREMENTS

NAC 450B.774 Procedure when patient refuses transportation to center for treatment of trauma.

1. If a patient at the scene of an injury refuses to be transported to a center for the treatment of trauma after a determination has been made that the patient's physical condition meets the triage criteria requiring transport to the center, the person providing emergency medical care shall evaluate the mental condition of the patient. If the person determines that the patient is competent, the patient must be advised of the risks of not receiving further treatment at the center.

2. If the patient continues to refuse to be transported to the center for the treatment of trauma, the person providing emergency medical care shall request the patient to sign a statement indicating that the patient has been advised of the risks of not receiving further treatment at the center and continues to refuse to be transported to the center.

3. The person providing emergency medical care shall inform a physician at the location to which the person intends to transport the patient of the patient's refusal to be transported before the person leaves the scene of the injury.

BURN CENTER

- Second and/or third degree burns > 20% body surface area (BSA).
- Second and/or third degree burns > 10% BSA in patients under 10 or over 50 years of age.
- Significant burns that involve the face, hands, feet, genitalia, perineum or major joints.
- Electrical burns, including lightning injury.
- Chemical burns.
- Circumferential burns.
- Inhalation injury.

If the patient meets the criteria AND the burns are not complicated by major trauma, initiate air ambulance response.

Patient Destination Table

	RRMC	SMRMC	NNMC	NNSMC	RSMMC	IVCH	NN ERM	NN ERSS	TFH	CTH	BMH
Acute Coronary Syndrome (Non-Stemi)	X	X	X	X	X				X	X	
STEMI	X	X	X	X						X	
Possible Stroke	X	X	X	X						X	
Pediatric Airway	X										
Obstetric Emergency	X			X					X	X	X
Neonate	X			X							
Trauma Criteria	X										
Sexual Assault	X	X	X	X	X	X	X	X	X	X	X

Destination

Patient/Family Choice – Patient/family choice should dictate hospital destination unless the patient is excluded due to clinical conditions defined below, or hospital choice is on divert status.

Trauma (Special Resources) – Patients who meet Trauma Criteria shall be transported to the closest Level 1 or 2 trauma center. In most cases, this is RRMC. If the patient (who is deemed competent) meets trauma criteria, but requests another hospital, the provider should appropriately explain the rationale for transport to the trauma center. If the patient still requests another destination, contact medical control at the closest trauma center and obtain physician approval for diversion. By air, patients less than 14 years of age who meet trauma criteria will be transported, when appropriate, to RRMC or U.C. Davis (whichever is closest).

Nearest facility – If a patient and/or family has no hospital preference, the transport shall be to the designated hospital in the catchment area. If outside the catchment zone, the closest hospital by time.

OB (Special Resources) – Within Washoe County, only NNSMC and RRMC have obstetrical services. Obstetrical patients greater than 20 weeks gestation with complaints related to their pregnancy should not be transported to NNMC, RSMMC, SMRMC, NNERM or NNERSS.

Neurological Disease/Possible Stroke (Special Resources) – Patients with stroke symptoms, with duration of symptoms less than eight hours will be transported to a Primary Stroke Center. With the exception of divert status for an internal hospital disaster; patients that meet stroke criteria cannot be diverted. Outside the Reno/Sparks area, the patient will be transported to the closest hospital. If the patient, family, or patient's physician request another hospital, the patient will be taken to the requested hospital.

Pediatrics (Special Resources) – Pediatric patients 12 years of age or younger are to be taken to Renown Regional Medical Center if they present with a need for intubation, assisted ventilation, or critical care. (Respiratory arrest goes to closest emergency department).

Neonatal (Special Resources) – Any patient 28 days of age or younger that presents with a need for intubation or bag-valve-mask ventilation will be taken to a hospital with a neonatal intensive care unit. Any patient born in the field will be taken to a hospital with a labor and delivery department. In both cases, these facilities are RRMC or NNSMC.

Other – Other acceptable reasons for destination selection are physician/facility request during an inter-facility transfer, transporting with/for another agency, such as fixed wing transfers, etc.

Sexual Assault – Victims of sexual assault who do not meet trauma triage guidelines will be transported to the closest hospital or the hospital of their choice if a medical assessment for injuries is requested. The police will be notified by the hospital for subsequent transport to the SART center upon completion of the medical evaluation and treatment.

Exceptions (Nearest facility) – Patients in cardiac arrest or who are in impending arrest, have an airway obstruction, uncontrolled hemorrhage, imminent delivery, or any condition that may be jeopardized by a longer transport are to be taken to the closest emergency department.

Acute Coronary Syndrome (Special Resources) – Any patient who meets the following criteria is taken to a hospital with interventional cardiology capabilities (RRMC, SMRMC, NNMC, NNSMC):

- 12 lead ECG shows evidence of an active STEMI AND/OR
- History of angioplasty, stent placement, or coronary artery bypass graft AND symptoms suggesting acute coronary syndrome. With the exception of divert status for an internal hospital disaster; patients that meet STEMI criteria cannot be diverted.
- Patients with chest pain and non-STEMI symptoms of acute coronary syndrome may be transported to any facility.

MCI – All hospital destinations during a declared MCI are coordinated and assigned by Medical Dispatch Facility.

Destination

Hospital Diversion – Occasionally, facilities may declare divert status for select patients. (Any facility accredited to care for STEMI or Stroke patients, cannot divert those patients, except in the case of an internal disaster.) Document the reason for the diversion and take the patient to the patient's second choice or the closest base hospital. Diversion decisions are typically made without medical control contact.

- **Closed Divert** – The hospital has no capacity/resources to accept any ambulance patient.
- **Critical Care** Divert – The hospital has no capacity/resources to accept ambulance patients who have a high probability of requiring ICU admission; ambulance patients who present in the field as high risk for potential or actual life-threatening health problems. Typically, this refers to patients who demonstrate signs and symptoms of Hemodynamic instability; acute respiratory failure; acute MI or severe CP; complete loss of consciousness or other presentations indicative of the need for critical care nursing or ICU admission. Paramedics/RNs are encouraged to contact the ED Base Station physician directly to clarify questions about any potential transport.
- **Internal Hospital Disaster** – The hospital has an in-house emergency such as a fire, electrical outage, hazmat or a major malfunction of critical equipment that may preclude the prevision of save effective care in the emergency department.
- **Specialty Service Divert** – The hospital is experiencing a temporary lapse in service or critical diagnostic equipment or a specific department is unavailable due to capacity or lack of medical personnel coverage.
- **Telemetry Divert** – Any patient who, based on their clinical presentation, is suspected to required continuous cardiac monitoring and has the potential to be admitted to a Telemetry unit, shall be diverted to the most appropriate alternative destination. Patients who are receiving cardiac monitoring solely due to procedural or protocol directive do not automatically meet this criteria.
- **ED Capacity** – The ED is over-capacity with long treatment delays in triage that could potentially jeopardize the appropriate placement of incoming ambulance patients. Treat the same as a closed divert.
- **Ambulance Divert** – If an ambulance is on a patient drop off delay due to a lack of Emergency Department beds or inadequate Emergency Department staff to accept the ambulance patient within 30 minutes of arrival, the hospital will initiate an ambulance diversion protocol for that Emergency Department. Such diversion will be remain until all wiating ambulance patients have been accepted and all ambulances have cleared. This excludes trauma, critical pediatrics, and patients in extremis.

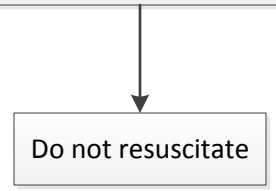
Notes:

- Divert status (except for internal hospital disaster) does not apply in cases of airway obstruction, severe shock, cardiac arrest, uncontrolled hemorrhage, imminent delivery or any patient that may be jeopardized by the diversion.
- It also does not apply to patients meeting pediatric and trauma criteria or in the case of an MCI.
- If patient is en route to a facility and the facility goes on divert, make an appropriate attempt to reroute the patient to the closest ED that is not experiencing diversion. Should that not be possible, due to the patient's condition or other circumstance, the patient in transport will not be rerouted and will proceed to the specific ED that was originally identified.
- If a patient demands transport to a hospital on diversion, or if the patient is refusing transport if they will not be taken to their hospital of choice because of the diversion, the patient will be taken to their hospital of choice. Make every effort to inform the patient of the need to go to a hospital not on divert and document the conversation.

DNR/POLST

Valid POLST indicating DNR or State issued DNR:

- Official document with both patient/legal representative and physician signature on site
- Faxed, copied or electronic version legal and valid
- Verify patient identification
- Verbal instructions from family or friends DO NOT qualify as valid DNR/POLST



Pearls:

- DNR/POLST is **INVALID** if patient indicates they wish to receive life-resuscitating treatment. Document presence of order and how they indicated it was to be revoked. Relay information to future medical providers.
- Family, cannot revoke DNR/POLST unless they hold DPOA/legal guardianship.
- Document presence of a DNR/POLST form with patient's name, physician name and license number if documented.
- POLST provides instruction of degree of resuscitation.
- Nevada providers can accept DNR/POLST of other states.
- If there is concern about the validity of the DNR/POLST begin BLS and contact **Medical Control**.

A Patient Care Record (PCR) will be completed for each incident/patient encounter, in accordance with current agency Policy.

Per the Nevada Administrative Code 450B.180 "Patient" means:
Any person who is sick, injured, wounded, or otherwise incapacitated or helpless and who is carried in an ambulance or air ambulance or is cared for by an emergency medical dispatcher, emergency medical responder, emergency medical technician, advanced emergency medical technician, paramedic or registered nurse.

When providing patient care activities prior to the arrival of the transporting agency, upon the transporting agencies arrival and when prepared to transfer patient care, EMS providers shall provide a verbal report. The verbal report should reflect the patient's status, the treatments that have been accomplished and the potential treatment plan, if necessary. This transfer of care shall be documented in the Patient Care Report (PCR).

Endangerment

NRS 432B.220 Persons required to make report; when and to whom reports are required; any person may make report; report and written findings if reasonable cause to believe death of child caused by abuse or neglect; certain persons and entities required to inform reporters of duty to report.

NRS 200.5093 Report of abuse, neglect, exploitation, isolation or abandonment of older person; voluntary and mandatory reports; investigation; penalty.

Child Report (under 18)

- Contact appropriate Law Enforcement agency if immediate patient protection is needed
- Washoe County Child Protective Services: 775-785-8600
- Complete appropriate agency reporting form

Elder Report (over 59)

- Contact appropriate Law Enforcement agency if immediate patient protection is needed
- Nevada Health and Human Services Aging and Disability Services: (888) 729-0571
- Complete appropriate agency reporting form

For persons over the age of 17 whose present socioeconomic conditions could benefit from additional resources, but do not require mandatory reporting, refer to regional resources guide.

Pearl:

- If there is a high index of suspicion, report to the appropriate agency and allow them to do the investigation.

- Ambulance attendants should be aware that whenever a patient is to be transferred from one medical facility to another by EMS, the transferring physician is responsible for notifying, in advance, the receiving physician of the following:
  - Reason for transfer
  - Patient condition
  - Estimated time of arrival
- Attendant should expect that the transferring physician will provide to them the name of the receiving facility and receiving physician, a copy of any available diagnostic tests, x-rays and patient medical records prior to releasing the patient.
- Ambulance attendants should only transfer a patient whose therapy required during the transfer lies within the ambulance attendant's scope, or that the appropriate personnel (registered nurse, respiratory therapist, etc.) accompanies the patient.
- Ambulance attendants are authorized to administer or monitor all medications listed on the approved medication list as appropriate for their level of licensure and as per protocol.
- ILS and ALS ambulance attendants are authorized to administer or monitor any crystalloid IV solution during the transport.
- Arterial lines should be discontinued prior to transport unless appropriate personnel from the initiating facility accompany the patient.
- Heparin lock/implantable catheters with/without reservoirs may be closed off and left in place. If they are to be used during transport, then an IV infusion should be established.
- Orogastric or nasogastric tubes may be left in place and should either be closed off or left to suction per order of transferring physician.
- Orthopedic devices may be left in place at the ambulance attendant's discretion as to ability to properly transport the patient with existing devices(s) in place.
- Trained personnel authorized operate the apparatus should accompany any patient requiring mechanical ventilation during transport. If the patient will require manual ventilatory assistance, at least two persons shall be available to attend to the patient.
- Transport of patient with IV antibiotic:
  - Obtain and document name of antibiotic
  - Obtain and document dose and rate of administration
  - If unfamiliar with antibiotic, ask about any specific side effects
  - Monitor medication to ensure proper administration rate during transport
  - Monitor patient for signs and symptoms of any side effect and/or allergic reactions such as nausea/vomiting, diarrhea, changes in LOC, rashes, swelling, SOB, or changes in BP. If any changes noticed; discontinue IV, initiate appropriate treatment, document changes, and inform staff at receiving facility.

Minors

Except for circumstances specifically prescribed by law, a minor is not legally competent to consent to (or refuse) medical care. A "minor" is any person under the age of 18.

An "emancipated minor" is an minor who is at least 16 years of age, who is married or living apart from his or her parents or legal guardian, and who is a resident of the county (NRS 129.080) that petitioned the juvenile court of that county for a decree of emancipation.

Life-Threatening Situation

Immediate treatment and/or transport to a medical facility should be initiated

Non-Life-Threatening Situation

If a minor has any illness or injury, EMS personnel should make a reasonable attempt to contact a parent or other legally qualified representative before initiating treatment or transport. If this is not possible, EMS personnel should transport the patient to the closest hospital with "implied consent." Parental consent is not needed for care in non- life-threatening situations when:

- Minor is emancipated
- Parent has given written authorization to procure medical care to any adult (18 or over) taking care of the minor
- Minor is an alleged victim of sexual assault
- Minor seeks prevention or treatment of pregnancy or sexually transmitted infection

Minors who Refuse Care

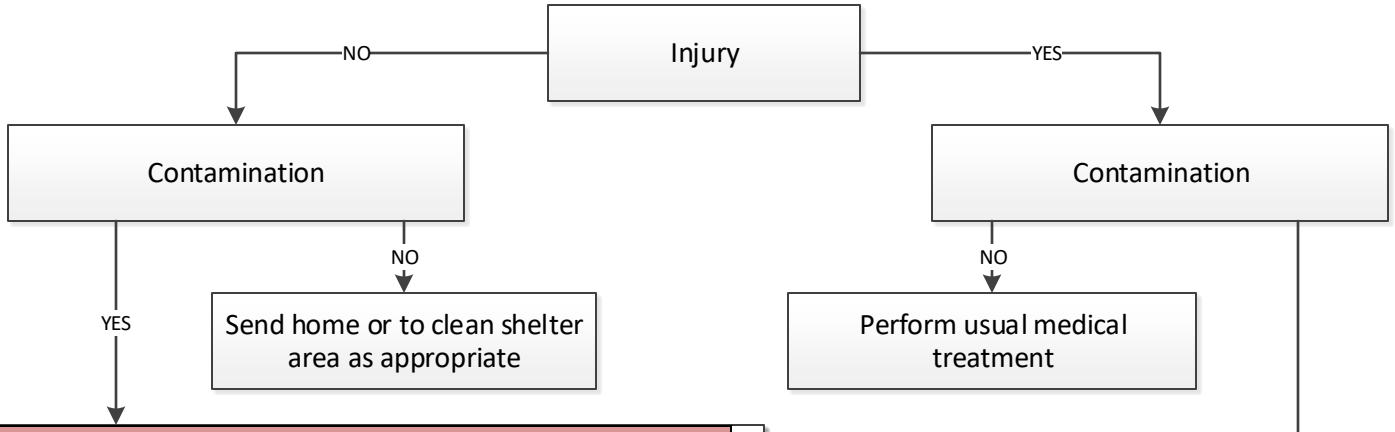
If a non-emancipated minor refuses any indicated treatment or transport, EMS field personnel should:

- Attempt to contact parents or other legally qualified representative for permission to treat and transport the minor
- Contact appropriate law enforcement agency and request that the patient be taken into temporary custody in order that treatment or transport can be instituted
- Contact base hospital and apprise them of the situation

Zone	Dose Rate (mR=millirad, R=rad)
Safe	Less than 1 mR/hour
Rescue Perimeter	Less than 10 mR/hour
Rescue Zone	10–10,000 mR/hour (0.01-10R/hour)
Maximum Exposure/Turn Back Rate	
5 R – general operations total dose	Greater than 10 R/h (30 min of non-lifesaving activities)
25 R – lifesaving total dose	Greater than 100 R/h (15 min of lifesaving activities)

Radiation initial victim care:

Do not survey victims with serious injury on-scene, control clothing or cocoon and EMS transport per usual trauma protocols.



Beta / Gamma:	
Less than 10,000 cpm	Home with decon card
10,000 – 25,000 cpm	Dry decon kit / clothing control
Greater than 25,000 cpm	Consider wet decon if weather permits, otherwise dry, re-survey after decon
Greater than 100,000 cpm	Refer to medical facility
* cpm = counts per minute	
Write cpm on patient's arm in permanent marker	

Alpha emitter – NO portal monitors – check facial areas with alpha-capable survey meter and note on victim card / arm where contamination present

YES

Patient	
Green	Yellow / Red (serious injury)
Refer to hospital after clothing removal. May consider initial wet wound decon at scene based on resources	Usual triage / treatment / transport priorities – do NOT survey on scene– hospitals will screen after stabilized– control clothing or cocoon

Unsolicited Medical Intervention

Once a physician has identified him/herself as such on scene, thank them for their offer of assistance. Then advise him/her that you are operating under the authority of the State of Nevada and under protocols approved by the State of Nevada, which does not allow you to take an order for care from any physician other than an on-duty base station physician or your Medical Director. You are also delivering care under the authority of a Medical Director and standing medical orders.

To avoid confusion and expedite patient care, no individual should intervene in the care of the patient unless the individual is:

- Requested by the attending EMS provider
- Is authorized by the base station physician
- Is capable of delivering more extensive emergency medical care at the scene

If the on-scene physician assumes patient management, he/she accepts responsibility for patient care until the transfer of care is made to the receiving hospital's physician. This requires the physician to accompany the patient to the emergency department.

If the physician assumes this responsibility, he/she must document this by handwriting their note on a hospital chart form upon arrival at the Ed and sign accordingly. The completion of the physician's note will become part of the patient's hospital record, and the medic should document the completion of this note in the patient's ePCR along with the physician's name and medical license number, if possible. The narrative of the ePCR should reflect what care was performed by the physician upon assuming care.

A physician who has initiated care of a patient before arrival of EMS personnel has accepted responsibility for the management of the patient. EMS personnel should offer all appropriate assistance and support within their scope of practice. Consultation with the base physician should be made to manage conflicts in patient management.

If a physician other than the EMS Medical Director assumes case of the patient, use agency specific procedures for reporting.

Appendix A:

Medications

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Adult Medications

Washoe County Regional Protocols

The following are the authorized medications used by EMS providers in Washoe County. Licensed EMS providers working under the agency permit are authorized, within their level of certification and training, to administer medications as directed by the written treatment protocols.

It is important to note that some dosages and processes vary on an agency basis. It is imperative that each EMS provider is aware of their agency's internal procedures.

Medication	Indication/Protocol	Dose/Route
Acetaminophen	**A)** Pain Management **B)** Sepsis (Fever)	**A) 1000 mg PO/IV** **B) 1000 mg PO**
Adenosine	**A)** Cardiac - Narrow Complex Tachycardia	**A) 6 mg rapid IVP followed by 20 mL flush, repeat 12 mg x 2 PRN**
Albuterol	**A)** Respiratory Distress /Asthma/COPD/Reactive Airway Disease **B)** Allergic Reaction/Anaphylaxis **C)** Hyperkalemia	**A) 2.5 mg/3 cc Nebulized repeat PRN** **B) 2.5 mg/3 cc Nebulized repeat PRN** **C) 2.5 mg/3 cc Nebulized repeat PRN**
Amiodarone	**A)** Cardiac – Arrest (pVT, VF) **B)** Cardiac - Wide Complex Tachycardia	**A) 300 mg IV/IO, may repeat 150 mg for sustained VT/VF in 3-5 min** **B) 150 mg IV/IO over 10 min**
Aspirin	**A)** Acute Coronary Syndrome (Suspected)	**A) 324 mg PO**
Atropine Sulfate	**A)** Cardiac - Bradycardia **B)** Overdose/Poisoning (Organophosphate Poisoning)	**A) 1.0 mg IVP, may repeat q 3-5 min to max 3 mg** **B) 1-2 mg q 3-5 mins until secretions cease**
Calcium Chloride	**A)** Hyperkalemia **B)** Overdose/Poisoning (Calcium Channel Blocker OD **Call for order**)	**A) 5-10 mL 10% slow IV/IO over 5 min** **B) 250-500 mg slow IV/IO**
Dextrose	**A)** Hypoglycemia	**A) Oral Glucose 15 gm PO PRN** **B) 12.5-25 gm D50% IV/IO, reassess/repeat PRN** **AND/OR** **125 mL D10% IV/IO, reassess/repeat PRN**
Diltiazem	**A)** Cardiac - Narrow Complex Tachycardia **Call for order**	**A) 15-20 mg IV/IO over 5 min; after 15 min, if not resolved, 20-25 mg over 5 min** **Maintenance infusion 5-15 mg/hr titrated to heart rate**
Diphenhydramine	**A)** Allergic Reaction/ Anaphylaxis/Dystonia	***A)*** **25-50 mg IV/IM/PO for *Mild Allergy/Anaphylaxis*** **25-50 mg slow IV push for *Moderate or Severe Allergy/Anaphylaxis*** **25-50 mg IM/IV for *Dystonia***
Dopamine Hydrochloride	**A)** Shock - Cardiogenic **B)** Cardiac - Bradycardia **C)** Cardiac - Post Arrest Care	**A) 5-20 mcg/kg/min IV/IO infusion** **B) 2-10 mcg/kg/min IV** **C) 5-10 mcg/kg/min IV**

Medication	Indication/Protocol	Dose/Route
Dropiderol	**A)** Behavioral Emergency **B)** Nausea/Vomiting	**A) 2.5-5 mg slow IV/IO/IM q 5 min; max 10 mg** **B) 0.625-1.25 mg slow IV/IO/IM may repeat x1 in 10 min** **<u>Geriatric:</u>** **0.625 mg slow IV/IO/IM may repeat x1 in 10 min**
Duoneb	**A)** Respiratory Distress	**A) 0.5 mg IPRATROPRIUM and 3.0 mg ALBUTEROL SULFATE in 3 mL**
Epinephrine	**A)** Cardiac - Arrest (VF, pVT, TdP, Asystole) **B)** Allergic Reaction/ Anaphylaxis **C)** Respiratory Distress	**A) 1 mg 1:10,000 IV/IO q 3-5 mins; ETT 2.5 mg 1:1,000** **B) <u>Moderate Allergic Reaction</u>:** **0.3 mg 1:1,000 IM** **<u>Severe Allergic Reaction:</u>** **0.1 mg 1:10,000 IV repeat x 3 followed by 100 mL NS.** **C) 0.3-0.5 mg 1:1,000 IM; 0.1 mg IV 1:10,000 repeat as needed, max 0.3 mg**
Epinephrine Infusion	**A)** Cardiac - Bradycardia **B)** Cardiac - Post Arrest Care **C)** Sepsis **D)** Shock - Cardiogenic	**A) 2-10 mcg/min IV/IO infusion** **B) 2-10 mcg/min IV/IO infusion** **C) 2-10 mcg/min IV/IO infusion** **D) 2-10 mcg/min IV/IO infusion**
Etomidate	**A)** Sedation **B)** Medication Assisted Intubation	**A) 0.15 mg/kg IV/IO may repeat once if inadequate sedation** **B) 0.3 mg/kg IV/IO may repeat one time to a max total dose of 0.6 mg/kg**
Fentanyl	**A)** Pain Management **B)** Medication Assisted Intubation	**A) 0.5-1.5 mcg/kg IV/IO/IN/IM, may repeat q 5 min** **B) 1-3 mcg/kg IV/IO**
Furosemide	**A)** Pulmonary Edema	**A) 40 mg IV or double home dose up to 80 mg IV**
Glucagon	**A)** Hypoglycemia **B)** Overdose/Poisoning (Beta Blocker Overdose **Call for order**)	**A) 1 mg IM** **B) 3-5 mg IV/IO**
Haloperidol	**A)** Behavioral Emergency	**A) 5-10 mg IV/IM q 5-10 mins, max 15 mg**
Hydrocortisone Sodium Succinate	**A)** Acute Adrenal Crisis	**A) 100 mg IV/IO/IM; IM is preferred method of administration**
Hydroxocobalamin (Cyanokit)	**A)** Smoke Inhalation (Suspected Cyanide Poisoning)	**A) 5 gm IV over 15 minutes**
Ibuprofen	**A)** Pain Management	**A) 600 mg PO**
Ipratropium Bromide	**A)** Respiratory Distress	**A) 0.5 mg/2.5 mL 2nd and 3rd HHN**

Medication	Indication/Protocol	Dose/Route
Ketamine	**A)** Behavioral Emergency	**A) 1 mg/kg IV may repeat once after 5 minutes; or 3 mg/kg IM; Max dose 300 mg**
	B) Pain Management	**B) 0.3 mg/kg IV/IO/IM/IN may repeat q 10 min as needed; Max dose 30 mg**
	C) Sedation	**C) 1 mg/kg IV/IO may repeat once after 5 minutes; 3 mg/kg IM as single dose**
	D) Medication Assisted Intubation	**D) 1-3 mg/kg IV/IO**
Ketorolac (Toradol)	**A)** Pain Management	**A) 15 mg IV/IM may repeat 1 time**
Levophed	**A)** Cardiac – Post Arrest Care	**A) 2 – 20 mcg/min IV/IO infusion**
	B) Sepsis	**B) 2 – 20 mcg/min IV/IO infusion**
	C) Shock - Cardiogenic	**C) 2 – 20 mcg/min IV/IO infusion**
Lidocaine	**A)** Cardiac – Arrest (pVT, VF) ***Routine use of Lidocaine not recommended***	**A) 1-1.5 mg/kg IV/IO, followed by 0.5-0.75 mg/kg IV/IO q 5 min to 3 mg/kg max** **If patient converts, Lidocaine Infusion 2-4 mg/min IV/IO; ETT 3 mg/kg, repeat once.**
	B) Cardiac – Wide Complex Tachycardia	**B) 1-1.5 mg/kg IV/IO slow push; maintenance infusion 2-4 mg/min**
Magnesium Sulfate	**A)** Cardiac - Torsades de Pointes	**A) 2 gm IV/IO over 5 mins**
	B) Respiratory Distress	**B) 2 gm IV over 20 mins**
	C) Seizure (Suspected Eclamptic Seizure)	**C) 4 gm IV/IO over 20 mins**
Methylprednisolone	**A)** Respiratory Distress	**A) 125 mg IV/IO**
	B) Allergy/Anaphylaxis	**B) 125 mg IV/IO**
	C) Acute Adrenal Crisis	**C) 125 mg IV/IO/IM**
Metoprolol	**A)** Acute Coronary Syndrome (STEMI patient with SBP> 140 & HR >100 **Call for order**)	**A) 5 mg slow IV push**
	B) Cardiac – Narrow Complex	**B) 5 mg IV/IO**
	C) Acute Aortic Dissection **Call for order**	**C) 5 mg slow IV push**
Midazolam (Versed)	**A)** Behavioral Emergency	**A) 2-5 mg slow IV/IO/IM/IN q 5 minutes, titrated to effect, total dose 10 mg**
	B) Sedation (Cardioversion, Pacing, Post-Intubation, Anxiety)	**B) 0.5 mg-5 mg IV/IO/IM/IN**
	C) Seizures	**C) 2-5 mg IV/IO/IM/IN q 5 min, max total dose 10 mg**
	D) Medication Assisted Intubation	**D) 2-10 mg IV/IO may repeat with 2-5mg IV/IO if inadequate relaxation**
	E) Hypothermia Post ROSC	**E) 2-5 mg IV/IO; titrate to effect**
Morphine Sulfate	**A)** Pain Management	**A) 1-5 mg IV/IO q 10 mins**
Naloxone (Narcan)	**A)** Poisoning/Overdose	**A) 0.5 mg-2 mg IV/IO/IM/IN may repeat to max total dose of 10 mg**
Nitroglycerin	**A)** Acute Coronary Syndrome	**A) If SBP > 100: 0.4 mg SL, may repeat q 5 min until pain free, consider 1 inch NTG paste if transport time > 15 mins**
	B) Pulmonary Edema	**B) If systolic BP:** **> 100, 0.4 mg SL q 5 min** **≥ 160, 0.8 mg SL q 5 min** **If diastolic BP > 100: 1.6 mg SL** **1 inch NTG paste if SBP ≥ 100**

Medication	Indication/Protocol	Dose/Route
Nitrous Oxide	**A)** Pain Management	**A) As long as patient is able to follow directions, if available**
Ondansetron (Zofran)	**A)** Nausea/Vomiting	**A) 4 mg IV/IO/IM/PO, may repeat once**
Oxytocin	**A)** Childbirth - Uncontrolled Postpartum Hemorrhage	**A) IV infusion 20 units in 1000 mL NS; Give 10 units (500 mL) over 10-20 minutes, then maintenance infusion 2.5 units (125 mL) per hour**
Promethazine (Phenergan)	**B)** Nausea/Vomiting	**B) 12.5 mg deep IM, may repeat x 1 in 15 mins** **Geriatrics:** **6.25 mg deep IM x 1, no repeat**
Sodium Bicarbonate	**A)** Crush Injury (Rhabdomyolysis Prevention) **B)** Hyperkalemia (Suspected) **C)** Overdose/Poisoning (Tricyclic Antidepressant Overdose)	**A) 1 mEq/kg in 1000 mL NS wide open** **B) 1 mEq/kg infusion over 5 mins** **C) 1 mEq/kg slow IV push**
Tetracaine	**A)** Ocular Injury	**A) 1-2 drops per eye, repeat PRN**
Thiamine	**A)** Hypoglycemia with chronic alcoholism/malnutrition	**A) 100 mg slow IV/IM**
Tranexamic Acid	**A)** Shock – Hemorrhagic **B)** Traumatic Cardiac Arrest	**A) 1 g slow IV/IO push over 1-2 minutes** **B) 1 g IV/IO**

Pediatric Medications

The following are the authorized medications used for pediatric patients by EMS providers in Washoe County. Licensed EMS providers working under the agency permit are authorized, within their level of certification and training, to administer medications as directed by the written treatment protocols.

It is important to note that some dosages and processes vary on an agency basis. It is imperative that each EMS provider is aware of their agency's internal procedures.

Medication	Indication/Protocol	Dose/Route
Acetaminophen	**A)** Pediatric Fever **B)** Pain Management and Sedation	**A) 15 mg/kg PR/PO** **B) 15 mg/kg PO**
Adenosine	**A)** Cardiac - Narrow Complex Tachycardia	**A) 0.1 mg/kg rapid IVP followed by 10 cc flush, repeat 0.2 mg/kg x 2 PRN**
Albuterol	**A)** Allergy/Anaphylaxis **B)** Respiratory Distress/Asthma	**A) 2.5 mg in 3 cc Nebulized repeat PRN** **B) 2.5 mg in 3 cc Nebulized repeat PRN**
Amiodarone	**A)** Cardiac – Arrest (pVT, VF, TdP) **B)** Cardiac - Wide Complex Tachycardia	**A) 5 mg/kg IV/IO, repeat twice for sustained VT/VF; max 15 mg/kg** **B) 5 mg/kg IV/IO over 20 mins**
Atropine Sulfate	**A)** Cardiac - Bradycardia **B)** Overdose/Poisoning (Organophosphate Poisoning)	**A) 0.02 mg/kg IV/IO q 5 mins, min single dose 0.1 mg, max single dose 0.5 mg, ETT 0.04 mg/kg** **B) 0.02 mg/kg IV/IO q 3-5 mins until cessation of secretions**
Calcium Chloride	**A)** Overdose/Poisoning (Calcium Channel Blocker OD **Call for order**)	**A) 20 mg/kg slow IV/IO**
Dextrose	**A)** Hypoglycemia	**A) ≤ 28 days: D10, 2 mL/kg IV/IO/UV** **> 28 days: D10 or D25 2 mL/kg IV/IO** **Max single dose 25 gm**
Diphenhydramine	**A)** Allergy/Anaphylaxis	**A) 1 mg/kg IV/IO/IM/PO, max 25 mg for *Mild Allergy/Anaphylaxis*** **1 mg/kg IV, max 25 mg for *Moderate or Severe Allergy/Anaphylaxis***
Duoneb	**A)** Respiratory Distress	**A) 0.5 mg IPRATROPRIUM and 3.0 mg ALBUTEROL in 3 mL.**

Medication	Indication/Protocol	Dose/Route
Epinephrine	**A)** Cardiac - Bradycardia	**A) 0.01 mg/kg IV/IO q 3-5 mins, max 1 mg** **ETT 1:1000 0.1 mg/kg**
	B) Cardiac - Arrest (VF, pVT, TdP, Asystole)	**B) 0.01 mg/kg 1:10,000 IV/IO, 0.1mg/kg** **1:1,000 ETT q 3-5 mins**
	C) Allergy/Anaphylaxis	**C) <u>Moderate Allergic Reaction</u>:** **0.01 mg/kg 1:1,000 IM, max 0.3 mg** **<u>Severe Allergic Reaction</u>:** **0.01 mg/kg 1:10,000 IV/IO followed by 20 mL/kg NS, repeat PRN**
	D) Respiratory Distress/Asthma	**D) <u>Moderate</u>:** **0.01 mg/kg 1:1,000 IM q 15 mins, max 0.3 mg** **<u>Impending Respiratory Failure:</u>** **0.01 mg/kg 1:10,000 IV/IO, 1 mg max** **<u>Suspected Croup:</u>** **< 6 months 0.25 mg in 3 cc NS via HHN** **> 6 months 0.5 mg in 3 cc via HHN**
	E) Neonatal Resuscitation	**E) 0.01 mg/kg 1:10,000 IV/IO q 3-5 min as needed**
Fentanyl	**A)** Pain Management	**A) 1 mcg/kg IN/IM/Slow IV/IO, may repeat q 5 as needed**
	B) Medication Assisted Intubation **Call for order**	**B) 1-3 mcg/kg IV/IO**
Glucagon	**A)** Hypoglycemia	**A) < 20 kg: 0.5 mg IM** **> 20 kg: 1 mg IM**
Hydrocortisone Sodium Succinate	**A)** Acute Adrenal Crisis	**A) 2 mg/kg IV/IO**
Hydroxocobalamin (Cyanokit)	**A)** Smoke Inhalation (Suspected Cyanide Poisoning)	**A) 70 mg/kg IV over 15 mins**
Ibuprofen	**A)** Pain Management and Sedation	**A) 10 mg/kg PO**
Ketamine	**A)** Medication Assisted Intubation **Call for order**	**A) 1-2 mg/kg IV/IO**
	B) Pediatric Pain Management	**B) 0.3 mg/kg IV/IO/IM/IN max single dose 30mg, may repeat q 15 as needed**
	C) Sedation	**C) 1 mg/kg IV/IO; may repeat once after 5 minutes; max single dose 50 mg** **OR** **3 mg/kg IM; max single dose 150 mg**
	D) Behavioral Emergencies	**D) 1 mg/kg IV/IO; may repeat once after 5 minutes; max single dose 50 mg** **OR** **3 mg/kg IM; max single dose 150 mg** **Maximum IM of 3ccs for any fluid in single muscle group**

Medication	Indication/Protocol	Dose/Route
Lidocaine	**A)** Cardiac – Arrest (pVT, VF) ***Routine use of Lidocaine not recommended***	**A) 1.0 mg/kg IV/IO If access established after ETT dose, may repeat at 1 mg/kg IV/IO (max 3 mg/kg); 2.5 mg/kg ETT, may repeat x 1. If patient converts after administration, infusion 20-50 mcg/kg/min**
Magnesium Sulfate	**A)** Cardiac – Wide Complex Tachycardia (Torsades de Pointes) **B)** Cardiac – Arrest **C)** Respiratory Distress	**A) 25-50 mg/kg IV max 2 g over 20 minutes** **B) 25-50 mg/kg IV max 2g** **C) 25-50 mg/kg in 100 mL NS IV infusion over 20 minutes, max 2 gm**
Methylprednisolone	**A)** Respiratory Distress – Impending Respiratory Failure **B)** Allergy/Anaphylaxis – Severe **C)** Acute Adrenal Crisis	**A) 1 mg/kg IV/IO** **B) 1 mg/kg IV/IO** **C) 2 mg/kg IV/IO/IM, max 125 mg**
Midazolam (Versed)	**A)** Sedation **B)** Seizure **C)** Medication Assisted Intubation **Call for order** **D)** Cardiac - Wide Complex Tachycardia **E)** Behavioral Emergency	**A) 0.2 mg/kg IV, may repeat as needed** **B) 0.2 mg/kg IV/IO/IN/IM, may repeat in 5 mins** **C) 0.2 mg/kg IV/IO; may repeat if inadequate relaxation** **D) 0.2 mg/kg IV; max single dose 5 mg** **E) 0.2 mg/kg IV/IO/IN/IM; may repeat as needed**
Morphine Sulfate	**A)** Pain Management	**A) 0.1 mg/kg IV/IO/IM max single dose 5 mg, may repeat q 10 as needed**
Naloxone (Narcan)	**A)** Poisoning/Overdose	**A) 0.1 mg/kg IV/IO/IM/IN, max single dose 0.5 mg, may repeat to max dose of 10 mg**
Nitrous Oxide	**A)** Pain Management	**A) As long as the patient is able to follow directions, if available**
Ondansetron (Zofran)	**A)** Nausea/Vomiting	**A) 0.15 mg/kg IV/IO/IM up to max dose 4 mg, may repeat x 1 in 20 mins**
Tetracaine	**A)** Ocular Injury	**A) 1-2 drops per eye, repeat PRN**
Racemic Epinephrine	**A)** Respiratory Distress (Suspected Croup/Epiglottitis)	**A) < 6 months 0.25 mL/3 mL NS HHN** **> 6 months 0.5 mL/3 mL NS HHN**
Sodium Bicarbonate	**A)** Overdose/Poisoning (Tricyclic Antidepressant Overdose)	**A) 1 mEq/kg IV**

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The following section is a reference to medications included by name and dose in the Washoe County Regional protocols; the only purpose of this section is to serve as a reference for the Washoe County Regional Protocols. The formulary may contain information outside of allowed protocols. Individual agencies may or may not utilize these or other approved medications. Please refer to approved medication list included in the appendix of your agency.

ACETAMINOPHEN (TYLENOL)

Pharmacology and Actions

Thought to produce analgesia by blocking generation of pain impulses, probably by inhibiting prostaglandin synthesis in the CNS or the synthesis or action of other substances that sensitize pain receptors to mechanical or chemical stimulation. It is thought to relieve fever by central action in the hypothalamic heat-regulating center.

Indications

Fever

Contraindications/Precautions

1. Contraindicated in patients with hypersensitivity to acetaminophen.
2. Avoid concomitant use with ethanol and this increases the risk of hepatic damage.

Side Effects and Special Notes

1. Use cautiously in patients with suspected pre-existing liver disease, chronic alcohol use, or chronic hepatitis/jaundice because hepatotoxicity has occurred after therapeutic doses.
2. Many OTC products contain acetaminophen, be aware of this when calculating dosages.
3. Acetaminophen may produce false positive decreases in blood glucose levels in home monitoring systems.

ADENOSINE (ADENOCARD)

Pharmacology and Actions

1. Naturally-occurring amino acid.
2. Slows conduction through the AV node.
3. Has no effect on accessory tracks such as found in WPW or LGL syndromes.
4. Extremely short duration of action (<10 seconds).
5. May cause brief period of asystole which spontaneously reverts.
6. Almost all patients will report varying degrees of chest pressure or pain after administration of this drug.
7. Many patients will revert to the previous rhythm even after conversion to normal sinus rhythm.

Indications

Stable Narrow Complex SVT

Contraindications/Precautions

1. Second or third degree heart block, poison or drug induced tachycardia.
2. Atrial fibrillation, atrial flutter, or Ventricular Tachycardia will not be converted by Adenosine.
3. Reduce initial dose to 3 mg if given through a central line.
4. Larger doses may be required in patients taking theophylline or caffeine.

ALBUTEROL (PROVENTIL, VENTOLIN)

Pharmacology and Actions

Albuterol relaxes bronchial smooth muscle by stimulating Beta 2 adrenergic receptors.

Indications

1. Primarily used to treat bronchial asthma, COPD and reversible bronchospasm.

Contraindications/Precautions

1. Causes decrease in serum potassium and should be used with caution in patients with profound hypokalemia.

Side Effects and Special Notes

1. Adverse effects include tremor, nervousness, tachycardia, palpitations and occasionally hypertension.
2. Most patients will have a decrease in heart rate and blood pressure with relief of bronchospasm.
3. Therefore, do not withhold therapy in patients with hypertension and/or tachycardia.

AMIODARONE (CORDARONE)

Pharmacology and Actions

Considered a Class III antiarrhythmic. Complex drug with effects on Sodium, Potassium and Calcium channels as well as alpha and beta adrenergic blocking properties. Thought to prolong the refractory period and action potential duration. Amiodarone has an extremely long half-life (up to 40 days).

Indications

1. Indicated for the treatment of shock, CPR and Vasopressor refractory VF/pulseless VT.
2. Indicated in other life threatening arrhythmias like recurrent and/or hemodynamically unstable VT.

Contraindications/Precautions

1. None in VF/Pulseless VT.
2. Endotracheal administration is contraindicated.
3. May produce vasodilation and hypotension.
4. May have negative inotropic effects.
5. May produce prolonged QT interval.
6. Use with caution in the presence of renal failure.

ASPIRIN

Pharmacology and Actions

Inhibits platelet aggregation and arterial constriction by blocking formation of thromboxane A_2. This reduces overall ACS mortality, reinfarction, and CVA.

Indications

1. Indicated in all patients with ACS.
2. Indicated in any person with symptoms suggestive of ischemic pain.

Contraindications/Precautions

1. Relatively contraindicated in patients with active ulcer disease.
2. Contraindicated in patients with known hypersensitivity to aspirin.

ATROPINE

Pharmacology and Actions

Atropine is anticholinergic, inhibits acetylcholine at the parasympathetic neuroeffector junction, blocking vagal effects on the SA node; thus enhancing conduction to the AV note and increasing the heart rate.

Indications

1. Atropine is indicated for symptomatic bradycardia and bradyarrhythmias (junctional or escape rhythm).
2. It is also indicated in cases of organophosphate poisoning.
3. It can be administered prior to endotracheal intubation to diminish secretions and block cardiac vagal reflexes.
4. Excellent for vagally induced bradycardia in pediatric patient being intubated.

Contraindications/Precautions

1. The action of atropine cause mydriasis (dilated pupils).
2. Use with caution in presence of myocardial ischemia.
3. Routine use during PEA or Asystole is unlikely to have therapeutic benefit.
4. Unlikely to be effective for hypoxic bradycardia, Type II AV Block, and Third Degree with wide QRS complexes.

CALCIUM CHLORIDE

Pharmacology and Actions

Positive inotrope which increases contractility (the strength of the contraction). Stabilizes myocardial muscle membrane in the setting of hyperkalemia.

Indications

1. Known or suspected hyperkalemia.
2. Hypocalcemia.
3. As an antidote for toxic effects from calcium channel blocker and beta blocker overdose.
4. $MgSO_4$ overdose.

Contraindications/Precautions

1. Hyperkalemia due to digitalis toxicity.
2. Do not mix with Sodium Bicarbonate.

DEXTROSE

Pharmacology and Actions

Dextrose is a sugar called glucose or grape sugar containing six carbon atoms. Dextrose is important because it is the primary energy source for the brain.

Indications

1. Indicated for the treatment of known hypoglycemia.

Contraindications/Precautions

1. Contraindicated in intracranial or intraspinal hemorrhage.

Side Effects and Special Notes

1. Extremely hypertonic.
2. Should be administered into a rapid-running IV established in a large vein.
3. Inadvertent extravasation will lead to tissue sloughing and necrosis.

DILTIAZEM (CARDIZEM®)

Pharmacology and Actions

Diltiazem is a calcium channel blocking agent that inhibits the influx of calcium ions during membrane depolarization of cardiac and vascular smooth muscle. Its action is to slow AV nodal conduction and increase the AV nodal refractory period. Diltiazem slows the ventricular rate in patients with a rapid ventricular response during atrial fibrillation or atrial flutter, potentially converts SVT to normal sinus rhythm, and decreases total peripheral resistance in both systolic and diastolic blood pressure.

Indications

1. Narrow complex atrial fib/flutter with rapid ventricular rate (>150 bpm)
2. SVT refractory to Adenosine. Use after Adenosine for refractory reentry SVT with narrow QRS and adequate blood pressure.

Contraindications/Precautions

1. Patients with impaired left ventricular function or heart failure.
2. Complete heart block.
3. Recently (within past 1 hours) received IV ß-blocker.
4. Patients with WPW and Afib.
5. Sick sinus syndrome.
6. Vtach, wide complex tachycardia, drug/poison induced tachycardia
7. Cautious use in patients with CHF, monitor for signs of pulmonary edema.
8. Cautious use in patients who are already taking antihypertensive medications, monitor for hypotension.

Side Effects and Special Notes

1. Hypotension
2. Bradycardia
3. Heart block

DIPEHNHYDRAMINE HYDROCHLORIDE (BENADRYL)

Pharmacology and Actions

Diphenhydramine competes with histamine for H1 receptor sites on effector cells. Prevents, but does not reverse histamine-mediated responses, particularly histamine's effects on the smooth muscle of the bronchial tubes, gastrointestinal tract, uterus and blood vessels.

Indications

1. One of the most widely used antihistamines for the treatment of anaphylaxis and several allergic reactions.
2. Also used to treat motion sickness and extrapyramidal symptoms.

Contraindications/Precautions

1. Contraindicated in acute asthmatic attack.
2. Should be used cautiously in glaucoma, asthmatic, hypertensive or cardiac patients.

Side Effects and Special Notes

1. Adverse reactions include drowsiness, occasional nausea and dry mouth.
2. Used with Epinephrine in severe anaphylaxis (if not contraindicated).

DOPAMINE HYDROCHLORIDE (INTROPIN)

Pharmacology and Actions

Dopamine is the endogenous catecholamine precursor of norepinephrine. It releases norepinephrine and displays direct and indirect alpha and beta 1 effects. It increases cardiac output and usually elevates heart rate and systolic pressure-systemic vascular resistance is not increased except at higher dosages. It dilates renal and splenic vascular beds by activation of dopaminergic receptors. The alpha effects predominate at higher doses (usually greater than 10 mcg/kg per minute, marked individual variation exists and dose must be guided by clinical response).

Indications

1. Indicated for augmentation of cardia performance and/or renal blood flow in shock and hypoperfusion syndromes due to septicemia, cardiac failure, cardiac surgery, renal failure, trauma and acute myocardial infarction.

Contraindications/Precautions

1. Contraindicated in patients with uncorrected tachyarrhythmias, ventricular/fibrillation or known hypersensitivity.
2. Should be used cautiously in patients with peripheral vascular disease.
3. Any underlying hypovolemia must be corrected, if possible, prior to use.

Side Effects and Special Notes

1. The principal adverse effects include headache, anxiety, tachycardia, chest pain, hypotension, nausea and vomiting.
2. Carefully monitor blood pressure, ECG and urine output throughout the infusion.
3. Extravasation requires discontinuation of the drug.

DOPAMINE INFUSION CHART

Use this chart if you are using a Dopamine concentration of 1600 mcg/ml.
Match the weight with the dose and set your dial a flow or pump.

Example: A patient who weighs 50 kg needs dopamine at 5 mcg/kg/min. You need to administer 9 ml/hr or 9 gtts/min using 60 gtts/ml set.

	Dopamine dosage in mcg/kg/min					
Weight (kg)	**5**	**6**	**7**	**8**	**9**	**10**
50	9	11	13	15	17	19
55	10	12	14	16	19	21
60	11	13	16	18	20	22
65	12	15	17	19	22	24
70	13	16	18	21	24	26
75	14	17	20	22	25	28
80	15	18	21	24	27	30
85	16	19	22	25	29	32
90	17	20	24	27	30	34
95	18	21	25	28	32	36
100	19	22	26	30	34	37
105	20	24	28	31	35	39
110	21	25	29	33	37	41
115	22	26	30	34	39	43
120	22	27	31	36	40	45
125	23	28	33	37	42	47
130	24	29	34	39	44	49

DROPERIDOL

Pharmacology and Actions

Droperidol is a butyrophenone closely related to Haloperidol. It produces a dopaminergic blockage, a mild alpha-adrenergic blockage, and causes peripheral vasodilation. Its major actions are sedation, tranquilization, and potent anti-emetic effect. Onset 3-10 minutes after IM administration. Duration: 2-3 hours.

Indications

1. Sedation of severely agitated/combative patients
2. Nausea/Vomiting

Contraindications/Precautions

1. Contraindicated for patients presenting with suspected MI, uncorrected hypotension, respiratory depression, known hypersensitivity.
2. Avoid use with known prolonged QT interval
3. Use caution with frail or elderly patients who are at increased risk for prolonged and over-sedation as well as increased risk of hypotension.
4. Do not administer concurrently with Haloperidol or Promethazine.

Side Effects and Special Notes

1. Can cause transient hypotension and/or tachycardia that is usually self-limiting. May be treated with IV fluids.
2. Some patients may experience akathisia manifested as restlessness, hyperactivity, or anxiety following administration. This can be treated with Diphenhydramine.
3. Extra-pyramidal reactions have been noted hours to days after administration and can be treated with Diphenhydramine.

EPINEPHRINE

Pharmacology and Actions

Epinephrine is an endogenous catecholamine with both alpha and beta adrenergic activity. Epinephrine increases heart rate, myocardial contractility, pulse pressure, cardiac output, systolic and diastolic blood pressure, automaticity, systemic vascular resistance and myocardial work and oxygen consumption. Epinephrine also lowers the threshold for defibrillation and causes bronchodilation.

Indications

1. Indicated in cardia arrest, post cardiac arrest, sepsis, bradycardia, distributive shock, bronchial asthma, croup, anaphylaxis and hypotension.

Contraindications/Precautions

1. Age > 45, or previous cardiac history (in some settings, consult medical control).
2. Epinephrine will lower the threshold for ventricular fibrillation. Epinephrine's positive inotropic and chronotropic effects can precipitate or exacerbate cardiac ischemia.

Side Effects and Special Notes

1. Epinephrine should not be mixed in the same infusion bag with alkaline solutions or be given concurrently with sodium bicarbonate.
2. May be given via an endotracheal tube if IV access is not available.
3. Higher doses may be required to treat poison or drug induced shock.

EPINEPHRINE INFUSION CHART

Amount to infuse ml/hr		
Dose Ordered (mcg/min)	1mg/100 mL or 10 mg/1000 mL (10 mcg/mL)	2 mg/250 mL or 4 mg/500 mL (8 mcg/mL)
2	12	15
3	18	23
4	24	30
5	30	38
6	36	45
7	42	53
8	48	60
9	54	68
10	60	75

ETOMIDATE (AMIDATE)

Pharmacology and Actions

Etomidate is an imidazole derivative that is primarily a hypnotic. It is the most hemodynamically stable of the currently available induction agents. At induction doses of 0.3 mg/kg, it has minimal respiratory or myocardial depression. Etomidate attenuates the rise in intracranial pressure that is associated with laryngoscopy and intubation. It does this by decreasing cerebral blood flow and cerebral metabolic oxygen demand without adversely affecting cerebral perfusion pressure. In healthy, hemodynamically stable patients, the recommended induction dose of 0.3 mg/kg should be used. The onset is 20-30 seconds with full recovery in 7-14 minutes.

Indications

1. Medication assisted intubation
2. Sedation

Contraindications/Precautions

1. Know hypersensitivity to the drug.

Side Effects and Special Notes

1. Etomidate does not release histamine, but it can cause nausea and vomiting, pain on injection, myoclonic movement, and hiccups.
2. A small number of patients will experience pain on injection of Etomidate. This is due to the diluent (propylene glycol) and can be lessened considerably if administered in a large vein, and in conjunction with a rapid intravenous fluid rate.
3. The myoclonic activity following Etomidate injections is secondary to brain stem stimulation and can be mistaken for grand mal seizures.
4. Hiccups are usually not a concern during RSI, but should be recognized as a side effect of Etomidate administration.
5. The best known and most concerning side effect of Etomidate is its reversible blockade of 11 beta-hydroxylase, which decreases both serum cortisol and aldosterone levels. This side effect is much more common with continuous infusions of Etomidate in the intensive care unit setting rather than with a single dose injection utilized for RSI.

FENTANYL

Pharmacology and Actions

Binds with opiate receptors in the CNS, altering both perception of and emotional response to pain through an unknown mechanism.

Indications

1. Relief of severe acute and severe chronic pain.

Contraindications/Precautions

1. Contraindicated in patients with known tolerance to the drug.
2. Additive effects when given with CNS depressants, general anesthetics, hypnotics, MAO inhibitors, other narcotic analgesics, sedatives, and tricyclic antidepressants.

Side Effects and Special Notes

1. For better analgesic effect, administer drug before patient has intense pain.
2. Monitor respiratory status carefully, drug may cause respiratory depression. Naloxone may be used to reverse Fentanyl.
3. Rapid administration may cause chest wall rigidity.

FUROSEMIDE (LASIX)

Pharmacology and Actions

Furosemide is a diuretic that works in the loop of henle. The onset of diuresis following IV administration is within five minutes, with the peak effect occurring within the first half hour.

Indications

1. Furosemide is the indicated therapy in acute pulmonary edema.

Contraindications/Precautions

1. Contraindicated in anuria and in patients with known hypersensitivity to the drug.
2. Excessive diuresis may result in dehydration and reduction in blood volume with circulatory collapse.
3. Patients should be observed for signs of fluid and electrolyte imbalances, namely hyponatremia, hypochloremic alkalosis and hypokalemia.

Side Effects and Special Notes

1. Digitalis therapy may exaggerate metabolic effects of hypokalemia, especially with reference to myocardial activity.

GLUCAGON

Pharmacology and Actions

Raises blood glucose level by promoting catalytic depolymerization of hepatic glycogen to glucose.

Indications

1. Hypoglycemia.
2. Beta blocker and calcium channel blocker overdose/poisoning.

Contraindications/Precautions

1. Known hypersensitivity to the drug.

Side Effects and Special Notes

1. Use only the diluent supplied by the manufacturer.
2. Unstable hypoglycemic diabetic patients may not respond to Glucagon, and will require IV dextrose.
3. As soon as patient is alert enough to swallow, follow up with a meal, orange juice, D50, etc.

HALOPERIDOL (HALDOL)

Pharmacology and Actions

The precise mechanism of action has not been clearly established. A butyrophenone that probably exerts its antipsychotic effects by blocking postsynaptic dopamine receptors in the brain.

Indications

1. Management of psychotic disorders.

Contraindications/Precautions

1. Known hypersensitivity to medication.
2. Coma or CNS depression.

Side Effects and Special Notes

1. Extrapyramidal reactions
2. Tardive dyskinesia
3. Sedation
4. Tachycardia
5. Hypotension
6. Dry mouth

HEPARIN

Pharmacology and Actions

Prevents conversion of fibrinogen to fibrin and prothrombin to thrombin by enhancing the inhibitory effects of antithrombin III.

Indications

1. Deep vein thrombosis
2. Pulmonary emboli
3. Myocardial infarction
4. Open heart surgery
5. Disseminated intra vascular clotting syndrome (DIC)
6. Atrial fibrillation with embolization
7. Prevention of DVT/P.E.

Contraindications/Precautions

1. Hypersensitivity
2. Hemophilia
3. Leukemia with bleeding
4. Peptic ulcer disease
5. Severe hepatic disease
6. Severe HTN

Side Effects and Special Notes

1. Monitor for bleeding gums, petechiae, ecchymosis, black tarry stools, hematuria, epistaxis and decrease in blood pressure. The antidote for heparin overdose is Protamine.
2. Heparin may increase the action of Diazepam.
3. Digitalis, tetracyclines and antihistamines decrease the action of Heparin.
4. Oral anticoagulants, salicylates, dextran, steroids and nonsteroidal anti-inflammatories increase the action of Heparin.

HEPARIN
WEIGHT ADJUSTED PROTOCOL

The following chart gives the Heparin infusion rate in both units/hr and mL/hr with a Heparin concentration of **50 units/mL** (i.e., 25,000 units in 500 mL).

Units/Hr	mL/Hr
600	12
700	14
800	16
900	18
1000	20
1100	22
1200	24
1300	26
1400	28
1500	30
1600	32
1700	34
1800	36
1900	38
2000	40
2100	42
2200	44
2300	46
2400	48
2500	50
2600	52
2700	54
2800	56
2900	58
3000	60

HYDROCORTISONE SODIUM SUCCINATE (SOLU-CORTEF)

Pharmacology and Actions

Is a systemic corticosteroid that inhibits multiple inflammatory processes. Solu-Cortef produces multiple glucocorticoid and mineralocorticoid effects. It has a half-life of 8-12 hours and is metabolized by the liver.

Indications

1. Adrenal insufficiency (congenital adrenal hyperplasia)
2. Corticosteroid responsive conditions

Contraindications/Precautions

1. Systemic fungal infections
2. Premature infants and neonates
3. Idiopathic thrombocytopenic purpura
4. Hyperglycemia
5. Hypersensitivity
6. Decreases immune function
7. Contains benzyl alcohol

Side Effects and Special Notes

1. Sodium retention, CHF, edema
2. Hyperglycemia
3. Hypertension
4. Hyperkalemia
5. N/V
6. Headache
7. Anaphylaxis

HYDROXOCOBALAMIN (CYANOKIT®)

Pharmacology and Actions

Hydroxocobalamin, the active ingredient in CYANOKIT®, forms a strong bond with cyanide, forming nontoxic cyanocobalamin, and another form of vitamin B12, which is then safely excreted in the urine.

Indications

1. Exposure to fire or smoke in an enclosed area indicated by the presence of soot around the mouth, nose or oropharynx.
2. Suspected Cyanide poisoning.

Contraindications /Precautions

1. Cyanokit® has proven to be incompatible with other drugs; therefore, it should not be administered simultaneously in the same line as other medications, consider initiating two IV lines.
2. Possible allergic/anaphylactic reaction.
3. Substantial increases in blood pressure may occur following Cyanokit therapy.

IBUPROFEN

Pharmacology and Actions

Exact mechanism unknown; inhibits cyclooxygenase, reducing prostaglandin and thromboxane synthesis.

Indications

1. Pain management, anti-inflammatory, fever

Contraindications/Cautions in patients with

1. NSAID or ASA allergy or hypersensitivity
2. Pregnancy with greater than 20 weeks gestation
3. Active internal hemorrhage or active peptic ulcers
4. Perioperative patients
5. Renal or Heptic impairment
6. Hx of bleeding disorders or previous GI bleeding
7. Recent CVA
8. Chronic alcohol use

Side Effects and Special Notes

GI bleeding/ulcers, hepatotoxicity, nephrotoxicity, nausea, abdominal pain, dizziness, rash

IPRATROPIUM BROMIDE (ATROVENT)

Pharmacology and Actions

Anticholinergic bronchodilator

Indications

1. Relief of acute bronchospasm (reversible airway obstruction).

Contraindications/Precautions

1. Allergy or known hypersensitivity to Atrovent.
2. Hypersensitivity to Atropine (chemically related).
3. Those with a history of hypersensitivity to soya lecithin or related food products, such as soy beans and peanuts.
4. Use with caution in patients with heart disease, hypertension, glaucoma and the elderly.
5. Ipratropium may worsen the condition of glaucoma if it gets into the eyes. Having the patient close their eyes during nebulization may prevent this.

Side Effects and Special Notes

1. More common: cough, dry mouth or unpleasant taste.
2. Less common or rare: vision changes, eye burning or pain, dizziness, headache, nausea, nervousness, palpitations, sweating, trembling, increased wheezing or dyspnea, chest tightness, rash, hives or facial swelling.

KETAMINE

Pharmacology and Actions

Dissociative Anesthetic Agent. It has amnestic and sedative effects, but it also provides analgesia. It has a rapid onset of 45-60 seconds when given IV. Its duration of action is 5-10 minutes IV, or 12-25 minutes IM. Ketamine preserves respiratory drive and is unlikely to cause hypotension. The patient may exhibit behavior consistent with an awake state (eyes open, responds to pain) after receiving Ketamine, but is dissociated from the noxious event, making Ketamine a suitable choice for short-term sedation and analgesia.

Indications

1. Short-term management of pain and anxiety related to noxious events such as pain related injury, immobilization, movement of patient, or manipulation of injured extremities.
2. Indicated for sedation, behavioral emergencies, and medication assisted intubation.

Contraindications/Precautions

1. KETAMINE is inadvisable in those with evidence of head trauma, traumatic mechanism with high likelihood of head trauma or patients with potential acute intracranial pathology otherwise (intracranial hemorrhage, CVA).

Side Effects and Special Notes

1. Patients may have a re-emergence reaction when recovering from Ketamine that manifests as hallucinations or drams that may be unpleasant. In general, this is reduced by concomitant use of benzodiazepines.
2. May cause hypersecretion.
3. Avoid rapid administration of Ketamine IV, which can cause HTN or respiratory depression.

KETOROLAC (TORADOL)

Pharmacology and Actions

KETOROLAC works by reducing hormones that cause inflammation and pain in the body. KETOROLAC is non-narcotic and is not habit-forming. It is 30 times the strength of aspirin. It will not cause physical or mental dependence, as narcotics can. However, KETOROLAC is sometimes used together with a narcotic to provide better pain relief than either medicine used alone.

Indications

Moderate to severe pain secondary to kidney stones, back pain or pain associated with isolated trauma.

Contraindications/Precautions

Do not administer KETOROLAC if the patient has:

1. An allergy to aspirin (ASA) or NSAIDs
2. Woman who is or suspects she may be pregnant
3. Severe renal disease or a kidney transplant
4. A bleeding or clotting disorder
5. Multi-system trauma
6. Injury to the head
7. Suspected or the possibility of developing internal bleeding
8. Stomach ulcer or history of gastrointestinal bleeding
9. Is a possible surgical candidate for presenting injury or illness

Special Considerations

Consider contacting online Medical Control if the patient has a history of liver disease, chronic alcohol abuse, or history of asthma as KETOROLAC can worsen these conditions.

Side Effects

Nausea, vomiting, gastric distress, dizziness, dry mouth, abnormal taste in mouth, blurred vision and drowsiness.

LIDOCAINE (XYLOCAINE)

Pharmacology and Actions

Lidocaine attenuates phase four diastolic depolarization and decreases automaticity. It raises the ventricular fibrillation threshold.

Indications

1. Acute management of ventricular arrhythmias.
2. Prophylactic use in the acute myocardial infarction remains a subject of debate.
3. Prevents the increased intracranial pressure associated with rapid sequence intubation.

Contraindications/Precautions

1. Use with caution in patients with severe heart block (may block the only pacemaker present).

Side Effects and Special Notes

1. Overdose of Lidocaine usually results in signs of central nervous system or cardiovascular toxicity. Airway maintenance should be ensured in the event of seizures or signs of respiratory depression. Seizures may be treated with benzodiazepines. Should circulatory depression occur, vasopressors may be used. Clinical signs of CNS toxicity may include light-headedness, nervousness, apprehension, euphoria, confusion, dizziness, drowsiness, tinnitus, blurred or double vision, vomiting, sensations of heat, cold or numbness, twitching, tremors, convulsions, unconsciousness, respiratory depression and arrest.
2. Cardiovascular reactions are usually depressant in nature and are characterized by bradycardia, hypotension and cardiovascular collapse.

LEVOPHED

Pharmacology and Actions

For blood pressure control in certain acute hypotensive situations.
As an adjunct in the treatment of cardiac arrest and profound hypotension.
Stimulates alpha and beta-1 adrenergic receptors; produces inotropic and vasopressor effects.

Indications

1. Hypotension absent hypovolemia
2. Sepsis (shock)
3. Cardiogenic shock
4. Distributive shock

Contraindications/Precautions

1. Volume depletion
2. Vascular thrombosis
3. Profound Hypoxia
4. Hypercarbia
5. Hypersensitivity

Side Effects and Special Notes

HTN, arrhythmias, bradycardia, ischemic injury, asthma exacerbation, anaphylaxis and extravasation necrosis.
Category C. Use with caution if benefits outweigh risks. Animal studies show risk in pregnancy.
Not recommended in children.

1. Cardiovascular reactions are usually depressant in nature and are characterized by bradycardia, hypotension and cardiovascular collapse.

LIDOCAINE JELLY

Pharmacology and Actions

Elicits local anesthesia.

Stabilizes the neuronal membrane by inhibiting the ionic fluxes required for the initiation and conduction of impulses.

Indications

1. Anesthetic lubricant for intubation

Contraindications/Precautions

1. Hypersensitivity

Side Effects and Special Notes

1. Cardiovascular (with excessive systemic absorption)
2. CV depressant
3. Bradycardia
4. Hypotension
5. Cardiovascular collapse

MAGNESIUM SULFATE

Pharmacology and Actions

Magnesium Sulfate acts as a smooth muscle relaxant, especially for uterine smooth muscle and a mild bronchodilator. Also acts as an antiarrhythmic agent, which may be effective in decreasing arrhythmias related to acute myocardial infarction. Acts as a central nervous system depressant and may cause respiratory depression or apnea.

Indications

1. Pregnancy induced hypertensive disorders (preeclampsia or eclampsia) to prevent convolutions. May transiently lower blood pressure at therapeutic levels. Can also be used as a tocolytic in pre-term labor.
2. May be used in irretractable ventricular tachycardia/fibrillation, especially in Toursade's de Pointes.
3. Ventricular arrhythmias associated with digitalis toxicity.
4. Respiratory distress secondary to asthma refractory to other medications.

Contraindications/Precautions

1. Use cautiously in patients with renal failure.

Special Notes and Side Effects

1. Monitor respiratory rate every 5 minutes. For respiratory depression, discontinue Magnesium infusion and maintain airway/ventilation as needed.
2. Monitor blood pressure every 15 minutes.
3. Monitor reflexes every 30 minutes. If absent or hyper-reactive, after standard regimen, call physician.
4. 1-2 grams of Calcium Gluconate or Calcium Chloride is the physiologic antidote for Magnesium Sulfate toxicity.

METHYLPRENISOLONE (SOLU MEDROL)

Pharmacology and Actions

Methylprednisolone is a synthetic steroid with potent anti-inflammatory properties. It is related to the natural hormones secreted in the adrenal cortex.

Indications

1. Severe allergic reactions, impending respiratory failure associated with asthmatic attacks and bronchospasm associated with COPD that do not respond to other treatments.

Contraindications/Precautions

1. Contraindicated in known hypersensitivity.
2. Should be used with caution in pregnant patients and patients with GI bleeding. It should also be used with caution in patients with diabetes mellitus, as hypoglycemic responses to insulin and oral hypoglycemic agents may be blunted. Hold steroids for suspected pneumonia, CHF or “metabolic hyperventilation” (DKA, sepsis, etc.).
3. A single dose is all that should be given in the prehospital setting. Long-term steroid therapy can cause gastrointestinal bleeding, prolonged wound healing, and suppression of adrenocortical steroids.

Side Effects and Special Notes

1. Fluid retention
2. Congestive heart failure
3. Hypertension
4. Abdominal distention
5. Vertigo
6. Headache
7. Nausea
8. Malaise
9. Hiccups

Potassium-depleting agents may potentiate hypokalemia induced by corticosteroids.

The pharmacological effects of steroids are vast and complex. Effective as anti-inflammatory agents, they are used in the management of allergic reactions, asthma, and anaphylaxis. Methylprednisolone is considered an intermediate-acting steroid with a plasma half-life of 3 to 4 hours.

METOPROLOL

Pharmacology and Actions

Selectively antagonizes beta 1-adrenergic receptors. Half-life is 3-7 hours.

Indications

1. AMI

Contraindications/Precautions

1. Hypersensitivity to drug/class/component
2. Sinus bradycardia
3. HR < 45 bpm (MI, acute)
4. AV block, 2nd or 3rd degree
5. AV block, PR interval > 0.24 sec (MI, acute)
6. Heart failure, uncompensated
7. Heart failure, mod-severe (MI, acute)
8. SBP < 100 mmHg (MI, acute)
9. Cardiogenic shock
10. Sick sinus syndrome w/o pacemaker

Side Effects and Special Notes

1. CHF
2. Heart block
3. Bradycardia, severe
4. Raynaud's phenomenon
5. Bronchospasm
6. Hypersensitivity reaction
7. Hepatitis (rare)

MIDAZOLAM (VERSED)

Pharmacology and Actions

Versed is a short acting benzodiazepine with CNS depressant and anti-seizure actions.

Indications

1. Agent for short periods of sedation and to reduce agitation
2. Seizures

Contraindications/Precautions

1. Use with caution in patients with respiratory compromise/distress or decreased mental status.
2. Should not be used on patients with known hypersensitivity to benzodiazepine or narrow angle glaucoma.

Side Effects and Special Notes

1. Constant monitoring of cardiopulmonary status of patient required.
2. For short term sedation and not the drug of choice when long term sedation is required.

MORPHINE SULFATE

Pharmacology and Actions

Acts as a narcotic analgesic and produces central nervous system depression. It also manifests mild hemodynamic effects. It increases venous capacitance and systemic vascular resistance, relieving pulmonary congestion.

Indications

1. Relief of severe acute and severe chronic pain.
2. May be used for ischemic pain in ACS unrelieved by nitrates.
3. Acute cardiogenic pulmonary edema.

Contraindications/Precautions

1. Use caution in the patient with RV infarction.

Side Effects and Special Notes

1. The most common side effects are respiratory depression and orthostatic hypotension (which can be corrected with IV fluids).
2. Monitor for respiratory depressions, continuous pulse oximetry may aid in assessing respiratory depression.
3. Naloxone should be readily available for administration in the event of severe respiratory depression.

NALOXONE (NARCAN)

Pharmacology and Actions

Displaces previously administered opioid narcotic analgesics from their receptors (competitive antagonism).

Indications

1. Known or suspected opioid induced respiratory depression.

Contraindications/Precautions

1. May cause withdrawal symptoms in addicted individuals.

Side Effects and Special Notes

1. Administer slowly in an amount sufficient to reverse respiratory depression only. Given rapidly, a patient may awaken suddenly and become extremely combative.
2. The duration of the narcotic may exceed that of Naloxone. Re-administration may be necessary.

NITROGLYCERINE (NITROSTAT, TRIDIL)

Pharmacology and Actions

Relaxation of vascular smooth muscle is the principal action of Nitroglycerin. Nitroglycerin produces, in a dose related manner, dilation of both the arterial and venous beds. Venous dilation promotes peripheral pooling of blood and decreases venous return to the heart, reducing left ventricular end-diastolic pressure (preload). Arteriolar relaxation reduces systemic vascular resistance and arterial pressure (afterload). Myocardial oxygen consumption is decreased. Elevated central nervous and pulmonary capillary wedge pressures, pulmonary vascular resistance and systemic vascular resistance are also reduced.

Indications

1. Myocardial ischemia
2. Malignant hypertension
3. Congestive heart failure

Contraindications/Precautions

1. Contraindicated in patients with known hypersensitivity, hypotension, uncorrected hypovolemia, increased intracranial pressure, inadequate cerebral circulation, and pericardial tamponade.
2. Contraindicated with phosphodiesterase inhibitors (tadalafil within 48 hours and sildenafil/vardenafil within 24 hours).
3. Contraindicated in patients with RV infarction.
4. Maintain systolic and limit blood pressure drop to 30% of pre-treatment blood pressure.

Side Effects and Special Notes

1. Headache is the most frequent adverse reaction.
2. If severe hypotension and reflex tachycardia occurs, decrease Nitroglycerin or temporarily discontinue it and place the patient in a supine position with legs elevated.
3. Sublingual Nitroglycerin can be beneficial in the clinical diagnosis of cardiac disease. Sublingual Nitroglycerin is the initial drug of choice in the patient with classic cardiac pain.
4. Intravenous Nitroglycerin should be administered by an infusion pump.
5. Blood pressure should be taken and recorded every five minutes while titrating Nitroglycerin, then every 15 minutes while infusion continues. Monitor ECG continuously.

NITROGLYCERINE DRIP CHART

Amount to infuse in ml/hr		
Dose Ordered (mcg/min)	50 mg/250 ml 100 mg/500ml (200 mcg/ml)	100 mg/250 ml 200 mg/500 ml (400 mcg/ml)
10	3	1.5
20	6	3
30	9	4.5
40	12	6
50	15	7.5
60	18	9
70	21	10.5
80	24	12
90	27	13.5
100	30	15
110	33	16.5
120	36	18
130	39	19.5
140	42	21
150	45	22.5
160	48	24
170	51	25.5
180	54	27
190	57	28.5
200	60	30

NITROUS OXIDE

Pharmacology and Actions

A selective antagonist of a specific type of serotonin receptor located in the CNS at the area postrema (chemoreceptor trigger zone) and in the peripheral nervous system on nerve terminals of the vagus nerve. The drug's blocking action may occur at both sites.

Indications

1. Broad, first-line for rapid pain relief.

Contraindications/Precautions

1. Head injury with altered level of consciousness
2. Recent ingestion of alcohol or illicit drugs
3. Major facial injuries or trauma
4. Thoracic trauma
5. Known or suspected bowel obstruction
6. Known or suspected cardiac ischemic chest pain
7. Patient developing cyanosis or respiratory distress with use of Nitrous Oxide – oxygen
8. Inability to comply with instructions regarding use of Nitrous Oxide – oxygen
9. Pulse oximeter ready indicating oxygen saturation less than 90% prior to Nitrous Oxide – Oxygen mixture use

Side Effects and Special notes

1. Euphoria
2. Disassociation

ONDANSETRON (ZOFRAN)

Pharmacology and Actions

A selective antagonist of a specific type of serotonin receptor located in the CNS at the area postrema (chemoreceptor trigger zone) and in the peripheral nervous system on nerve terminals of the vagus nerve. The drug's blocking action may occur at both sites.

Indications

1. Prevention of nausea and vomiting.

Contraindications/Precautions

1. Known hypersensitivity to the medication.

Side Effects and Special Notes

1. Use cautiously in patients with liver failure.

OXYMETAZOLINE HYDROCHLORIDE (AFRIN)

Pharmacology and Actions

Thought to cause local vasoconstriction of dilated arterioles, reducing blood flow and nasal congestion.

Indications

1. Nasal congestion, prior to nasal intubation to lessen the chance of causing and epistaxis.

Contraindications/Precautions

1. Known hypersensitivity to the drug.
2. Use cautiously in patient with hyperthyroidism, cardiac disease, hypertension or diabetes mellitus.

Side Effects and Special Notes

1. Bottle is single patient use only and needs to be replaced after each use.

OXYTOCIN (PITOCIN)

Pharmacology and Actions

Selectively stimulates the smooth musculature of the uterus resulting in increased uterine muscle tone, increased frequency of contractions and increased strength of contractions.

Indications

1. In hospital - normal postpartum – to produce uterine contractions.
2. Postpartum hemorrhage – to control excessive uterine bleeding when related to recent childbirth.

Contraindications/Precautions

1. Known hypersensitivity to the drug and with retained placenta.

Side Effects and Special Notes

1. Side effects include: Cardiac dysrhythmia, pelvic hematoma, hypertonicity of the uterus, uterine rupture, nausea, vomiting and fluid retention.
2. Monitor vaginal drainage and uterine tonicity during administration.

PROMETHAZINE (PHENERGAN)

Pharmacology and Actions

Promethazine is a phenothiazine and acts as an antiemetic.

Indications

1. Prophylaxis and treatment of nausea and vomiting.

Contraindication/Precautions

1. Contraindicated in patients with central nervous system depression.

Side Effects and Special Notes

1. Most common adverse effects are sedation, drowsiness and dry mouth.
2. May cause dystonia and extrapyramidal reactions. Treat both with 25-50 mg Diphenhydramine IV.

POTASSIUM CHLORIDE

Pharmacology and Actions

Potassium is a mineral that the human body requires for proper functioning of neuromuscular tissues.

Indications

1. Used for the treatment of hypokalemia.

Contraindications/Precautions

1. Severe renal impairment with oliguria and anuria.
2. Hyperkalemia

Side Effects and Special Notes

1. Adverse reactions to Potassium Chloride administration include peripheral vascular collapse with hypotension, cardiac arrhythmias, heart block, possible cardiac arrest, EKG changes (prolonged P-R interval, wide QRS, ST segment depression, tall tinted T waves), nausea, vomiting, abdominal pain and pain at the infusion site.
2. Potassium Chloride should be administered via an infusion pump.
3. 1-3cc of 1% Lidocaine may be added directly to the Potassium Chloride solution to decrease pain at the infusion site.
4. Patients receiving Potassium Chloride at rates greater than 20 mEq per hour should have continuous ECG monitoring.
5. Treat hyperkalemia: 1 gm Calcium Chloride + 5 units regular insulin + 50 gm Glucose

RACEMIC EPINEPHRINE (VAPONEPHRIN)

Pharmacology and Actions

Effects are those of Epinephrine. Inhalation causes local effects on the upper airway as well as systemic effects from absorption. Vasoconstriction may reduce swelling in the upper airway and beta effects on bronchial muscle may relieve bronchospasm.

Indications

1. Treatment of life-threatening airway obstruction in croup.

Contraindications/Precautions

1. Use with caution in patients with cardiovascular disorders including coronary insufficiency and hypertension.

Side Effects and Special Notes

1. Adverse effects of Racemic Epinephrine include tremor, nervousness, tachycardia, palpitations and occasionally hypertension. Since these are also symptoms of hypoxia, be sure to monitor the patient closely.
2. Racemic Epinephrine is heat and light sensitive. If the solution is discolored, it should be discarded.
3. Clinical improvement in croup can be dramatic after administration of Racemic Epinephrine. Rebound worsening of airway obstruction can occur, however, in one to four hours. Many patients require admission after administration.

TETRACAINE

Indications

1. Provides anesthesia prior to ophthalmic procedures, such as irrigation.

Contraindications/Precautions

1. Known hypersensitivity

Side Effects and Special Notes

1. Use cautiously in patients with cardiac disease and hyperthyroidism.
2. Not for long term use.
3. Warn patient not to rub or touch eye while it is anesthetized. This may cause corneal abrasion and greater pain when anesthesia wears off.
4. Do not use discolored solution.

SODIUM BICARBONATE

Pharmacology and Actions

Sodium Bicarbonate reacts with hydrogen ions to form water and carbon dioxide to buffer metabolic acidosis.

Indications

1. Acidosis that accompanies shock and cardiac arrest.
2. Treatment of tricyclic antidepressant overdose.
3. Preexisting or life threatening hyperkalemia.
4. Crush injuries to prevent Rhabdomyolysis.

Side Effects and Special Notes

1. Sodium Bicarbonate can inactivate the catecholamines norepinephrine, dopamine and epinephrine. Do not mix with IV solutions of these agents.

THIAMINE (VITAMIN B1)

Pharmacology and Actions

Combines with Adenosine Triphosphate to form a coenzyme necessary for carbohydrate metabolism.

Indications

1. Administered concurrently with D50 in intoxicated or malnourished patients to prevent Wernicke's encephalopathy.

Contraindications/Precautions

1. Known hypersensitivity to the drug.

Side Effects and Special Notes

1. IV use: dilute before giving. Administer cautiously - give patient a skin test before therapy if he has a history of hypersensitivity reactions.
2. Thiamine malabsorption is most likely in alcoholism, cirrhosis or GI disease.

TRANEXAMIC ACID

Pharmacology and Actions

Tranexamic acid is a synthetic analog of the amino acid lysine. It serves as an antifibrinolytic by reversibly binding four to five lysine receptor sites on plasminogen. This reduces the conversion of plasminogen to plasmin, preventing fibrin degradation and preserving the framework of fibrin's matrix structure.

Indications

1. Suspected or impending hemorrhagic shock with time of onset < 3 hours

Contraindications/Precautions

1. Known hypersensitivity
2. No other contraindications in the acutely hemorrhaging patient
3. Rapid administration may cause hypotension

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Appendix B:

Community Resources

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Call 2*1*1 or text your 5-digit zip code to TXT211 (898211) for resources in your community.

ADOLESCENTS

Big Brothers Big Sisters of N. Nevada 775-352-3202
Big Brothers Big Sisters – *Carson City and Douglas* 775-283-0606

Child Find *Established to help identify the un-served child* 775-327-0685

Child Nutrition & School Health Access to variety of nutritious foods promoting student health 775-687-9144

Children's Cabinet – *Reno* 775-856-6200
Children's Cabinet – *Carson City* 775-684-0880
Counseling, respite care, day care, parenting classes, family counseling

Eddy House *Walk-in Center: 888 Willow St, Reno* 775-384-1129
Center for youth who aged out of foster services. Walk-in center for runaways, homeless, foster, & at-risk youth in downtown Reno

Family Resource Center Info 775-856-6200
Centers: N. Valleys, NE Reno, Sparks and Sun Valley

Jan Evans Juvenile Justice Center – *650 Ferrari McLeod Blvd., Reno* 775-325-7800
(Espanola 325-7801 or 325-7811 24-hours)
Juvenile Services – *Carson City* 775-887-2033
Juvenile Probation and Detention – *Douglas County* 775-586-7210

National Runaway Switchboard 800-786-2929
Here for you when looking for a place to run away or if you're a run away and ready to go home

Nevada Youth Empowerment *Transitional housing for youth 18-24 years old* 775-747-2073

OUR Center S*upport center for LGBTQA community, 1745 South Wells Ave, Reno* 775-624-3720

Safe Talk for Teens 775-823-2700
Safe confidential support for teens, provides resources for additional support

Solace Tree 775-324-7723
Support for grieving children, teens and families, 1300 Foster Drive, Ste 200, Reno

Tag – Transgender Allies Group *316 California Ave, Ste 146, Reno* See Emails
Director: sherrie@transgenderalliesgroup.org or brooke@transgenderalliesgroup.org

Quest Counseling 775-786-6880
Adolescent substance abuse and family services, 3500 Lakeside Ct #101, Reno

Washoe County Social Services *350 S Center St, Reno* 775-785-8600
Carson City, Douglas, Storey County Social Services 775-684-4400
Investigates reports of child abuse, emergency shelter for children

Willow Springs *960 Edison Way, Reno* 775-858-3303
Residential treatment center for youth & teens Washoe County

AIDS/HIV

Northern Nevada Hopes *W. 5th St., Reno* *Counseling, referrals, medical services*	775-786-4673
Sida Informacion/Spanish Aids Hotline	800-344-7432
National Aids Hotline	800-232-4636
OUR Center *www.OurCenterReno.org 1754 S Wells Ave, Reno*	775-624-3720

ALCOHOL – DRUGS

Al-Anon adult/children	775-348-7103
Alcohol & Drug Treatment Hotline	800-ALCOHOL
Alcoholics Anonymous, 24 hours – *Washoe County* *AA 24 hour line can obtain bi-lingual assistance*	775-355-1151
Alcoholics Anonymous – *Carson City*	775-882-0443
Bristlecone Family Resource Centers *Help with drugs, alcohol, gambling and tobacco*	775-954-1400
Northern Nevada Al-Anon Info *Help for families and friends of alcoholics*	775-348-7103
NV DUI Task Force *Provide resources to DUI victims/families*	775-348-4664
ReSTART *Substance abuse counseling, life skills, parenting classes, transitional/supportive housing, limited rental funds*	775-324-2622
Ridge House *Resident and outpatient treatment*	775-322-8941
Salvation Army – *Washoe County* Salvation Army – *Carson City* *Disaster assistance to needy families, substance abuse, basic services*	775-688-4555 775-887-9120
The Empowerment Center *Safe & sober housing & support services*	775-853-5441
Well Care *Community triage center for those participating in outpatient services*	775-538-6700
Step 2 Rehabilitation for Women	775-787-9411
Substance Abuse Prevention	775-825-4357

BEREAVEMENT – GRIEF

Bereavement: the process of living with the loss of a loved one. Grief is the deep and poignant reaction to death – unique to each person.

Circle of Life Community Hospice *Grief support group with various meeting days & times*	775-827-2298
Compassionate Friends – *Washoe County*	775-750-7005
Compassionate Friends – *Carson City (Thomas)* *Grief/bereavement support for the loss of a child of any age, compassionatefriends.org*	775-461-0362
First Candle National Warmline *For parents who have lost an infant to SIDS, miscarriage or still birth* *Sara Brundage hablar espanol – available after 2 pm west coast time*	800-221-7437
Grief Recovery Group *$40 per week*	775-972-9408
Grief Share Meeting Groups:	
Centerpoint Christian Fellowship – *Dayton*	775-246-4108
Colony Community Fellowship	775-324-0324
Grace Community Church	775-747-9000
Hilltop Community Church – *Carson City*	775-267-3020
Hope Community Church	775-284-4673
Reno Christian Fellowship	775-853-4234
Sparks Christian Fellowship	775-331-2303
Renown Hospice *Support group meets bi-weekly*	775-982-2828
Renown Spiritual Office	775-982-7729
St. Mary's Medical Center Spiritual Office *Support at schools & community sites for people of all ages*	775-770-3734
St. Mary's Hospice (N. Nevada - Tears and Rainbows)	775-770-3081
Summit View Hospice *Grief & bereavement support open to all*	775-636-9598
The Solace Tree *Support for grieving children, teens, and their families, facing or living with death*	775-324-7723
Vitas Healthcare *Grief & bereavement resources & support groups (virtual & phone-in)*	866-489-0583

BOARD UP SERVICES

Local fire departments provide board up services for fire victims. See Clean-Up Services for abatement companies providing board-up.

Affordable Glass	775-527-3615

BURIAL & CREMATION ASSISTANCE

Each agency provides similar services for vastly different prices. Call around.
Burial Assistance for infants (0-1 year): www.thetearsfoundation.org

Washoe County Social Services – Burial Assistance *Provides cremation/burial assistance to indigent families*	775-328-2700
Funeral Consumers Alliance of Nevada (FCAN) *FCAN provides listings for Carson City & Truckee as well as price Information for burial, cremation & memorial parks*	775-329-7705
Affinity Burial & Cremation *644 S Wells Ave, Reno*	775-322-9200
Capitol City Cremation and Burial Society *1614 North Curry Street, Carson City*	775-882-1766
Eastside Memorial Park (Douglas County) *1600 Buckeye Rd, Minden*	775-782-2215
Fitzhenry's *3945 Fairview Dr, Carson City*	775-882-2644
John Sparks Memorial Society *644 Pyramid Way, Sparks*	775-331-1112
LaPaloma Burial & Cremation *5301 Longley Lane #180, Reno* LaPaloma Funeral Services Northwest *437 Stoker Ave, Reno*	775-827-3700 775-335-1010
Lone Mountain Cemetery (Carson City) *1044 Beverly Drive, Carson City*	775-887-2111
Masonic Memorial Gardens *437 Stoker Avenue, Reno*	775-329-2635
McFarlane Mortuary *887 Emerald Bay Rd, S Lake Tahoe*	530-541-3095
Mountain View Mortuary & Cemetery *425 Stoker Avenue, Reno*	775-788-2199
Neptune Society *5890 S. Virginia St Ste 4E, Reno*	775-525-3533
Northern Nevada Memorial *8056 S. Virginia St #3, Reno*	775-322-2772
O'Brien, Rogers and Crosby (Walton's) *600 W. 2nd Street, Reno*	775-323-6191
Our Mother of Sorrows Catholic Cemetery 2700 N. Virginia, Reno	775-323-0133
Ross Burke and Knobel – Reno (Walton's) *2155 Kietzke Lane, Reno* Ross Burke and Knobel – Sparks (Walton's) *1538 C Street, Sparks*	775-323-4154 775-329-0440
Sierra Memorial Gardens *142 Bell Street, Reno*	775-323-1835
Simple Cremation *7111 S Virginia St Ste A-17, Reno* Simple Cremation *1016 N. Rock Boulevard, Sparks*	775-324-3720 775-335-0001
Truckee Meadows Cremation & Burial *616 S. Wells Ave., Reno*	775-324-4611
Veteran's Memorial Cemetery *14 Veteran's Way, Fernley*	775-575-4441
Walton's Funerals and Cremations - Chapel of the Valley *1281 N. Roop Street, Carson City* Walton's Sierra Chapel *875 W. 2nd Street, Reno* Walton's Funeral Home – Sparks *1745 Sullivan Lane, Sparks*	775-882-4965 775-323-7189 775-359-2210

CLEAN UP SERVICES

A-1 Clean the Scene	888-867-2141
Affordable Glass	775-527-3615
Belfor Property Restoration	775-424-3200
Bio-One & Trashout	775-686-3174
Coit – Certified Techs Clean Them All	775-322-4266
Empire Cleaning & Restoration Services *(24-hour)*	775-747-8441
H2O Environmental Trauma & Crime Scene	775-351-2237
Nevada Water & Fire Restoration	775-856-6666
ServPro of Southwest Reno *(Reno/Sparks/Carson)*	775-852-6480

CLOTHING – FOOD – SHELTER

American Red Cross	775-856-1000
Carson Valley Community Food Closet	775-782-3711
Catholic Community Services of Northern Nevada *Basic services agency open to all who qualify financially*	775-322-7073
Food Bank of Northern Nevada	775-331-3663
Hosanna Home *Christian home for WOMEN in transition*	775-232-5416
Salvation Army – *Washoe County* Salvation Army – *Carson City & Douglas County* *Disaster assistance to needy families, substance abuse, basic services*	775-688-4555 775-887-9120

CORONER – MEDICAL EXAMINER

Carson City Sheriff's Office	775-887-2500
Douglas County Sheriff's Sub-Station	775-782-9925
Storey County Sheriff's Office	775-847-0959
Washoe County Medical Examiner (Coroner)	775-785-6114

COUNSELING – MENTAL HEALTH

Most of the following providers offer a sliding fee scale. Call 211 for more listings.

Alliance Family Services		775-337-2394
American Comprehensive Counseling Services (ACCS) – *Washoe County*		775-356-0371
American Comprehensive Counseling Services (ACCS) – *Carson City*		775-883-4325
Crisis Support Services of NV *24/7 free, confidential, & caring support to those in crisis*		800-273-8255
www.cssnv.org or text CARE to 839863		775-784-8090
Healing Minds C*ounseling services www.healingminds.com/grief-counseling-reno-nv*		775-448-9760
Empowerment Therapy Group – *Jeanette Bussey*		775-232-7659
Family Counseling & Consumer Credit Services *(East Plumb Ln) -$80 initial visit, sliding scale*		775-329-0623
Frank Lemus, *Spanish speaking counselor*		775-323-1330
Mojave Adult, Child & Family Services		775-334-3033
Non Profit Affiliate of UNR School of Medicine for children & families with serious mental illness or psychiatric disability		
National Alliance on Mental Illness – Warmline *Stigma-free non-crisis phone service you can call or text*		775-350-7977
www.namiwesternnevada.org/online-resources		
National Association on Mental Illness NV Chapter		775-322-1346
Available to speak to callers & provide weekly support group(s) for mentally ill people & their friends and families		
Northern Nevada Adult Mental Health		775-688-2001
In-patient, outpatient, outpatient pharmacy, rehab & counseling programs		
Northern Nevada HOPES *Medical & mental health*		775-786-4673
Quest Counseling		775-786-6880
Adolescent substance abuse & family services		
Reno-Sparks Gospel Mission Counseling		775-323-0386
Extension 13 or 0 – Low cost Christian counseling, individual and families		
Something To Believe In Counseling *Specializing in EMDR therapy & PTSD*		775-870-6552
Veteran's Center *Many resources for VETERANS including PTSD counseling*	775-323-1294 or	988 x1
Confidential chat: veteranscrisisline.net or text 838255		
Victims of Crime Treatment Center *Multiple locations*		775-682-8684

COURTS

Carson City Justice Court *885 E. Musser Street, Ste 2007, Carson City* 775-887-2121

Nevada Department of Motor Vehicles 775-684-4368

East Fork Justice Court *1038 Buckeye Road, Minden*

Reno Justice Court *One South Sierra Street, Reno* 775-325-6501

Second Judicial District Court 775-328-3110
Family Division: One South Sierra Street, Reno; General Jurisdiction: 75 Court Street, Reno

Sparks Justice Court *630 Greenbrae Drive, Sparks* 775-353-7600

Sparks Municipal Court *1450 C Street, Sparks* 775-353-2286

Storey County District Court *26 S. B Street, Virginia City* 775-847-0969

CRISIS – DISASTER SERVICES

American Red Cross 775-856-1000

Crisis Support Services of Nevada 800-273-8255 or 775-784-8090
Referrals for people of all ages & victims of all traumas, including sexual assault, rape and individuals and families facing suicide attempt or death by suicide.

National Red Cross 800-733-2767

Red Cross Español 800-257-7575

Salvation Army 775-688-4555

Suicide Prevention Hotline 988

Veteran's Suicide Prevention Coordinator 988 x1
Confidential chat veteranscrisisline.net or text to 838255

DEATH CERTIFICATES

Birth & Death Certificates – *Washoe County - 9th & Wells in building B, Reno* 775-328-2455
Call for most current FEE for birth/death certs.

DOMESTIC VIOLENCE

Abuse and Neglect Hotline			775-785-8600
Committee to Aid Abused Women www.caaw.org			775-329-4150
Crisis Call Center	800-273-8255	or	775-784-8090
Defense Sexual Assault HOTLINE			887-995-5247
Hosanna House Female shelter (must be sober)			775-232-5416
National Domestic Violence Hotline			800-799-7233
Nevada Coalition to End Domestic & Sexual Violence			775-828-1115
Safe Embrace Family violence intervention program, 24-hour crisis intervention, support groups			775-322-3466
Sierra Community House			530-546-0952
Tahoe Safe Alliance			800-736-1060
Temporary Protection Order (TPO) Office – Washoe County			775-328-3468
Temporary Protection Order (TPO) Office – Carson City			775-884-1886
Victims of Crime Treatment Center			775-682-8684

DOMESTIC VIOLENCE SHELTERS

Committee to Aid Abused Women (CAAW)	775-329-4150
Safe Embrace	775-322-3466
Volunteers of America - *Women's Shelter*	775-329-4145
Volunteers of America - *Men's Shelter*	775-329-4141
Volunteers of America - *Family Shelter*	775-322-9574
Veteran's Shelter *non-emergency (ext. 11761)*	775-786-7200

DOMESTIC VOILENCE V.I.N.E. INFORMATION

Victim Information & Notification Everyday (VINE) 888-268-8463

Call from anywhere in Nevada for FREE ANONYMOUS information & notification on custody status of offenders. Service is available 24/7/356.
Online at www.vinelink.com

FAMILIES

Big Brothers Big Sisters of Northern Nevada	775-352-3202
Boys & Girls Club of Truckee Meadows *Before & after school care, sports leagues, education, & healthy meals for kids/teens*	775-322-9030
CARES Campus *Emergency shelter for men, women, couples, pets*	775-329-4141
Catholic Charities of Northern Nevada *St. Vincent Food Pantry: Corner of Fourth & Valley, Reno Emergency Assistance for Families, dial x230 or x221*	775-322-7073
Central Reno Family Resource Center	775-204-1408
Community Services Agency *Head Start pre-school, employment training & assistance, computer classes, etc.*	775-786-6023
Disability Resources *For adults, children and their families*	775-329-1126
Family Ties of NV *Family to family health info center (connecting special needs families to support)*	775-823-9500
Hope Springs *Bridge-housing community, pets accepted*	775-786-4673
Kids to Senior Korner *Community based outreach to families, children & seniors*	775-432-9165
Nevada Urban Indians *Native American resources/clinic*	775-788-7600
North Valleys Resource Center	775-677-5437
Northeast Reno Family Resource Center *Bernice Matthews Elem. School, El Rancho Drive, Reno*	775-353-5563
OUR Center *Support for LGBTQA community*	775-624-3720
Resettlement and Placement	775-784-7515
Salvation Army *Emergency food, clothing, antibiotics*	775-688-4559 x243
Sparks Family Resource Center	775-204-1408
Sun Valley Family Resource Center	775-204-1408
Victims of Crime Treatment Center	775-682-8684
Village on Sage Street *Transitional temp housing (18+)*	775-499-5198
Washoe County Human Services *Health, medical, housing & death related services*	775-328-2081
Washoe County Senior Services *Health, medical, housing & death related services – SENIORS*	775-328-2575
Washoe Caregivers *www.washoecaregivers.org*	775-333-5499

FIRE – SUPPORT SERVICES

American Red Cross *4750 Longley Ln Ste 101, Reno 89502*	775-856-1000
Board Up Services: 1-800-BOARDUP	800-262-7387
Carson City Fire Department *non-emergency #*	775-887-2210
City of Reno Fire Department *non-emergency #*	775-334-2300
City of Sparks Fire Department *non-emergency #*	775-353-2259
Disaster Clean Up	800-232-4636
Douglas County Fire (East Fork Station) *non-emergency #*	775-782-9040
Hazardous Materials/Washoe County Environmental	775-328-2434
Storey County Fire Department *non-emergency #*	775-847-0954
Truckee Meadows Fire Protection District *non-emergency #*	775-326-6000

HEALTH

American Foundation for the Blind				800-232-5463
American Heart Association				800-242-8721
American Kidney Fund				800-638-8299
Cancer Information Service				800-422-6237
C*A*R*E* Chest				775-829-2273
Carson City Health and Human Services				775-887-2190
Children's Tumor Foundation				800-323-7938
Community Health Alliance	775-324-2599	or	775-329-6300 or	775-825-6702
Douglas County Community Health				775-782-9038
Juvenile Diabetes Research Foundation				800-533-2873
National Alliance on Mental Illness Nevada (NAMI)				775-336-3090
National Down Syndrome Society				800-221-4602
Nevada Diabetes Association				775-856-3839
Nevada Public Health Foundation				775-884-0392
Nevada Urban Indians *Open to general public for mental/clinical/substance abuse/victim services; sliding fee*				775-788-7600
Northern Nevada HOPES *Medical & mental health*				775-786-4673
Northern Nevada Public Health				775-328-3400
Poison Control Center				775-732-4989
Prescription Discount Card - ***FREE*** *for everyone*			Pharmacies:	877-435-7977
Immediate use: ***BIN*** *610194 /* ***GROUP ID*** *39800 /* ***PCN*** *FW /* ***Cardholder ID*** *091510 / www.familywize.com*				
Renown Medical Clinic *Locust St, Reno*				775-982-5270
Ronald McDonald House Charities				775-322-4663
TMCC Disability Resource Center				775-673-7277
Veteran's Center *(Readjustment Counseling)* AFTER HOURS: 1-877-WAR-VETS (877-927-8387) or *PTSD counseling for vets*				775-323-1294
Vocational Rehabilitation for Women				775-623-6544
Washoe Caregivers *www.washoecaregivers.org*				775-333-5499

HOUSING SERVICES

CARES Campus *emergency shelter for men, women, couples, pets*	775-329-4141
Community Health Improvement Plan	775-324-2599
Eddy House *Transitional housing for youth 18-24*	775-686-6244
Healthcare for Homeless Vets *350 Capital Hill*	775-324-6600
Hope Springs *Bridge-housing community, dogs accepted*	775-786-4673
Hosanna House *Female shelter (must be sober)*	775-232-5416
Men's Crossroads *Supportive housing for men*	775-785-4006
Nevada Job Connect – *Reno*	775-284-9600
Nevada Job Connect – *Sparks*	775-284-9520
Nevada Job Connect – *Carson City*	775-684-0400
Resume assistance, computer, copier and fax for job seekers	
Nevada Youth Empowerment *Transitional housing for youth 18-24*	775-240-2195
OUR Place *Housing for women & children*	775-327-7501
Project RESTART	775-324-5166
RPD H.E.L.P. Officer Cell number	775-321-8330
Homeless Evaluation Liaison Program/Assistance in reconnecting homeless people with their support systems/families	
Reno Sparks Gospel Mission *Long-term residential housing for women*	775-323-0386
Resource Center *Mail, computer, internet, phone, benefits information and referrals*	775-657-4675
STEP 2 *Transitional housing for substance abuse history*	775-787-9411
Village on Sage Street *Transitional/tem housing (18+)*	775-499-5198
Women's Crossroads *Supportive housing for women/women with children*	775-337-4548

HOSPITALS

Carson Tahoe Regional Medical Center	775-445-8000
Carson Valley Medical Center	775-782-1500
ER @ McCarran Northwest	775-900-6700
Incline Village Community Hospital	775-833-4100
Northern Nevada Medical Center *(ER 356-4040)*	775-331-7000
Northern Nevada Sierra Medical Center *(ER 799-7399)*	775-799-7320
Renown Regional Medical Center *(Urgent Care 982-5000)*	775-982-4100
Renown South Meadows	775-982-7000
Saint Mary's Regional Medical Center *(ER 770-3188)*	775-770-3000
Veteran's Hospital *(ER x1138)*	775-786-7200

LANGUAGE

Northern Nevada International Center *www.unr.edu/languagebank*	775-784-7515

LEGAL AID

Child Welfare Services Attorneys	775-337-5700
Douglas County Public Administrator	775-267-4321
Lawyer in the Library *(10 minutes free)*	775-328-3250
Nevada Legal Services *Reno*	775-284-3492
Nevada Legal Services *Carson City*	775-883-0404
State of Nevada Public Administrator – *Carson City*	775-887-2260
Storey County District Attorney	775-847-0964
Washoe County Public Administrator	775-861-4000
Washoe County Senior Law Center	775-328-2575
Washoe Legal Services	775-329-2727

MILITARY/VETERANS

American Legion, Post 1 *Meets 1st Tuesday each month @ 7pm*		775-786-1996
American Red Cross ** (ARC) Disaster Services		877-272-7337
American Red Cross - *Reno*		775-856-1000
Counseling and Group for Veterans		775-323-1294
Day Labor Veteran Rep *420 Galletti Way, Reno*		775-687-4727
Disabled American Vets (DAV) *975 Kirman Ave 5th floor of VA Hospital*		775-321-4895
Free Bereavement		877-726-4727
Healthcare for Homeless Vets *350 Capital Hill, Reno*		775-324-6600
Nevada Department of Veterans Services *6630 s McCarran Blvd Bldg C Ste 204, Reno*		775-688-1653
Northern Nevada Veteran's Memorial Facility - *Fernley*		775-575-4441
Office of Military Legal Assistance *100 North Carson St, Carson City*		775-684-1216
Reno VA Hospital *975 Kirman Ave, Reno*		775-786-7200
Reno Vet Center *5580 Mill Street Ste 600, Reno*		775-323-1294
U. S. Army Recruiting Company Sierra Nevada		775-333-2826
VA Regional Office *5460 Reno Corporate Dr, Reno*	775-321-4885 or	775-321-4880
VA Sierra Nevada Healthcare System		775-786-7200
Veteran Resource Center *1835 Montello St, Reno*		775-432-6012
Vitality Veterans *Transitional housing for vets*		775-673-3800

***** Call ARC to notify active duty member of the military of the status of a loved one (emergency, serious illness, or death).***

Be prepared to provide the following information:

- *Name of military service member*
- *Rank and branch*
- *Social Security number*
- *Date of birth*
- *Overseas – unit*
- *Military duty address stateside - base*

PET SERVICES

A Beloved Friend's Pet Cremation *Pickup at any location & returns remains within 24 hours*	775-825-9900
Nevada Humane Society *Animal help desk*	775-856-2000 x200
Pet Loss Support Group *NW Reno Library*	775-342-7040
Shakespeare Fund *Financial assistance with pet expenses*	775-342-7040
Washoe County Animal Services *Office / dispatch*	775-322-3647
Washoe County Animal Services *Shelter facility*	775-353-8900

POLICE

California Highway Patrol	800-835-5247
Carson City Sheriff's Office	775-887-2500
Douglas County Sheriff's Office	775-782-9925
Nevada Highway Patrol	775-688-2500
Pyramid Lake Paiute Tribe Police Department	775-574-1014
Reno Police Department	775-334-2121
Reno Police Victim Services Unit (VSU)	775-657-4519
Reno Public Safety Dispatch (non-emergency)	775-334-2677
Reno-Sparks Tribal Police	775-323-2677
Reno Tahoe Airport Police	775-328-6600
Sparks Police Department	775-353-2231
Storey County Sheriff's Office	775-847-0959
Truckee Meadows Community College Police	775-674-7900
Truckee Police Department	530-550-2323
University of Nevada Reno Police Department	775-784-4013
Washoe County Sheriff's Office	775-328-3001

SENIOR CITIZEN SERVICES

Access to Healthcare			877-385-2345
Carson City Senior Center			775-883-0703
Disabled American Veterans, DAV			775-336-7053
Division for Aging Services – Reno			775-688-2964
Douglas County Community & Senior Center – Gardnerville			775-782-5500
Douglas County Senior Center – Minden			775-783-6455
Eldercare Hotline			800-677-1116
Kids to Senior Korner Community based outreach to families, children & seniors			775-432-9165
Lifeline Low cost / free lifeline systems			855-332-7799
Medicare Ship Medical help line: 877-385-2345			800-633-4227
Memory Care / Alzheimer's Association of Northern Nevada			775-786-8061
Nevada Department of Veteran Services			775-321-4880
Office of Consumer Health Assistance			888-333-1597
Sanford Center for Aging Comprehensive geriatric assessment & support center			775-784-4774
Seniors in Service: Foster grandparent program, senior companion program, caregiver voucher program			775-358-2322
Senior RX / Disability RX	866-303-6323	or	775-687-0539
Social Security Administration (SSA) 1170 Harvard Way, Reno	800-772-1213	or	888-808-5481
Tahoe-Douglas Senior Center			775-588-5140
Washoe County Senior Services			775-328-2575

Call 211 for more senior services: Adult daycare, companion programs, respite care, housing, activities, employment, Alzheimer's & dementia & chore services

SEXUAL ASSAULT – RAPE

Rape, Abuse & Incest National Network 800-656-4673

Safe Embrace Emergency shelter for female victims 775-322-3466

Sexual Assault Support Services (SASS) 800-992-5757 or 775-784-8090
Advocacy team provides immediate crisis intervention services for survivors of sexual assault, their family members & friends

Sexual Assault Survivor Group Ages 13-18 775-772-3263 or 775-322-6462
Group meets every Monday from 5:30 – 7:00 p.m. $50 / session – sliding fee. Victims of Crime funding accepted

Victims of Crime Treatment Centers 775-682-8684

SHELTERS

Cares Campus Shelter 775-329-4141

Volunteers of America - *Women's shelter* 775-329-4145

Volunteers of America – *Men's Shelter* 775-329-4141

Volunteers of America – *Family Shelter* 775-322-9574

Committee to Aid Abused Women (CAAW) 775-329-4150

SUDDEN UNEXPLAINED INFANT DEATHS

Burial assistance for infants (0-1 year): *www.thetearsfoundation.com*

Perinatal Bereavement Support Group 775-982-5769
For parents who have lost an infant due to miscarriage, stillbirth, or sudden unexplained infant death

First Candle 800-221-7437

First Candle – Kathleen 702-301-3417

Compassionate Friends – *Carol (Carson City)* 775-813-0828
Compassionate Friends – *Delores (Reno)* 775-849-1979
Support for parents who have lost a child of any age

SUICIDE – ATTEMPTS & COMPLETED

Suicide Prevention & Crisis Hotline	775-784-8090
Suicide Hotline *For anyone affected by suicide*	988
Survivors of Suicide Support *Janett, group leader & suicide survivor. Meets every Monday evening in Reno area*	775-784-8085
Veterans Suicide Support *Confidential chat veteranscrisisline.net or text to 838255*	988 x 1

VICTIM SERVICES (CRIME RELATED)

Nevada Department of Corrections Victim Advocate	775-887-3393
Sparks Police Department Victim Advocate	775-353-2217
Victims of Crime *Northern Nevada*	775-687-8428
Victims Services (VSU) – Reno Police Department	775-657-4519
VINE *24-hour inmate status hotline; information also available online at www.vinelink.com*	877-332-8463
Washoe County Sheriff's Office Victim Advocate	775-325-6454