S-SV EMS Agency

ALS/BLS FIELD MANUAL

UPDATED: 06/01/2024

Sierra-Sacramento Valley EMS Agency

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Policy Manual Update #74 effective 06/01/2024

This manual is a synopsis of the S-SV EMS Prehospital Care Policy Manual and includes pertinent S-SV EMS field policies & all treatment protocols. The policies/protocols included in this manual are current as of the date listed above. EMS personnel are responsible for all policy/protocol updates released after the printing of this manual.

Policy & Protocol Update Summary

Ref.	Title	UPDATE COMMENTS
505	Patient Destination	Due for routine review. No substantive changes.
505-A	S-SV EMS Regional Hospital Capabilities	Addition of Tahoe Forest Hospital as a Primary Stroke Center.
605	EMS Documentation	Updated language regarding PCR completion and EMS data submission processes/timelines.
803	Paramedic Scope Of Practice	Formatting changes only. No substantive changes.
852	Patient Restraint Mechanisms	Additional language regarding management of actively spitting patients.
C-1	Non-Traumatic Pulseless Arrest	Updated mechanical CPR device indication/ contraindication language. Updated language for consistency with ACLS.
C-2	Return Of Spontaneous Circulation (ROSC)	Due for routine review. No substantive changes.
C-3	Bradycardia With Pulses	Removal of morphine for TCP sedation/pain control.
C-4	Tachycardia With Pulses	Removal of morphine for pre-cardioversion sedation/pain control.
C-6	Chest Discomfort/Suspected Acute Coronary Syndrome (ACS)	Removal of morphine.
R-3	Acute Respiratory Distress	Due for routine review. No substantive changes.
M-1	Allergic Reaction/Anaphylaxis	Due for routine review. No substantive changes.
M-6	General Medical Treatment	Incorporation of nausea/vomiting treatment, expanded sepsis assessment/treatment language.
M-8	Pain Management	Removal of morphine. Revised language regarding non-traumatic related/chronic pain & acute injury treatment modalities.

Ref.	Title	UPDATE COMMENTS
E-2	Hypothermia & Avalanche/Snow Immersion Suffocation Resuscitation	Title change & additional clarification language regarding snow immersion suffocation resuscitation.
E-3	Frostbite	Updated reference to new pediatric pain management protocol numbering (M-8P).
E-4	Bites/Envenomations	Updated reference to new pediatric pain management protocol numbering (M-8P).
T-1	General Trauma Management	Updated reference to new pediatric pain management protocol numbering (M-8P).
T-3	Suspected Moderate/Severe Traumatic Brain Injury (TBI)	Updated language regarding PPV, advanced airway use and target EtCO2 Updated SBP & fluid bolus language.
T-4	Hemorrhage	Updated list of approved Hemostatic Agents. Additional TXA information in the ALS/BLS protocol.
T-5	Burns	Updated reference to new pediatric pain management protocol numbering (M-8P).
T-6	Traumatic Pulseless Arrest	New traumatic cardiac arrest protocol.
C-1N	Neonatal Resuscitation	Renumbered. Due for routine review. No other substantive changes.
C-1P	Pediatric Pulseless Arrest	Renumbered. Added EtCO2. Revised epinephrine dosing. Added narcotic OD language.
C-3P	Pediatric Bradycardia With Pulses	Renumbered. Updated O2 administration language. Added EtCO2.
C-4P	Pediatric Tachycardia With Pulses	Renumbered. Updated O2 administration language. Added EtCO2.
R-1P	Pediatric Foreign Body Airway Obstruction	Renumbered. Updated O2 administration language.
R-2P	Pediatric Respiratory Arrest	Renumbered. Updated O2 administration language. Added EtCO2.

Ref.	Title	UPDATE COMMENTS
M-1P	Pediatric Allergic Reaction/ Anaphylaxis	Renumbered. Updated O2 administration language. Updated BLS epinephrine administration language. Updated high risk and in extremis criteria on page 2.
M-5P	Pediatric Ingestions & Overdose	Renumbered. Updated O2 administration language. Added EtCO2. Added Poison Control contact information.
M-8P	Pediatric Pain Management	Renumbered. Updated O2 administration language. Added EtCO2. Added Poison Control contact. Removal of morphine. Revised language regarding traumatic & non-traumatic pain treatment modalities.
M-11P	Pediatric Behavioral Emergencies	New pediatric behavioral emergencies protocol.
N-1P	Pediatric Altered Level Of Consciousness	Renumbered. Updated O2 administration language. Added EtCO2.
N-2P	Pediatric Seizure	Renumbered. Updated O2 administration language. Added EtCO2. Added IV acetaminophen.
T-3P	Pediatric Suspected Moderate/ Severe Traumatic Brain Injury (TBI)	Renumbered. Due for routine review. No other substantive changes.
1101	Vascular Access	Due for routine review. No substantive changes.
1110	ALS/LALS Annual Infrequently Used Skills Verification & Regional Training Module	Renumbered Infrequently Used Skills Verification Sheets. Removal of King Airway. Removal of Morphine.

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Sierra – Sacramento Valley EMS Agency Program Policy			
Paramedic Accreditation			
	Effective: 12/01/2023	Next Review: 07/2026	**913**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE:

To establish the requirements for obtaining and maintaining accreditation to practice as a paramedic in the S-SV EMS region.

AUTHORITY:

A. HSC, Division 2.5, § 1797.84, 1797.185, 1797.194, and 1797.214

B. CCR, Title 22, Division 9, Chapter 4, § 100166.

POLICY:

A. Initial Paramedic Accreditation:

1. To obtain initial S-SV EMS paramedic accreditation, an individual shall:

- Submit a completed paramedic accreditation application.
- Provide a copy of their current California paramedic license.
- Provide a copy of their current U.S. state-issued driver's license or photo identification card.
- Effective on or after July 1, 2024, provide a copy of their current PALS, PEPP, APLS or Handtevy Prehospital Pediatric Provider Course (for entities using the Handtevy system) recognition.
- Effective on or after July 1, 2024, provide a copy of their current ACLS Course recognition.
- Successfully complete an S-SV EMS paramedic accreditation class and pass a policy/protocol examination with a minimum score of 80%.
  - If the examination is failed twice, the individual will be required to repeat the paramedic accreditation class prior to re-testing.
- Provide verification of one of the following:
  - Current paramedic accreditation from another California LEMSA.
  - Successful completion of a paramedic training program field internship conducted in the S-SV EMS region within the previous six (6) months.

- Successful completion of a supervised field evaluation consisting of a minimum of five (5), but no more than ten (10), ALS contacts conducted in the S-SV EMS region within the previous 60 days.
- Pay the accreditation fee.

2. An individual with a current California paramedic license may practice in the paramedic basic scope of practice, under the affiliation of an S-SV EMS approved ALS prehospital service provider agency and direct supervision of an S-SV EMS accredited paramedic, until they have completed the initial accreditation process. This temporary authorization shall be valid for a maximum of 60 days, after which time all initial accreditation requirements must be met for the individual to continue to practice as a paramedic in the S-SV EMS region.

3. If initial accreditation requirements are not met within 60 days of completion of the S-SV EMS paramedic accreditation class, the individual must repeat all initial accreditation requirements to obtain S-SV EMS paramedic accreditation.

4. S-SV EMS will issue a wallet-sized paramedic accreditation card to eligible individuals, within 10 working days of submission/verification of all requirements listed in this section of the policy.

   - The accreditation effective date will be the day the card was issued.
   - The accreditation expiration date will be the expiration date listed on the individual's current California paramedic license.

B. Renewal/Maintenance of Paramedic Accreditation:

1. To renew/maintain accreditation, an S-SV EMS accredited paramedic shall complete the following each time they renew their California paramedic license:

   - Submit a completed S-SV EMS paramedic reaccreditation application.
   - Provide a copy of their renewed California paramedic license.
   - Provide a copy of their current PALS, PEPP, APLS or Handtevy Prehospital Pediatric Provider Course (for entities using the Handtevy system) recognition.
   - Effective on or after July 1, 2024, provide a copy of their current ACLS Course recognition.
   - Complete S-SV EMS mandated education.

2. Failure to comply with the renewal/maintenance of paramedic accreditation requirements listed in this policy will result in a lapse of paramedic accreditation, and the individual will not be allowed to practice as a paramedic in the S-SV EMS region until they comply with the renewal/maintenance of paramedic accreditation requirements.

- For a lapse greater than 6 months, the individual shall also successfully complete an S-SV EMS paramedic accreditation class and pass a policy/protocol examination with a minimum score of 80% to be eligible for paramedic accreditation renewal.

3. S-SV EMS will issue a wallet-sized paramedic accreditation card to eligible individuals, within 10 working days of submission/verification of all requirements listed in this section of the policy.

    - The accreditation effective date will be the effective date listed on the individual's renewed California paramedic license.
    - The accreditation expiration date will be the expiration date listed on the individual's renewed California paramedic license.

C. ALS Prehospital Service Provider Agency Responsibilities:

1. ALS prehospital service provider agencies are responsible for the following:

    - Verifying their paramedic personnel have a current and valid S-SV EMS accreditation prior to allowing them to practice independently as a paramedic in the S-SV EMS region.
    - Verifying the accreditation renewal/maintenance status of their paramedic personnel on an ongoing basis.
    - Ensuring that their paramedic personnel are kept current on S-SV EMS policies/protocols.
    - Ensuring that their paramedic personnel complete all S-SV EMS required training/education.

2. If there is a change in the employment status of an S-SV EMS accredited paramedic employee, the ALS prehospital service provider agency shall submit a completed S-SV EMS Paramedic Employee Status Report (913-A or online form) to S-SV EMS within 30 calendar days of such change.

Sierra – Sacramento Valley EMS Agency Program Policy			
Alternate Transport Vehicles			
	Effective: 10/06/2022	Next Review: 05/2023	**416**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE:

To establish requirements for the utilization of alternate transport vehicles in the S-SV EMS region.

AUTHORITY:

A. HSC, Division 2.5, § 1797.

B. CCR, Title 13, § 1100.2 and 1108.

C. CCR, Title 22, Division 9.

DEFINITIONS:

A. **Alternate Transport Vehicle –** An S-SV EMS approved vehicle utilized by a non-transport EMS ground provider that has been specially constructed, modified or equipped for transporting sick, injured, or otherwise incapacitated persons.

B. **Authorized Transport Provider –** An S-SV EMS authorized helicopter EMS (HEMS) aircraft or ground ambulance transport provider.

C. **Landing Zone –** A location where a HEMS aircraft can land to allow for expeditious and safe transfer of a patient from EMS ground to HEMS aircraft personnel.

D. **Rendezvous Point –** A location, mutually agreed to by on-scene EMS personnel and responding authorized transport provider personnel, which will allow for expeditious and safe transfer of a patient from alternate transport vehicle to authorized ground transport provider personnel.

POLICY:

On limited occasions, alternate transport vehicles may be utilized to transport patients to rendezvous with an authorized HEMS aircraft or ground transport provider at a landing zone or rendezvous point, rather than waiting for the authorized transport provider to arrive on scene.

PROCEDURE:

A. A risk/benefit assessment, including consideration of the following items, shall be completed prior to transporting a patient utilizing an alternate transport vehicle:

   1. Is the transport in the best interest of the patient?

   2. What is the alternate transport vehicle's ETA to the landing zone or rendezvous point?

   3. What is the ETA of the responding authorized transport provider to the scene, landing zone and/or rendezvous point?

   4. If transporting to a landing zone, would the alternate transport vehicle be waiting at the landing zone for HEMS aircraft to arrive or would it be more appropriate to remain on scene for an approved ground transport provider without significantly delaying transfer of patient care to HEMS aircraft personnel?

B. The following criteria shall be met prior to transporting a patient utilizing an alternate transport vehicle:

   1. Utilization of the alternate transport vehicle is expected to result in a shorter total transport time from the scene to the most appropriate acute care hospital.

   2. The alternate transport vehicle can provide for safe patient transportation in accordance with S-SV EMS policies.

C. If the alternate transport vehicle can provide a higher level of care than the closest authorized transport provider, and the patient requires this higher level of care, the alternate transport vehicle may rendezvous directly with the closest authorized transport provider able to provide a similar or higher level of care.

D. An alternate transport vehicle shall not transport a patient directly to the hospital unless specifically approved by an S-SV EMS authorized base/modified base hospital.

E. An S-SV EMS approved patient care report (PCR) shall be completed for any patient transported in an alternate transport vehicle.

Sierra – Sacramento Valley EMS Agency Program Policy			
HEMS Aircraft Authorization, Classification & Operations			
	Effective: 12/01/2022	Next Review: 09/2025	**450**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE:

To establish standards for the authorization, classification, and operations of HEMS aircraft/personnel.

AUTHORITY:

A. HSC, Division 2.5, § 1797.200 – 1797.276, 1798 – 1798.8 & 1798.170.

B. CCR, Title 22, Chapter 8.

C. Federal Aviation Regulations, 91.3, 91.11 and 91.12.

DEFINITIONS:

A. **Helicopter Emergency Medical Services (HEMS) Aircraft –** Rotor wing aircraft utilized for the purpose of prehospital emergency response and patient transport. HEMS aircraft include air ambulances and all ALS/BLS rescue aircraft.

B. **Air Ambulance –** Any aircraft specially constructed, modified or equipped and used for the primary purpose of responding to emergency incidents and transporting critically ill and/or injured (life or limb) patients, whose medical flight crew has, at a minimum, two (2) attendants certified or licensed in advanced life support.

C. **Rescue Aircraft –** Aircraft whose usual function is not patient transport but may be used for patient transport when the use of an air or ground ambulance is inappropriate or not readily available. Rescue aircraft are classified as one of the following:

1. **Advanced Life Support (ALS) Rescue Aircraft –** A rescue aircraft whose medical flight crew has, at a minimum, one (1) attendant licensed as a paramedic.

2. **Basic Life Support (BLS) Rescue Aircraft –** A rescue aircraft whose medical flight crew has, at a minimum, one (1) attendant certified as an EMT.

3. **Auxiliary Rescue Aircraft –** A rescue aircraft that does not have a medical flight crew, or whose flight crew does not meet ALS/BLS rescue aircraft requirements.

HEMS Aircraft Authorization, Classification & Operations	450

POLICY:

A. S-SV EMS is responsible for classifying/authorizing HEMS aircraft based within the S-SV EMS region, except that the California EMS Authority (EMSA) is responsible for classifying aircraft of the California Highway Patrol, CAL FIRE, and California National Guard. S-SV EMS classification/authorization will be provided by written agreements with HEMS aircraft providers.

B. No person or organization shall provide or hold themselves out as providing HEMS aircraft services unless that organization has aircraft which have been classified/ authorized by a local EMS agency (LEMSA) or, in the case of the California Highway Patrol, CAL FIRE, and California National Guard, by EMSA.

C. Except for mutual aid requests, HEMS aircraft must be classified/authorized by S-SV EMS and possess a current/valid S-SV EMS air ambulance service provider permit to operate within the S-SV EMS region. A request from a designated dispatch center shall be deemed as authorization of aircraft operated by the California Highway Patrol, CAL FIRE, California National Guard, or the Federal Government.

D. HEMS aircraft providers, owners, operators, or any hospital where a HEMS aircraft is based, housed, or stationed permanently or temporarily shall adhere to all federal, state, and local statues, ordinances, policies, and procedures related to HEMS aircraft operations, including qualifications of flight crews and aircraft maintenance.

E. All ALS HEMS aircraft shall employ a provider medical director who is a physician licensed in the State of California who by training and experience, is qualified in emergency medicine. The medical director shall be responsible for the supervision of the quality assurance/improvement program of air medical transport patient care.

F. Medical Control:

1. The medical direction/management of the EMS system shall be under the medical control of the S-SV EMS medical director.

2. Flight paramedics shall operate under S-SV EMS policies/protocols. Paramedics employed by S-SV EMS authorized air ambulance providers who have been approved for Unified Paramedic Optional Scope of Practice may perform skills and administer medications in accordance with applicable S-SV EMS and/or HEMS aircraft provider approved policies/protocols.

3. Flight RNs may perform skills and administer medications beyond the S-SV EMS paramedic scope of practice, in accordance with RN specific policies/protocols developed/approved by the provider's medical director and agreed to by the S-SV EMS medical director. HEMS aircraft provider patient care policies/protocols shall be submitted to S-SV EMS initially and upon subsequent revision.

G. Personnel:

1. Air ambulances shall be staffed with a minimum of two (2) ALS medical flight crew members. Staffing can be achieved with any combination of:

   - S-SV EMS accredited paramedic.
   - Registered nurse (RN) who has successfully completed an S-SV EMS paramedic accreditation course or similar S-SV EMS approved training.

2. Rescue aircraft shall be staffed with a minimum of one (1) S-SV EMS accredited paramedic or EMT medical flight crew member, based on their classification level.

3. The medical flight crew of HEMS aircraft shall have training in aeromedical transportation equivalent to DOT Air Medical Crew National Standard Curriculum.

4. Medical flight crews shall participate in such continuing education requirements as required by their license/certification.

5. In situations where the flight crew is less medically qualified than the ground personnel from whom they receive patients, they may only assume patient care responsibility in accordance with applicable S-SV EMS policies/protocols.

H. Communications:

1. HEMS aircraft providers shall be honest, open, ethical, and responsible for accurately informing the air ambulance coordination center and/or requesting PSAP of any changes in availability or response status. This shall include any circumstance and/or activity that will delay their ability to respond (maintenance, training flights, interfacility transports, need for refueling, etc.).

2. HEMS aircraft shall provide an updated ETA to the air ambulance coordination center, requesting PSAP and/or designated LZ contact when enroute.

3. All communications between HEMS aircraft and the designated LZ contact should be done using CALCORD operational frequency of 156.075.

4. HEMS aircraft shall have the capability of communicating directly, while in flight, with the following entities:

   - Required FAA facilities.
   - Air ambulance coordination center and/or requesting PSAP.
   - Ground units.
   - Base, modified base and receiving hospitals.
   - S-SV EMS air to air EMS aircraft on frequency 123.025.

5. Air ambulance providers shall notify the applicable air ambulance coordination center when entering/flying through their geographical area. The air ambulance coordination center will inform air ambulance personnel of any other known aircraft activities in the area (fire suppression, other responding aircraft, etc.).

6. Air ambulance coordination centers will not routinely perform flight-following operations with HEMS aircraft. This will remain the responsibility of the requesting PSAP and/or the HEMS aircraft provider's dispatch center.

7. Air ambulance providers shall maintain and update their availability on EMResource a minimum of once per pilot shift. EMResource will not be used as a primary method of determining HEMS aircraft availability by the air ambulance coordination centers.

I. Air Ambulance Coordination Center Data Recording and Reporting:

1. Air ambulance coordination centers shall adequately record all air ambulance resource request activities.

2. Air ambulance coordination centers shall provide air ambulance coordination data to S-SV EMS upon request.

J. Space & Equipment:

1. HEMS aircraft shall be configured so that:

- There is sufficient space to accommodate one (1) patient on a stretcher and one (1) patient attendant. Air ambulances shall have space to accommodate one (1) patient and two (2) patient attendants, at a minimum.
- There is sufficient space for medical personnel to have adequate patient access to carry out necessary procedures on the ground and in the air.
- There is sufficient space for medical equipment and supplies required by applicable regulations and S-SV EMS policies.

2. HEMS aircraft shall have adequate safety belts and tie-downs for all personnel, patients, stretchers, and equipment to prevent inadvertent movement.

3. HEMS aircraft shall have onboard equipment and supplies commensurate with the scope of practice of the medical flight crew, as approved by S-SV EMS.

4. HEMS aircraft shall be equipped with a radio headset for each crew member, ride along and patient. Each crew member headset should allow for communications with ground stations, base/modified base and receiving hospitals.

Sierra – Sacramento Valley EMS Agency Program Policy		
Automatic Aid/Mutual Aid/Disaster Assistance (Including EMPF, AST & MTF Resource Requests)		
	Effective: 06/01/2022	Next Review: 05/2025	**461**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: Victoria Pinette – Executive Director		SIGNATURE ON FILE

PURPOSE:

A. To define the conditions/circumstances under which prehospital personnel may utilize the scope of practice for which they are trained and certified/licensed/accredited for during automatic aid/mutual aid/disaster assistance responses.

B. To describe the purpose, requesting process and utilization of Paramedic Fireline (EMPF), Ambulance Strike Team (AST) and Medical Task Force (MTF) resources.

AUTHORITY:

A. HSC, § 1797.170(b), 1797.204 & 1797.220.

B. CCR, Title 22, Division 9.

C. California Disaster and Civil Defense Master Mutual Aid Agreement (11/1950).

D. EMSA 'Ambulance Strike Team/Medical Task Force Guidelines' (07/2003).

E. EMSA 'Compendium of Statutes and Regulations Related to EMT and Paramedic Scope of Practice During Mutual Aid in California' (12/2011).

F. California Fire and Rescue Emergency Mutual Aid System, Mutual Aid Plan (02/2012).

G. Emergency Management Assistance Compact (EMAC).

H. Supplemental Interstate Compact For Emergency Mutual Assistance, July 2007.

I. FIRESCOPE California Incident Command System Position Manual Fireline Emergency Medical Technician/Fireline Paramedic (EMTF/EMPF) ICS 702 (12/2016)

DEFINITIONS:

A. **Ambulance Strike Team (AST)** – Consists of five ALS or BLS ambulances (two personnel each) and one leader in a separate command vehicle or Disaster Medical Support Unit (DMSU).

B. **Automatic Aid** – Agreements between two or more jurisdictions where the nearest available resource is dispatched to an emergency irrespective of jurisdictional boundaries, or where two or more agencies are automatically dispatched simultaneously to predetermined types of emergencies. This type of agreement is typically utilized on a routine basis.

C. **Disaster Assistance** – Requests for assistance in the event that a disaster overwhelms local resources. These requests may be under existing mutual aid agreements or the result of unforeseen needs arising from a large-scale disaster.

D. **Medical Task Force (MTF)** – Any combination of resources assembled to support a specific medical mission or operational need. All resource elements within a Task Force must have common communications and a designated leader.

E. **Mutual Aid** – Agreements between two or more jurisdictions to provide assistance across jurisdictional boundaries, when requested, as a result of the circumstances of an emergency exceeding local resources.

F. **Paramedic Fireline (EMPF)** – A paramedic who meets FIRESCOPE requirements, and is authorized by their department to provide ALS care on the fireline.

PRINCIPLES:

A. When requested by an authorized automatic aid/mutual aid/disaster assistance response requester, EMS personnel may utilize the scope of practice for which they are trained and certified/licensed/accredited according to CCR, Title 22 and their Local EMS Agency (LEMSA) policies and procedures.

B. EMPF personnel provide emergency medical care on an active fireline, division or other physically challenging assignment. These resources may also provide care in the medical unit and/or at other locations as directed by the Incident Commander or designee.

C. AST/MTF resources provide an EMS operational response to disaster situations with a focus on transportation. These resources may also work in concert with California Medical Assistance Team (CAL-MAT) or other disaster medical personnel, and be used for medical and health system support in various settings including first aid sites, shelters, command posts, and Mobile Field Hospitals.

POLICY:

A. Automatic Aid/Mutual Aid/Disaster Assistance Responses Within California

1. BLS (EMR/EMT) Personnel:

- BLS personnel may utilize their basic scope of practice in a volunteer or paid capacity. There is no requirement that BLS personnel be affiliated with a prehospital provider to utilize their basic scope of practice.
- While functioning under the authority/oversight of a LEMSA approved prehospital provider during an automatic aid/mutual aid/disaster assistance response, BLS personnel may utilize the optional/expanded scope of practice for which they are trained, certified and accredited for by their LEMSA.

2. LALS/ALS (AEMT/Paramedic) Personnel:

- LALS/ALS personnel may provide LALS/ALS care anywhere in California provided all of the following conditions are met:
  - They possess a valid California AEMT Certificate or Paramedic License.
  - They are accredited by a California LEMSA.
  - They are affiliated with a California LEMSA approved LALS/ALS provider, and are functioning under the authority/oversight of the LALS/ALS provider with whom they are affiliated.
  - They utilize the scope of practice for which they are trained and accredited for by their LEMSA.

B. Automatic Aid/Mutual Aid/Disaster Assistance Responses Outside California

Prehospital personnel are normally approved to utilize the scope of practice for which they are trained and certified/licensed/accredited according to their respective classification, but must check in with the Medical Unit Leader or other appropriate incident representative for any special restrictions or credentialing requirements.

PROCEDURE:

A. General Automatic Aid/Mutual Aid/Disaster Assistance Response Requirements

1. Prehospital personnel shall follow all S-SV EMS policies/protocols during an automatic aid/mutual aid/disaster assistance response, and shall not administer any medication or perform any procedures listed as ‘Base/Modified Base Hospital Physician Order Only’ without appropriate medical control approval.

2. Controlled substances shall be obtained, secured and inventoried as indicated in S-SV EMS Management of Controlled Substances Policy (710).

3. Documentation of patient care shall be completed as indicated in S-SV EMS Prehospital Documentation Policy (605).

B. EMPF Programs

1. EMPF programs shall be approved by S-SV EMS.

2. Designation of an individual as an EMPF by an S-SV EMS approved provider verifies that the paramedic has completed standard FIRESCOPE education.

3. The EMPF position is like any other single resource position requested for incident management, and is ordered at the discretion of an Incident Commander through normal ordering channels.

4. EMPF personnel shall carry the items listed in S-SV EMS ALS Specialty Program Provider Inventory Requirements Policy (702) when responding to wildland fires to provide ALS care in this capacity.

5. The EMPF shall present their credentials to the Medical Unit Leader upon arrival at the incident. The Medical Unit Leader is responsible for verifying credentials of all EMPF personnel assigned to the incident, and shall notify S-SV EMS of any EMPF personnel not affiliated with an S-SV EMS approved prehospital provider assigned to an incident in the S-SV EMS region.

C. AST/MTF Resources:

1. AST/MTF resources shall be requested/approved by one of the following entities:

- Medical Health Operational Area Coordinator (MHOAC).
- Regional Disaster Medical Health Coordinator/Specialist (RDMHC/S).
- California State EMS Authority (EMSA).

2. Upon receipt of an official verbal or written AST/MTF resource request, S-SV EMS representatives will identify/coordinate the assignment/deployment of resources. AST/MTF resource assignments will be done in a fair and consistent manner, based on system/incident needs and provider resource availability. ASTs/MTFs may be comprised of resources from multiple different provider agencies at the discretion of S-SV EMS. Any verbal AST/MTF request shall be followed up with an official written resource request from the AST/MTF requesting/approving entity as soon as incident conditions allow.

3. Any S-SV EMS approved ground ambulance transport provider agency may participate in an AST/MTF deployment. By participating in an AST/MTF deployment, provider agencies/personnel agree to the following:

- Resources/personnel should be able to deploy within 1 – 2 hours of a request, and are expected to be self-sufficient for up to 72 hours.
- Personnel will likely be working in austere environments and performing tasks outside their normal day-to-day duties.
- Provider agencies shall not commit resources/personnel that will negatively impact their normal EMS coverage responsibilities.
- Provider agencies agree to accept the current hourly Ambulance Strike Team Reimbursement rates adopted by the California State Association of Counties (CSAC) as recommended by the Emergency Medical Services Administrators Association of California (EMSAAC). Reimbursement shall be "portal to portal" (time of dispatch to return to home base), and no billing for transport or other costs are allowed.

4. Every AST/MTF shall have a leader selected/approved by S-SV EMS. Preference will be given to those individuals who have completed the Ambulance Strike Team Leader training. Provider agencies may choose to assign additional personnel to accompany the leader for training purposes, but the cost of these additional personnel will not be reimbursed by the requesting entity, unless previously agreed to.

5. The following shall apply to AST/MTF deployments within the S-SV EMS region:

   - S-SV EMS will assign appropriate representatives (within the affected area whenever possible) to support/oversee the affected EMS system(s) and all deployed AST/MTF resources as long as necessary/appropriate.
   - S-SV EMS representatives will assess, identify and order (in coordination with the AST/MTF requesting/approving entity) additional AST/MTF support resources/personnel (EMS overhead, fleet maintenance, CISM, etc.).
   - As soon as incident conditions allow, the AST/MTF requesting/approving entity shall be responsible for providing ongoing support to the AST/MTF resources (food, lodging, medical supplies, fuel, etc.).

6. For deployments outside the S-SV EMS region, AST/MTF resources will respond to the requested reporting location and follow the direction of requesting entity or other appropriate incident management personnel.

Sierra – Sacramento Valley EMS Agency Program Policy			
Patient Destination			
	Effective: 06/01/2024	Next Review: 04/2027	**505**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE:

To establish procedures for determining the appropriate destination of patients transported by ambulance in the S-SV EMS region.

AUTHORITY:

A. HSC, Division 2.5, § 1797.67, 1797.88, 1798.165 & 1798.170.

B. CCR, Title 13, § 1105(c).

C. CCR, Title 22, Division 9, Chapters 2, 3, 4 & 7.

POLICY:

A. In the absence of decisive factors to the contrary, EMS personnel shall transport emergency patients to the most accessible medical facility equipped, staffed, and prepared to receive emergency cases and administer emergency care appropriate to the needs of the patients. In determining the most accessible facility, EMS personnel shall take into consideration traffic obstructions, weather conditions, or similar factors which clearly affect transport time.

B. Hospitals unable to accept patients due to incapacitating internal disaster shall be considered not prepared to receive emergency cases.

C. All hospitals shall maintain their current facility status on EMResource, and shall update their facility status no less than once every 24 hours. All hospitals shall respond to EMResource hospital polls initiated by S-SV EMS or the applicable Medical Health Operational Area Coordinator within 30 minutes of notification.

PROCEDURE:

A. The most accessible medical facility shall ordinarily be the nearest licensed healthcare facility which maintains and operates a basic emergency department, except for the following circumstances:

1. The base/modified base hospital may direct a patient be transported to a further acute care hospital equipped, staffed, and prepared to receive emergency cases, which in the judgment of the base/modified base hospital physician or MICN, is more appropriate to the medical needs of the patient. Such direction shall take into consideration the prehospital provider's time and/or travel limitations.

2. S-SV EMS policies/protocols governing transport of special category patients to designated special care facilities shall be followed.

3. The Control Facility (CF) is responsible for the dispersal of all patients during multiple casualty incidents (MCIs).

4. In the event of an unprecedented demand for medical/health services beyond the capacity of current providers and resources available through local, regional, state, and/or federal mutual aid, Crisis Standard of Care Procedures may be implemented to include alternate patient transportation/destination orders.

B. A member of a health care service plan should be transported to a hospital that contracts with the plan when prehospital EMS personnel and/or the base/modified base hospital determines that the condition of the member permits such transport. However, when prehospital personnel determine that such transport would unreasonably remove the transport unit from the area, the member may be transported to the nearest hospital capable of providing appropriate treatment.

C. When a patient, or their legally authorized representative, requests transportation to a hospital other than the most accessible, the request should be honored when prehospital EMS personnel and/or the base/modified base hospital determines that the condition of the patient permits such transport; except when prehospital EMS personnel determine that such transport would unreasonably remove the transport unit from the area. In such cases:

1. Arrangements should be made for alternative transport if possible.

2. If such transport cannot be obtained without unacceptable delay, the patient may be transported to the nearest hospital capable of providing appropriate treatment.

D. When a private physician requests emergency transportation to a hospital other than the most accessible, the request should be honored unless:

1. The base/modified base hospital determines that the condition of the patient does not permit such transport. In such cases, base/modified base hospital directions shall be followed. If communication with the requesting physician is feasible, the base/modified base hospital should contact the physician and explain the situation.

2. Prehospital EMS personnel determine that such transportation would unreasonably remove the unit from the area. In such cases:

    - Arrangements should be made for alternate transportation if possible.
    - If alternate transportation cannot be arranged without unacceptable delay, and the private physician is immediately accessible, the patient may be transported to a mutually agreed-upon alternate destination.
    - If alternate transportation cannot be arranged without unacceptable delay, and the private physician is not immediately accessible, the patient may be transported to the nearest hospital capable of providing appropriate treatment.

Hospital Type Abbreviations/Definitions

BASE (Base Hospital): EMS medical direction provided by MICNs and ED physicians.
MOD (Modified Base Hospital): EMS medical direction provided by ED physicians only (no MICNs).
REC (Receiving Hospital): Unable to provide EMS medical direction, but able to receive ambulance patients.

Stroke Center Abbreviations

PSC - Primary Stroke Center **TSC -** Thrombectomy Capable Stroke Center **CSC -** Comprehensive Stroke Center

Hospitals Located Within The S-SV EMS Region

Hospital Name	County	Hospital Type	Helispot/ Helipad	Trauma Center	Stroke Center	STEMI Center	L&D	Other
Enloe Medical Center	Butte	BASE	X	Level II	PSC	X	X	
Orchard Hospital	Butte	REC	X					
Oroville Hospital	Butte	BASE	X		PSC		X	
Colusa Medical Center	Colusa	MOD	X					
Glenn Medical Center	Glenn	REC	X					
Sierra Nevada Memorial Hospital	Nevada	MOD	X		PSC		X	
Tahoe Forest Hospital	Nevada	BASE	X	Level III	PSC		X	
Kaiser Roseville Medical Center	Placer	MOD			PSC	X	X	
Sutter Auburn Faith Hospital	Placer	MOD			PSC			
Sutter Roseville Medical Center	Placer	BASE	X	Level II	TSC	X	X	
Mayers Memorial Hospital	Shasta	BASE	X					
Mercy Medical Center Redding	Shasta	BASE	X	Level II	TSC	X	X	
Shasta Regional Medical Center	Shasta	BASE	X		PSC	X		
Fairchild Medical Center	Siskiyou	BASE	X	Level IV	PSC		X	
Mercy Medical Center Mt. Shasta	Siskiyou	BASE	X	Level III	PSC		X	
St. Elizabeth Community Hospital	Tehama	BASE	X	Level III	PSC		X	
Adventist Health +Rideout	Yuba	BASE	X	Level III	PSC	X	X	

S-SV EMS Designated MCI Control Facilities (CFs)

Control Facility (CF)	Coverage Area
Enloe Medical Center	Butte, Colusa & Glenn Counties
Adventist Health +Rideout	Sutter & Yuba Counties
Sutter Roseville Medical Center	Western Slope of Nevada & Placer Counties
Tahoe Forest Hospital (Back-Up: REMSA)	Tahoe Basin & Eastern Slope of Nevada & Placer Counties
Mercy Medical Center Redding	Shasta, Siskiyou & Tehama Counties

Sacramento County Hospitals								
Hospital Name	**County**	**Hospital Type**	**Helispot/ Helipad**	**Trauma Center**	**Stroke Center**	**STEMI Center**	**L&D**	**Other**
Kaiser Sacramento Medical Center	Sac.	REC			PSC			
Kaiser South Sacramento Medical Center	Sac.	REC	X	Level II	CSC	X	X	
Mercy General Hospital	Sac.	REC			PSC	X	X	VAD
Mercy Hospital of Folsom	Sac.	REC	X		PSC		X	
Mercy San Juan Medical Center	Sac.	REC	X	Level II	CSC	X	X	
Methodist Hospital	Sac.	REC			PSC		X	
Sacramento VA Medical Center	Sac.	REC						
Sutter Sacramento Medical Center	Sac.	REC	X		PSC	X	X	VAD
UC Davis Medical Center	Sac.	BASE	X	Level I & Pediatric	CSC	X	X	VAD & Burn

Nevada Hospitals								
Hospital Name	**County**	**Hospital Type**	**Helispot/ Helipad**	**Trauma Center**	**Stroke Center**	**STEMI Center**	**L&D**	**Other**
Northern Nevada Medical Center	Washoe	REC	X		PSC	X		
Northern Nevada Sierra Medical Center	Washoe	REC			PSC	X	X	
Renown Regional Medical Center	Washoe	REC	X	Level II	CSC	X	X	
Renown South Meadows Medical Center	Washoe	REC						
St. Mary's Regional Medical Center	Washoe	REC	X		PSC	X		

Oregon Hospitals								
Hospital Name	**County**	**Hospital Type**	**Helispot/ Helipad**	**Trauma Center**	**Stroke Center**	**STEMI Center**	**L&D**	**Other**
Providence Medical Center	Jackson	REC	X	Level III	X	X	X	
Rogue Regional Medical Center	Jackson	REC	X	Level II	X	X	X	
Sky Lakes Medical Center	Klamath	REC	X	Level III			X	

Sierra – Sacramento Valley EMS Agency Program Policy			
EMS Documentation			
	Effective: 06/01/2024	Next Review: 04/2027	**605**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE:

To specify EMS patient care report (PCR) documentation and data requirements.

AUTHORITY:

A. HSC, Division 2.5, § 1797.202, 1797.204, 1797.220, 1797.227, and 1798.

B. CCR, Title 22, Division 9, Chapters 3 and 4.

POLICY:

A. BLS non-transport providers shall complete a PCR for any EMS incident that results in a patient refusal of EMS care without ALS/LALS involvement.

B. BLS non-transport providers shall complete a S-SV EMS BLS Skills Utilization PCR (605-A), or electronic PCR (ePCR) compliant with current California Emergency Medical Services Information System (CEMSIS) and the National Emergency Medical Services Information System (NEMSIS) date standards (if available), to document the utilization of any of the following prior to ALS/LALS arrival:

   1. Defibrillation (AED shock delivered).

   2. BLS optional skills included in S-SV EMS Policy No. 477.

C. ALS/LALS non-transport providers and all transport providers shall utilize an ePCR software system, compliant with current CEMSIS/NEMSIS standards, for EMS documentation as follows:

   1. ALS/LALS non-transport personnel shall complete an ePCR for any EMS incident that results in their arrival at scene prior to a transport provider, unless patient contact was limited to BLS assessment and/or oxygen administration only, and patient care was assumed by a transport provider.

   2. Transport personnel shall complete an ePCR for any EMS incident that results in their arrival on scene. If the non-transport and transport personnel are from the same agency, a single ePCR by the appropriate unit is adequate.

3. For multiple patient incidents, an ePCR shall be completed for each individual patient (including patients who are determined to be deceased on scene).

4. For multiple casualty incidents (MCIs), the Medical Group Supervisor (or designee) shall complete a separate ePCR documenting pertinent incident information (MCI type, incident details, patient count/triage categories, etc.).

D. A PCR is a legal medical record. EMS personnel shall provide clear, legible, concise, complete, and accurate patient care documentation. Any form of misrepresentation is a serious infraction, which may result in disciplinary action.

E. EMS providers who fail to comply with EMS documentation laws, regulations, and/or policies may be suspended from providing service until they comply.

PROCEDURE:

A. All applicable/required PCR data fields shall be accurately completed.

1. EMS procedures and/or medication administrations, including specific dose, route, and response to treatment as applicable, shall be adequately documented in the Treatment/Procedures section. ALS/LALS personnel shall also document all pertinent procedures/medications utilized by bystanders or BLS personnel (including prior to their arrival on scene) in the Treatment/Procedures section.

2. The total volume of IV/IO fluid infused shall be adequately documented in the Treatment/Procedures and/or Narrative section.

3. All pertinent vital signs, including applicable cardiac rhythm interpretations, shall be adequately documented in the Vital Signs section. Vital signs shall be obtained/documented as close as possible to initial patient contact, a minimum of every 15 minutes during patient care (or more frequently if clinically indicated), and as close as possible to transfer of patient care at the receiving hospital.

4. The Narrative section shall be completed utilizing one of the following formats:

- SOAP (Subjective, Objective, Assessment, and Plan).
- CHART (Complaint, History, Assessment, Rx/pt. medications, and Treatment).
- Chronological order.

5. Response, patient care, and/or transport delays shall be adequately documented in the appropriate section(s) of the PCR.

6. A written or electronic legal signature of the individual completing the PCR is required.

B. The following information, when available, shall be documented on an interim PCR (605-B or equivalent), and left at the receiving facility at time of patient delivery:

   1. Basic incident and patient demographic information.

   2. Chief complaint, time of symptom onset, pertinent medical history, medications, and medication allergies.

   3. Pertinent vital signs.

   4. EMS treatment rendered (time, type, dose, route, response, etc.).

   5. Relevant patient care related documents (DNR/POLST forms, 12 Lead EKGs, cardiac monitor rhythm strips, etc.).

   6. Name, title, and ID of EMS personnel completing the documentation.

C. PCRs shall be completed within twenty-four (24) hours after completion of the patient encounter (NEMSIS V3.5 data element eTimes.13 – 'Unit Back in Service Date/Time'), and shall be distributed as follows:

   1. If a BLS optional skill was utilized, a copy of the completed PCR shall be provided/ available to S-SV EMS within seven (7) calendar days of the incident.

   2. PCRs shall be provided/available to the applicable receiving, base, and/or modified base hospital upon completion, but no later than twenty-four (24) hours after completion of the patient encounter.

D. Any EMS provider required to complete/submit ePCR data pursuant to this policy, and who chooses not to utilize the S-SV EMS ImageTrend ePCR software system, shall submit EMS data to S-SV EMS in the following manner:

   1. EMS data shall be continually compliant with current CEMSIS/NEMSIS standards and the current S-SV EMS data schematron.

   2. EMS data for all incidents required by this policy shall be submitted to the EMS data system utilized by S-SV EMS within twenty-four (24) hours after completion of the patient encounter. Any ePCR record that fails to import shall be identified, corrected, and successfully submitted to the EMS data system utilized by S-SV EMS within seventy-two (72) hours after completion of the patient encounter.

E. PCRs for adult and emancipated minor patients shall be preserved for at least seven (7) years. PCRs for unemancipated minor patients shall be preserved for at least one (1) year after such minor has reached the age of 18 years old and, in any case, not less than seven (7) years.

Sierra – Sacramento Valley EMS Agency Program Policy			
Management Of Controlled Substances			
	Effective: 06/01/2022	Next Review: 05/2025	**710**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: Victoria Pinette – Executive Director		SIGNATURE ON FILE

PURPOSE:

To ensure accountability in the management of controlled substances utilized by ALS/ LALS prehospital service provider agencies/personnel.

AUTHORITY:

A. Code of Federal Regulations, Title 21.

B. HSC, Division 2.5 & Division 10.

C. CCR, Title 22, Division 9, Chapters 3 & 4.

POLICY:

A. S-SV EMS Approved Controlled Substances:

1. Fentanyl.
2. Ketamine.
3. Midazolam.
4. Morphine sulfate.

B. Obtaining Controlled Substances:

Prehospital service provider agencies shall obtain controlled substances through one of the following methods:

1. The medical director of the prehospital service provider agency.
2. The base/modified base hospital shall ensure that a mechanism exists for prehospital service provider agencies to contract for the provision of controlled substances.

C. Prehospital Service Provider Agency Controlled Substances Policies/Procedures:

1. Prehospital service provider agencies shall ensure that security mechanisms and procedures are established for controlled substances, including, but not limited to:

    - Controlled substance ordering & order tracking.
    - Controlled substance receipt & accountability.
    - Controlled substance master supply storage, security & documentation.
    - Controlled substance labeling & tracking.
    - Controlled substance vehicle storage & security.
    - Controlled substance usage procedures & documentation.
    - Controlled substance reverse distribution.
    - Controlled substance disposal.
    - Controlled substance re-stocking procedures.

2. Prehospital service provider agencies shall ensure that mechanisms for investigation and mitigation of suspected controlled substance tampering or diversion are established, including, but not limited to:

    - Controlled substance testing.
    - Controlled substance discrepancy reporting.
    - Controlled substance tampering, theft & diversion prevention/detection.
    - Controlled substance usage audits.

D. Controlled Substance Security:

1. AEMT II and paramedic personnel are responsible for maintaining the correct inventory of controlled substances at all times.

2. All controlled substances shall be stored/secured in one of the following manners:

    - Preferred: Secured in a commercially developed drug locker specifically designed for controlled substance storage. The drug locker shall be securely mounted to the vehicle to prevent theft and shall have an electronic access keypad with an individual PIN code assigned to each individual authorized to access/utilize controlled substances. The drug locker shall be able to produce an electronic audit trail showing the date, time and PIN code of each instance the locker was opened. The double lock requirement does not apply to providers storing their controlled substance utilizing this method.
    - Alternative: Secured in the vehicle under double lock, in an appropriate manner to prevent theft. The outside driver/passenger/patient access door(s) of the vehicle shall not be considered one of the two locks.

3. Prehospital service provider agencies shall abide by all State and Federal laws/ regulations related to the storage/security of controlled substances.

4. Each unit shall maintain a standardized written record of the controlled substance inventory. Controlled substance inventory and administration records shall be maintained in accordance with all applicable State and Federal laws/regulations.

5. Controlled substances shall be inventoried any time there is a change in personnel. The key to access the controlled substances, if applicable, shall be in the custody of the individual who performed the inventory.

6. Any discrepancies in the controlled substance count shall be reported as soon as possible to an appropriate supervisor and the issuing agent. A discrepancy report must be appropriately documented.

E. Controlled Substances Administered to Patients:

1. Controlled substances shall be administered in accordance with applicable S-SV EMS policies/protocols.

2. The following information must be documented on a controlled substance administration record:

   - Date & time administered.
   - Unit number.
   - Patient name.
   - Drug administered.
   - Amount administered.
   - AEMT II or paramedic signature & number.

3. If only a portion of the controlled substance was administered to the patient, the remainder shall be wasted in the presence of a registered nurse or physician at the receiving hospital, or the provider's immediate supervisor. Both parties shall document this action on the controlled substance administration form.

4. Controlled substance inventories/logs are subject to inspection by the California Board of Pharmacy, Bureau of Narcotic Enforcement Administration of the Justice Department, Federal Drug Enforcement Administration, S-SV EMS, the issuing agent, and/or officers of the prehospital service provider agency.

Sierra – Sacramento Valley EMS Agency Program Policy			
Paramedic Scope Of Practice			
	Effective: 06/01/2024	Next Review: 04/2027	**803**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE:

To establish the paramedic scope of practice in the S-SV EMS region.

AUTHORITY:

A. HSC, Division 2.5, § 1797.84, 1797.172, 1797.220.

B. CCR, Title 22, Division 9, Chapter 4, § 10046 & 100147.

POLICY:

A. A paramedic may perform any activity identified in the scope of practice of an EMT (S-SV EMS Policy 801), or any activity identified in the scope of practice of an Advanced EMT (S-SV EMS Policy 802), without requiring a separate certification.

B. Activities listed in the 'Paramedic Basic Scope of Practice' section of this policy may be performed by paramedic students or paramedics under the following conditions:

1. Paramedic students currently enrolled in an approved paramedic training program, who are under the direct supervision of an approved paramedic field preceptor in the prehospital setting, or who are under the direct supervision of a physician, registered nurse, or physician assistant in the hospital setting.

2. California licensed and S-SV EMS accredited paramedics who are part of the organized EMS system, functioning under the oversight of an S-SV EMS approved paramedic prehospital service provider agency as follows:

- Under the direct supervision of a physician, registered nurse, or physician assistant in the hospital setting for the purposes of CE or while working in a rural hospital pursuant to § 1797.195 of the California Health and Safety Code.
- Standing order patient care specified in S-SV EMS approved policies/protocols.
- Base/modified base hospital physician or MICN on-line medical direction.
- Physician direction as specified in S-SV EMS Physician On Scene Policy (839).
- Physician interfacility transport written orders as specified in S-SV EMS Medical Control For Transfers Between Acute Care Facilities Policy (840).

C. Activities listed in the 'Paramedic Optional Scope of Practice' section of this policy, as applicable to the specific provider agency, may be performed by paramedic students under the conditions indicated above, or by California licensed and S-SV EMS accredited paramedics who are part of the organized EMS system and are functioning under the oversight of an S-SV EMS approved paramedic optional skills provider.

D. Paramedic Basic Scope of Practice:

1. Utilize electrocardiographic devices and monitor electrocardiograms, including 12-lead electrocardiograms.

2. Perform defibrillation, synchronized cardioversion, and external cardiac pacing.

3. Visualize the airway by use of a laryngoscope and remove foreign bodies with Magill forceps.

4. Perform pulmonary ventilation by use of an i-gel LMA device, stomal intubation, or adult oral endotracheal intubation.

5. Utilize ventilation devices for continuous positive airway pressure.

6. Institute IV catheters, saline locks, needles, or other cannula, in peripheral veins and monitor/administer medications through pre-existing vascular access.

7. Institute intraosseous access.

8. Administer IV or IO glucose solutions or isotonic balanced salt solutions, including Ringer's Lactate solution.

9. Obtain venous blood samples.

10. Use laboratory devices, including point of care testing, for prehospital screening use to measure lab values including, but not limited to glucose, capnometry, capnography, and carbon monoxide.

11. Utilize Valsalva maneuver.

12. Perform percutaneous needle cricothyroidotomy.

13. Perform needle thoracostomy.

14. Monitor thoracostomy tubes.

15. Monitor and adjust IV solutions containing potassium ≤ 40 mEq/L.

16. Administer approved medications by the following routes: IV, IO, intramuscular, subcutaneous, inhalation, transcutaneous, rectal, sublingual, endotracheal, intranasal, oral, or topical.

17. Administer the following medications:

- 10% dextrose.
- 50% dextrose.
- Activated charcoal.
- Adenosine.
- Albuterol.
- Amiodarone.
- Aspirin.
- Atropine sulfate.
- Calcium chloride.
- Diphenhydramine hydrochloride.
- Dopamine hydrochloride.
- Epinephrine.
- Fentanyl.
- Glucagon.
- Ipratropium bromide.
- IV acetaminophen.
- Lidocaine hydrochloride.
- Ketamine.
- Ketorolac.
- Midazolam.
- Morphine sulfate.
- Naloxone hydrochloride.
- Nitroglycerin preparations (except intravenous).
- Ondansetron.
- Pralidoxime chloride.
- Sodium bicarbonate.
- TXA.

E. Paramedic Optional Scope of Practice:

1. Perform the following during interfacility patient transports:

- Monitoring of magnesium sulfate, nitroglycerin, heparin, &/or amiodarone infusions.
- Monitoring of blood transfusions.
- Utilization of an automatic transport ventilator (ATV).
- Utilization of non-invasive High Flow Nasal Cannula (HFNC).

Sierra – Sacramento Valley EMS Agency Program Policy			
Unified Paramedic Optional Scope Of Practice For Qualified Transport Programs			
	Effective: 12/01/2022	Next Review: 11/2025	**806**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE:

To specify the unified paramedic optional scope of practice for qualified transport programs, and establish provider requirements and personnel qualifications for utilization.

AUTHORITY:

A. HSC, Division 2.5, Chapter 2 § 1797.67 & 1797.88, Chapter 6 § 1798.102, 1798.150, 1798.170 and 1798.172.

B. CCR, Title 22, Division 9, Chapter 4, § 100146

DEFINITIONS:

A. **Air Ambulance Provider –** A prehospital service provider agency that utilizes specially constructed, modified or equipped aircraft for the primary purpose of responding to emergency incidents and transporting critically ill and/or injured patients. An air ambulance provider utilizes a medical flight crew consisting of a minimum of two attendants certified or licensed in advanced life support.

B. **CAMTS –** Commission on Accreditation of Medical Transport Systems.

C. **CAMTS Emergency Critical Care (ECC) Accreditation –** A level of accreditation issued by CAMTS verifying that the medical transport provider has met all Emergency Critical Care (ECC) level accreditation standards. CAMTS recognizes FP-C for ECC accreditation, but also requires the FP-C to be paired with a qualified transport nurse partner.

D. **FP-C –** A 'Certified Flight Paramedic' educated and trained in critical care transport and flight medicine, who holds a current certification as an FP-C by the International Board of Specialty Certification (IBSC).

E. **FP-C in training –** A paramedic who has completed the qualified transport program's initial training but has not completed their FP-C testing/certificate. The FP-C in training must pass the FP-C exam by the end of their second year with the qualified transport program.

F. **Qualified Flight Paramedic –** A California licensed, S-SV EMS accredited and FP-C certified/FP-C in training paramedic who meets the requirements for utilization of the unified paramedic optional scope of practice. These individuals have at least three (3) years of critical care experience and have completed the qualified transport program's initial academy training with additional education in flight and altitude physiology. They work for a qualified transport program and are paired with a qualified transport nurse.

G. **Qualified Transport Program –** An S-SV EMS permitted air ambulance provider that has met the requirements to participate in the unified paramedic optional scope of practice program by obtaining/maintaining CAMTS ECC accreditation, and meeting the training, education, competencies, QI and medical direction requirements.

H. **Qualified Transport Nurse –** A registered nurse with at least three (3) years of critical care experience, who has completed the qualified transport program's initial academy training and is working on obtaining the CEN, CCRN, CFRN or CTRN certification required by the CAMTS ECC accreditation. A qualified transport nurse is employed by and practicing with the qualified transport program.

I. **Qualified Transport Program Medical Director –** A physician board certified/eligible in emergency medicine, who meets the CAMTS ECC accreditation medical director requirements.

J. **Qualified Transport Program Physician –** A physician affiliated with the qualified transport program, who is not the qualified transport program medical director, who is board certified/eligible in emergency medicine or in the specialty appropriate for the scope of services being provided (neonate, pediatrics, critical care, etc.).

POLICY:

A. The unified paramedic optional scope of practice procedures include:

1. Pediatric intubation.

2. Rapid sequence intubation/induction (RSI) medication administration, including sedatives, paralytics, analgesics, and induction agents.

3. Ventilator initiation, maintenance and management.

B. Prehospital service provider agencies shall meet the following requirements to be approved by S-SV EMS as a qualified transport program:

1. Have a current S-SV EMS air ambulance provider permit.

2. Obtain/maintain CAMTS ECC accreditation.

3. Have a qualified transport program medical director.

4. Utilize all unified paramedic optional scope of practice procedures.

5. Provide all required optional scope of practice training, education and competency testing, which has been reviewed/approved by S-SV EMS.

6. Allow only qualified flight paramedics to utilize the unified paramedic optional scope of practice.

7. Have a unified paramedic optional scope of practice QI program, which has been reviewed/approved by S-SV EMS.

8. Collect/submit unified paramedic optional scope of practice data to S-SV EMS. Data submission elements/frequency shall be established, and modified as necessary, by S-SV EMS pursuant to EMS Medical Directors Association of California (EMDAC) and California Emergency Medical Services Authority (EMSA) requirements.

C. Paramedic personnel shall meet the following requirements to be approved by S-SV EMS to utilize the unified paramedic optional scope of practice:

1. Have a current California paramedic license.

2. Have a current S-SV EMS paramedic accreditation.

3. Completed a minimum of 200 hours of training conducted by the qualified transport program, and meet the FP-C certified/FP-C in training requirements.

4. Follow the qualified transport program provider's policies/protocols for utilization of unified paramedic optional scope of practice procedures.

5. Remain competent/proficient in the unified paramedic optional scope of practice by passing required competency testing as follows:

   - Pediatric Intubation: Quarterly (every 3 months)
   - RSI: Quarterly (every 3 months)
   - Ventilator Use: Annually

6. Be employed by a qualified transport program provider and functioning under the oversight of this provider during any transports where the unified paramedic optional scope of practice is utilized.

7. Be partnered with a qualified transport nurse, qualified transport program medical director or qualified transport program physician during any transports where the unified optional scope of practice is utilized.

D. Unified paramedic optional scope of practice medical control:

1. Medical control for the utilization of the unified paramedic optional scope of practice shall remain the primary responsibility of S-SV EMS, according to established S-SV EMS policies/protocols, and is delivered in conjunction with the qualified transport program provider's policies/protocols specific to the utilization of the unified paramedic optional scope of practice procedures.

2. During an interfacility transport, online medical control may be obtained from the sending physician, receiving physician, Qualified Transport Program Medical Director, or Qualified Transport Program Physician as necessary.

Sierra – Sacramento Valley EMS Agency Program Policy			
Base/Modified Base/Receiving Hospital Contact			
	Effective: 06/01/2023	Next Review: 01/2026	**812**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE:

To define the circumstances under which prehospital personnel shall establish base, modified base, and/or receiving hospital contact for medical control, patient destination and/or patient notification purposes.

AUTHORITY:

A. HSC, Division 2.5, § 1797.220, 1798, 1798.2, 1798.102.

B. CCR, Title 22, Division 9, Chapters 2, 3 and 4.

POLICY:

A. Prehospital personnel shall make appropriate hospital contact in a timely manner according to the requirements contained in this policy.

B. Base/modified base hospital contact is required by prehospital personnel to perform procedure(s) and/or administer medications(s) that are identified in S-SV EMS policies/protocols as 'Base/Modified Base Hospital Order Only'. In the event of communication failure, those procedures/medications may still be utilized if the patient's condition warrants such treatment.

C. Base/modified base hospital contact is required by prehospital personnel to perform procedure(s) and/or administer medications(s) that are identified in S-SV EMS policies/protocols as 'Base/Modified Base Hospital Physician Order Only'. In the event of communication failure those procedures/medications shall not be utilized.

D. When requesting to speak directly to a base/modified base hospital physician, prehospital personnel shall advise the hospital staff member who initially answers the telephone or radio of the reason for the request.

E. Prehospital personnel may provide minimum necessary patient identifying information (name, DOB, MR#, etc.) when requested by the receiving hospital. A secured communication line (e.g. landline, cellular telephone) shall be used for these purposes if available.

Base/Modified Base/Receiving Hospital Contact	812

PROCEDURE:

A. Prehospital personnel shall contact the base/modified base hospital that is in closest proximity to the incident for any of the following circumstances:

1. For authorization to perform procedures and/or administer medications that are indicated in S-SV EMS policies/protocols as 'Base/Modified Base Hospital Order Only' or 'Base/Modified Base Hospital Physician Order Only'.

2. For patients refusing assessment, treatment and/or transportation as required by S-SV EMS Refusal Of EMS Care Policy (Reference No. 850).

3. For destination consultation on the following types of patients:

- Burn patients who require destination consultation as required by S-SV EMS Burns Treatment Protocol (Reference No. T-5).
- When there is initiation of an ALS/LALS protocol and transport to a facility other than the most accessible is being considered, except for the following types of patients meeting criteria for transport directly to a designated specialty care facility:
  - STEMI patients as defined in S-SV EMS Chest Discomfort/Suspected Acute Coronary Syndrome (ACS) Protocol (Reference No. C-6): If a STEMI patient is within the authorized catchment area of a designated STEMI receiving center, contact shall be made directly with the designated STEMI receiving center.
  - Stroke patients as defined in S-SV EMS Stroke Protocol (N-3): If a suspected stroke patient is within the authorized catchment area of a designated stroke receiving center, contact shall be made directly with the stroke receiving center.
  - Patients who meet Field Trauma Triage Criteria, when required/directed by S-SV EMS General Trauma Management Protocol (Reference No. T-1).

  Note: These exceptions do not apply to patients who require transport to the closest facility (i.e. – unable to establish an airway, CPR in progress)

4. For any patient who, in the opinion of the prehospital provider, requires the additional input or judgment of the base/modified base hospital for appropriate management.

B. Prehospital personnel shall make contact directly with the destination facility, in a timely manner, for any patient who does not meet the above criteria or when base/modified base contact is made and the patient is authorized/directed to be transported to a facility other than the base/modified base hospital initially contacted.

Sierra – Sacramento Valley EMS Agency Program Policy			
Determination Of Death			
	Effective: 06/01/2021	Next Review: 05/2024	**820**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: Victoria Pinette – Executive Director		SIGNATURE ON FILE

PURPOSE:

To establish criteria for determination of death by EMS personnel.

AUTHORITY:

A. HSC, Division 2.5, § 1797.220 and 1798.6.

B. CCR, Title 22, Division 9.

POLICY:

A. CPR need not be initiated, and may be discontinued, for patients who meet Obvious Death or Probable Death criteria.

B. Public safety, EMR, EMT, AEMT, or paramedic personnel may determine death for patients who, in addition to the absence of respiration, pulses and neurological reflexes, meet one or more of the following 'Obvious Death' criteria at the time of initial assessment:

1. Decapitation.

2. Decomposition.

3. Incineration of the torso and/or head.

4. Exposure, destruction, and/or separation of the brain or heart from the body.

5. Rigor Mortis.

6. A valid Do Not Resuscitate (DNR) in accordance with the S-SV EMS Do Not Resuscitate Policy (823). Note: this applies regardless of the cause of death (e.g. person with a terminal illness who is a trauma victim).

C. AEMT II or paramedic personnel may determine death for individuals who, in addition to the absence of respirations, pulses and neurological reflexes, meet one or more of the following 'Probable Death' criteria at the time of initial assessment:

1. Lividity or Livor Mortis (discoloration appearing on dependent parts of the body after death as a result of cessation of circulation, stagnation of blood and settling of the blood by gravity), and the cardiac monitor shows asystole in two (2) leads.

2. Victim of cardiac arrest secondary to blunt or penetrating trauma, and the cardiac monitor shows asystole in two (2) leads.

3. Victim of cardiac arrest secondary to blunt trauma, and the cardiac monitor shows PEA at a rate ≤40 per minute.

PROCEDURE:

A. Patient assessment shall be conducted in close proximity and with sufficient lighting to assure the existence of obvious or probable death criteria.

B. If determination of death is based on rigor mortis, all of the following additional assessments shall be completed:

1. Assessment to confirm absence of respiration:

- Assess the patient's airway.
- Look, listen and feel for respirations, including auscultation of the lungs for a minimum of 30 seconds.

2. Assessment to confirm absence of pulse:

- Palpate the carotid pulse for a minimum of 30 seconds.
- Auscultate the apical pulse for a minimum of 30 seconds.

3. Assessment to confirm absence of neurological response:

- Check for pupil response with a penlight or flashlight.
- Check for a response to painful stimuli.

4. Assessment to confirm rigor mortis:

- Confirm muscle rigidity of the jaw by attempting to open the mouth.
- Confirm muscle rigidity of one arm by attempting to move the extremity.

If any doubt exists as to the presence of rigor mortis, EMS personnel shall initiate CPR unless the patient has a valid DNR order.

C. If there is any objection/disagreement by family members or EMS personnel to terminating or withholding resuscitation for patients who have a DNR or meet probable death criteria, basic life support (including defibrillation) shall continue or begin immediately and EMS personnel shall contact the base/modified base hospital for further direction. Once base contact is initiated, EMS personnel shall not stop resuscitation unless directed to do so by the base/modified base hospital physician.

D. If not already on scene, an immediate request for law enforcement shall be made, and the body and scene shall be disturbed as little as possible to protect potential crime scene evidence.

E. EMS personnel shall follow the direction of law enforcement as to who has custody of the body (Note: evidence of a hospice patient receiving care from a physician or registered nurse who is a member of a hospice care team normally does not require coroner notification by prehospital personnel or law enforcement as this notification is the responsibility of hospice personnel).

F. Appropriate EMS personnel shall remain on scene until released by law enforcement. The following minimum information shall be provided to law enforcement by EMS personnel prior to leaving the scene:

1. Unit ID.

2. Name and certification/license # of the EMS provider who determined death.

3. Patient demographics and pertinent medical history.

4. Determination of death date and time.

G. The EMS provider who determined death shall document all relevant facts/findings, including time of determination of death, on the PCR. A minimum six-second cardiac monitor strip of each lead shall be attached to the PCR for all patients where death is determined utilizing probable death criteria. The PCR shall be completed within 24 hours, and a copy shall be provided to the coroner upon request.

SPECIAL INFORMATION:

A. Hypothermia, drug and/or alcohol ingestion/overdose can mask the positive neurological reflexes which indicate life. It is imperative to be certain no contributing environmental factors exist, such as cold water submersion or cold exposure. If any possibility exists that such conditions could be a factor, resuscitation should be started immediately unless the patient has a valid DNR.

B. In the event of a disaster/multiple casualty incident, death may be determined in accordance with recognized START criteria.

C. If the base/modified base hospital physician directs EMS personnel to stop resuscitation efforts once ambulance transport has begun, the ambulance will reduce transport code and continue transport to the original destination hospital.

D. If a patient undergoing resuscitation is transported to rendezvous with an EMS aircraft and determination of death is made at the rendezvous location, the body shall not be moved from the rendezvous location, and an immediate request for law enforcement shall be made.

Sierra – Sacramento Valley EMS Agency Program Policy			
DNR, POLST & End Of Life Option Act			
	Effective: 12/01/2019	Next Review: 11/2022	**823**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: Victoria Pinette – Executive Director		SIGNATURE ON FILE

PURPOSE:

A. To provide a mechanism to allow patients to refuse unwanted resuscitation attempts, and ensure that their rights to control their own medical treatment are honored.

B. To establish criteria, requirements and procedures for withholding resuscitative measures in the prehospital setting.

AUTHORITY:

A. California Health and Safety Code, Division 1, Part 1.8, § 442 – 443.

B. California Health and Safety Code, Division 2.5, § 1797.220 and 1798.

C. California Code of Regulations, Title 22, Division 9.

D. California Probate Code, Division 4.7.

DEFINITIONS:

A. **Advance Health Care Directive (AHCD) –** A document that allows an individual to provide healthcare instructions and/or appoint an agent to make healthcare decisions when unable or prefer to have someone speak for them.

B. **Agent or Attorney-In-Fact –** An individual designated in a power of attorney for health care to make a health care decision for the patient, regardless of whether the person is known as an agent or attorney-in-fact, or by some other term.

C. **Aid-in-Dying Drug –** A drug prescribed by a physician for a qualified individual, which the qualified individual may choose to self-administer to bring about his or her death.

D. **Basic Life Support (BLS) Measures –** The provision of treatment designed to maintain circulation and ventilation for a patient in cardiac arrest (assisted ventilation via a bag-mask device and manual or automated chest compressions), without the use of medications or other special medical equipment.

E. **Do Not Resuscitate (DNR) –** A request to withhold interventions to restore cardiac activity and respirations (no chest compressions, defibrillation, assisted ventilation, advanced airway devices, or cardiotonic medications).

F. **DNR Wrist or Neck Medallion –** A MedicAlert® or other approved wrist or neck medallion, engraved with the words "Do Not Resuscitate", and a patient ID number.

G. **Durable Power of Attorney for Health Care (DPAHC) –** A document that allows an individual to appoint an agent/attorney-in-fact to make health care decisions if they become incapacitated. The DPAHC must be immediately available and the agent/attorney-in-fact must be physically present. Decisions made by the agent/attorney-in-fact must be within the limits set by the DPAHC, if any.

H. **EMSA/CMA Prehospital DNR Form –** A form developed by the California Emergency Medical Services Authority (EMSA) and California Medical Association (CMA) for the purpose of instructing EMS personnel to forgo resuscitation attempts in the event of a patient's cardiopulmonary arrest in the out of hospital setting. The form must be signed and dated by a physician and patient/representative to be valid.

I. **End of Life Option Act –** A California law authorizing an adult, eighteen (18) years or older, who meets certain qualifications and who has been determined by their attending physician to be suffering from a terminal disease, to request an Aid-in-Dying drug prescribed for the purpose of ending their life in a humane and dignified manner.

J. **Physician's Orders for Life Sustaining Treatment (POLST) –** A physician order form that addresses a patient's wishes about a specific set of medical issues related to end-of-life care. The form must be signed and dated by a physician and patient/representative to be valid.

POLICY:

A. Any of the following DNR orders/forms shall be honored by prehospital personnel:

1. An EMSA/CMA Prehospital DNR form.

2. A POLST form.

3. An approved DNR wrist or neck medallion.

4. A DNR order in the medical record of a licensed healthcare facility (e.g., acute care hospital, skilled nursing facility, intermediate care facility, hospice) signed by a physician (or an RN verifying a valid verbal physician order on a physician order sheet). Electronic physician's orders are considered signed and shall be honored.

5. A verbal DNR order given by the patient's physician.

6. An AHCD or DPAHC, with the agent/attorney-in-fact physically present and stating the patient refuses resuscitative measures.

7. A Final Attestation form for patients who have chosen to utilize an Aid-in-Dying drug.

B. DNR orders do not expire and photocopies are considered valid.

PROCEDURE:

A. All patients shall receive an immediate assessment/medical evaluation.

B. If presented with a DNR order/form, prehospital personnel shall:

1. Verify the identity of the patient.

2. Confirm the validity of the order.

3. If deemed valid, follow the orders as written. The patient shall still receive full palliative treatment for pain, dyspnea, or other medical conditions.

4. Provide supportive care to family members.

C. If the patient is conscious and states that they wish resuscitative measures, the DNR order shall be ignored.

D. When the patient is in cardiac arrest:

1. BLS measures shall be initiated pending verification of a valid DNR order.

2. If there are any questions regarding the validity/applicability of a DNR order, or objection by family members/caretakers regarding withholding resuscitation, prehospital personnel shall continue BLS measures and immediately contact the base/modified base hospital for consultation.

3. If a patient has a valid DNR but resuscitation was started prior to arrival of the EMS responder, CPR can be discontinued.

E. When the patient is not in cardiac arrest:

1. A patient with a DNR order who is not in cardiac arrest shall be provided treatment as appropriate for their complaint, unless a POLST is in place that directs care differently.

2. If the patient/representative presents a valid POLST form, prehospital personnel shall follow the orders as written.

    - Patients with a POLST form indicating “Comfort-Focused Treatment”, are typically only transported to a hospital if their comfort needs cannot be met in their current location/setting. These patients who have no signs of pain or respiratory distress, and who have sufficient family/caretaker support present, may be released at scene by prehospital personnel and not transported to the hospital, unless transportation is requested by the patient/legal representative.
    - Prehospital personnel shall contact the base/modified base hospital for consultation for any questions or concerns regarding EMS treatment or transport of a patient with a POLST form.

F. End of Life Option Act:

If a terminally ill individual appears to have ingested an Aid-in-Dying drug under the provisions of the California End of Life Option Act, prehospital personnel shall:

1. Provide comfort care (oxygen administration, opening and maintaining the airway using non-invasive means only, and suctioning as necessary) as indicated.

2. Determine who called 9-1-1 and why.

3. Determine whether there are DNR orders (including a Final Attestation form) available.

4. If a final attestation form is present and the family objects, provide comfort care to the patient and immediately contact the base/modified base hospital for consultation. Do not start resuscitation if the patient is in cardiopulmonary arrest.

G. A copy of applicable DNR orders/forms shall be attached to the EMS patient care report (PCR) when available. If copies are unavailable, prehospital personnel shall indicate in the PCR that such documents were reviewed and verified as valid. If the patient is wearing a DNR bracelet or neck medallion, the DNR bracelet or neck medallion number shall be documented in the PCR.

H. If patient transport is initiated, applicable DNR orders/forms shall be taken with the patient to the receiving facility. Prehospital personnel shall also obtain and relay to the receiving hospital the name/contact information of any agent, attorney-in-fact or other applicable patient representative.

Sierra – Sacramento Valley EMS Agency Program Policy			
Crime Scene Management			
	Effective: 12/1/2023	Next Review: 09/2026	**825**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE:

To provide guidelines for EMS personnel when patient care is required at the scene of a known or potential crime.

AUTHORITY:

A. California Health and Safety Code, Division 2.5, § 1798.6, 1797.220.

B. California Code of Regulations, Title 22, Division 9.

POLICY:

A. The primary duty of both law enforcement and EMS personnel is to protect and preserve human life. EMS personnel must ensure that patient care is given highest priority, in consideration to the needs of law enforcement (personnel/public safety, crime scene management and evidence preservation).

B. In the event that EMS personnel discover a crime scene, or are at a crime scene without law enforcement, an immediate request for law enforcement shall be made. EMS personnel shall assure their own safety and, if possible, attempt to follow the guidelines contained in this policy.

C. EMS personnel shall follow the directions of law enforcement with respect to crime scene management. This direction should not prevent or detract from patient care. The following guidelines should be followed:

1. Parking of EMS vehicles should be done to provide adequate access for EMS personnel but with consideration of the crime scene (i.e., do not run over expended shell casings or destroy physical evidence such as tire tracks, foot prints and/or broken glass).

2. Entry to the crime scene should be made by the minimum number of EMS personnel necessary to provide patient care. If possible, entry and exit should be accomplished by the same route.

3. Care should be taken not to disturb any physical evidence.

4. Removal of the patient's clothing should be kept to a minimum. If necessary, clothing removal should be done in a manner which will minimize the loss of physical evidence (i.e., do not cut clothing through bullet or knife holes).

5. Patient clothing and personal articles are to be left in the possession of law enforcement personnel. Do not discard anything.

6. Place wrappers and other disposable trash items which accumulate as patient care is rendered in a single site away from the patient and/or potential crime scene evidence. Do not pick up trash items and discard because evidence may be destroyed. Law enforcement personnel may suggest a site to be used for trash which would be most ideal to maximize evidence preservation.

7. Determination Of Death (S-SV EMS Determination of Death Policy 820):

    - Patients who meet ‘Obvious Death Criteria’ do not require cardiac monitor confirmation of asystole.
    - Patients who meet ‘Probable Death Criteria’ should be assessed utilizing the minimum number of EMS personnel necessary.
    - If death has been determined by EMS personnel, the patient should be left in the position found and not moved or touched beyond what is necessary to determine death.
    - Law enforcement personnel have the authority to declare death. If this has occurred, medical confirmation procedures by EMS personnel do not need to be performed unless specifically requested by law enforcement.

8. Every effort to cooperate with law enforcement should be made. In the event of disagreement with law enforcement, EMS personnel should document the issue and refer the matter to their supervisor for follow up. If the disagreement involves an issue that could result in patient harm, an immediate request for supervisory personnel to respond to the scene shall be made.

Sierra – Sacramento Valley EMS Agency Program Policy			
Suspected Child Abuse/Neglect Reporting			
	Effective: 06/01/2021	Next Review: 05/2024	**830**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: Victoria Pinette – Executive Director		SIGNATURE ON FILE

PURPOSE:

To establish requirements/procedures for EMS personnel to report suspected child abuse and/or neglect.

AUTHORITY:

PC, Ch. 916 (Part 4, Title 1, Chapter 2, Article 2.5) § 11164 - 11174.3.

DEFINITIONS:

A. **Agencies authorized to accept mandated reports –** Police Department, Sheriff's Department, and Child Protective Services (CPS).

B. **Child –** Any person under the age of eighteen (18).

C. **Mandated reporter –** Includes paid firefighters, EMRs, EMTs, AEMTs, paramedics, teachers, peace officers, any healthcare practitioner, clergy member, child care custodian, or an employee of a child protective agency.

D. **Neglect –** The negligent failure of a parent or caretaker to provide adequate food, clothing, shelter, medical/dental care, or supervision.

E. **Physical abuse –** A physical injury, including death, to a child that appears to have been inflicted by other than accidental means.

F. **Sexual abuse –** Sexual assault on, or the exploitation of a minor. Sexual assault includes: rape, rape in concert (aiding or abetting or acting in concert with another person in the commission of a rape), incest, sodomy, oral copulation, penetration of genital or anal opening by a foreign object, and child molestation. It also includes lewd or lascivious conduct with a child under the age of fourteen years, which may apply to any lewd touching if done with the intent of arousing or gratifying the sexual desires of either the person involved or the child. Sexual exploitation refers to conduct or activities related to pornography depicting minors, and promoting prostitution by minors.

Suspected Child Abuse/Neglect Reporting	830

PRINCIPLES:

A. The purpose of reporting suspected child abuse/neglect is to protect the child, prevent further abuse/neglect of the child and other children in the home, and begin treatment of the entire family. The infliction of injury/neglect, rather than the degree of that injury/neglect, is the determinant for intervention by law enforcement and/or CPS.

B. California PC, § 11166 and 11168, requires that mandated reporters promptly report all suspected non-accidental injuries, sexual abuse, or neglect of children to local law enforcement and/or CPS.

C. It is the job of law enforcement, CPS and the courts to determine whether child abuse/neglect has, in fact, occurred. It is not necessary for the mandated reporter to determine child abuse/neglect, but only to suspect that it may have occurred. Children under the age of five, especially less than six months, are at highest risk.

D. All healthcare professionals are mandated to report suspected child abuse/neglect that they have knowledge of or observe in their professional capacity. Any person who fails to report as required may be punished by six months in jail and/or a $1,000 fine.

E. When a mandated reporter has knowledge of or has observed child abuse/neglect, that individual is required to report to law enforcement and/or CPS immediately or as soon as practically possible by telephone, and shall complete/submit the suspected child abuse/neglect report form within 36 hours.

F. When two or more mandated reporters are present at scene and jointly have knowledge of a known or suspected instance of child abuse/neglect, the telephone report can be made by a selected member and a single written report may be made and signed by the selected member of the reporting team. Any member who has knowledge that the designated reporter failed to uphold their agreement, shall thereafter make the report.

G. When a mandated reporter is not performing their job duties, they become discretionary reporters and are not required by law to report.

H. Those persons legally required to report suspected child abuse/neglect have immunity from criminal or civil liability for reporting as required.

POLICY:

A. If EMS personnel suspect child abuse/neglect, a prompt verbal report shall be made to law enforcement and/or CPS. If the child is in imminent danger, law enforcement shall be immediately notified/requested. To make a verbal report to CPS, call the applicable county CPS office using the appropriate 24-hour contact telephone number listed in this policy.

B. The suspected child abuse/neglect report shall be completed according to the instructions on the back of the form. The report shall be filled out as completely and clearly as possible. The completed form shall be submitted to law enforcement and/or CPS within 36 hours. A copy of the report should also be retained by the reporting party. An electronic version of the form/instructions can be obtained at the following link: https://oag.ca.gov/sites/all/files/agweb/pdfs/childabuse/ss_8572.pdf

C. The following information shall also be included in the PCR:

1. The name, department and badge # of the law enforcement officer and/or the name of the CPS social worker the report was made to.

2. The time of notification.

3. The disposition of the child, if not transported.

Suspected Child Abuse/Neglect Reporting Contact Information	
Butte County	**Colusa County**
Chico Area (North County) Child Protective Services: (888) 268-8822 2445 Carmichael Dr., Chico, CA 95928 Oroville Area (South County) Child Protective Services: (800) 400-0902 78 Table Mountain Blvd., Oroville, CA 95965	Child Protective Services: (530) 458-0280 251 East Webster St., Colusa, CA 95932
Glenn County	**Nevada County**
Child Welfare Services: (530) 934-1429 420 E. Laurel St., Willows, CA 95988	Child Protective Services: (530) 273-4291 988 McCourtney Rd., Grass Valley, CA 95949
Placer County	**Shasta County**
Family & Children Services: (916) 872-6549 1000 Sunset Blvd., Rocklin, CA 95765	Child Protective Services: (530) 225-5144 1313 Yuba St., Redding, CA 96001
Siskiyou County	**Sutter County**
Child Protective Services: (530) 841-4200 1215 South Main St., Yreka, CA 96097	Child Protective Services: (530) 822-7227 1635 Live Oak Blvd., Yuba City, CA 95991
Tehama County	**Yuba County**
Child Protective Services: (530) 527-1911 310 South Main St., Red Bluff, CA 96080	Child Protective Services: (530) 749-6288 5730 Packard Ave., Marysville, CA 95901

Sierra – Sacramento Valley EMS Agency Program Policy			
Suspected Elder/Dependent Adult Abuse Reporting			
	Effective: 06/01/2021	Next Review: 05/2024	**832**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: Victoria Pinette – Executive Director		SIGNATURE ON FILE

PURPOSE:

To establish requirements/procedures for EMS personnel to report suspected elder/ dependent adult abuse.

AUTHORITY:

A. WIC § 15630 et seq.

B. CCR, Title 22, § 100160 and § 100075.

DEFINITIONS:

A. **Dependent adult –** Any person between the ages of 18 and 64 years who meets one or both of the following criteria:

1. Has physical or mental limitations that restrict his or her ability to carry out normal activities or to protect his or her rights, including, but not limited to, persons who have physical or developmental disabilities, or whose physical or mental abilities have diminished because of age.

2. Is admitted as an inpatient to a 24-hour health facility, as defined in HSC § 1250, 1250.2, or 1250.3.

B. **Developmentally disabled person –** A person with a developmental disability specified by or as described as follows:

“Developmental disability" means a disability that originates before an individual attains age 18 years, continues, or can be expected to continue, indefinitely, and constitutes a substantial disability for that individual. As defined by the Director of Developmental Services, in consultation with the Superintendent of Public Instruction, this term shall include mental retardation, cerebral palsy, epilepsy, and autism. This term shall also include disabling conditions found to be closely related to mental retardation or to require treatment similar to that required for individuals with mental retardation, but shall not include other handicapping conditions that are solely physical in nature.

C. **Elder/dependent adult abuse –** Either of the following:

1. Physical abuse, neglect, financial abuse, abandonment, isolation, abduction, or other treatment with resulting physical harm or pain or mental suffering.

2. The deprivation by a care custodian of goods or services that are necessary to avoid physical harm or mental suffering.

D. **Elder –** Any person 65 years of age or older.

E. **Reasonable suspicion –** An objectively reasonable suspicion that a person would entertain, based upon facts that could cause a reasonable person in a like position, drawing when appropriate upon his or her training and experience, to suspect abuse.

PRINCIPLES:

A. Paid firefighters, EMRs, EMTs, AEMTs, paramedics, and MICNs are mandated reporters, and have a legal obligation to report known or suspected elder or dependent adult abuse under the following circumstances:

1. When the reporter who in their professional capacity, or within the scope of their employment, has observed or has knowledge of an incident that reasonably appears to be physical abuse, abandonment, abduction, isolation, financial abuse, or neglect; or

2. When the reporter has observed a physical injury where the nature of the injury, its location on the body, or the repetition of the injury, clearly indicates that physical abuse has occurred; or

3. When the reporter is told by an elder or dependent adult that they have experienced behavior, including an act or omission, constituting physical abuse, abandonment, abduction, isolation, financial abuse, or neglect, or the reporter reasonably suspects that abuse has occurred.

B. Any mandated reporter who has knowledge, or reasonably suspects, that types of elder or dependent adult abuse for which reports are not mandated have been inflicted upon an elder or dependent adult, or that his or her emotional well-being is endangered in any other way, may report the known or suspected instance of abuse.

C. Reports made under the law are confidential. The identity of all persons making reports of elder or dependent abuse is also confidential. This information will be shared only between the investigating and licensing agencies, with the district attorney in a criminal prosecution resulting from the report, by court order, or when the reporter waives the right to remain anonymous.

D. When two or more persons who are required to report are present and jointly have knowledge of a known or suspected instance of abuse of an elder or dependent adult, and when there is agreement among them, the telephone report may be made by a member of the team selected by mutual agreement and a single report may be made and signed by the selected member of the reporting team. Any member who has knowledge that the member designated to report has failed to do so shall hereafter make the report.

E. Mandated reporters who report suspected cases of elder or dependent adult abuse, in good faith, have absolute immunity, both civilly and criminally, for making a report of abuse of an elder or dependent adult. This includes taking of photographs of the victim and surroundings to submit with the report.

F. All healthcare professionals are mandated to report suspected elder/dependent adult abuse that they have knowledge of or observe in their professional capacity. Failure to report physical abuse, abandonment, abduction, isolation, financial abuse, or neglect of an elder or dependent adult, is a misdemeanor, punishable by not more than six months in the county jail, by a fine of not more than one thousand dollars ($1,000); or both fine and imprisonment. Any mandated reporter who willfully fails to report physical abuse, abandonment, abduction, isolation, financial abuse, or neglect of an elder or dependent adult, where that abuse results in death or great bodily injury, shall be punished by not more than one year in a county jail, by a fine of not more than five thousand dollars ($5,000), or by both fine and imprisonment.

POLICY:

A. Verbal reports of physical abuse are to be made immediately, or as soon as possible, by telephone.

B. When reporting abuse that allegedly occurred in a long-term care facility or adult day health care center, contact either the local law enforcement agency or the local Ombudsman program. When the abuse is alleged to have occurred anywhere else, contact either the local law enforcement agency or the local County Adult Protective Services.

C. A written Report of Suspected Dependent Adult/Elder Abuse must be completed and submitted to the agency initially contacted within two (2) working days of the verbal report. Electronic versions of the reporting forms and instructions can be obtained at the following links:

1. Report of Suspected Dependent Adult/Elder Abuse (SOC 341): https://cdss.ca.gov/portals/9/fmuforms/q-t/soc341.pdf?ver=2018-11-15-132736-097

2. Report of Suspected Dependent Adult/Elder Financial Abuse (SOC 342): https://www.cdss.ca.gov/cdssweb/entres/forms/English/soc342.pdf

D. The following information shall also be included in the PCR:

1. The name, department and badge # of the law enforcement officer and/or the name of the APS social worker or Local Ombudsman the report was made to.

2. The time of notification.

3. The disposition of the elder or dependent adult if not transported.

Suspected Elder/Dependent Adult Abuse Reporting Contact Information	
Butte County	**Colusa County**
Ombudsman: (530) 898-5923 Adult Protective Services: (800) 664-9774 78 Table Mountain Blvd., Oroville, CA 95965	Ombudsman: (530) 898-5923 Adult Protective Services: (530) 458-0280 251 East Webster St., Colusa, CA 95932
Glenn County	**Nevada County**
Ombudsman: (530) 898-5923 Adult Protective Services: (530) 934-1429 P.O. Box 611, Willows, CA 95988	Ombudsman: (916) 376-8910 Adult Protective Services: (530) 265-1340 500 Crown Point, Grass Valley, CA 95945
Placer County	**Shasta County**
Ombudsman: (916) 376-8910 Adult Protective Services: (916) 787-8860 101 Cirby Hills Dr., Roseville, CA 95678	Ombudsman: (530) 229-1435 Adult Protective Services: (530) 225-8798 PO Box 496005, Redding, CA 96049
Siskiyou County	**Sutter County**
Ombudsman: (916) 229-1435 Adult Protective Services: (530) 842-7009 2060 Campus Dr., Yreka, CA 96097	Ombudsman: (916) 376-8910 Adult Protective Services: (530) 822-7151 1965 Live Oak Blvd., Yuba City, CA 95991
Tehama County	**Yuba County**
Ombudsman: (530) 898-5923 Adult Protective Services: (530) 527-1911 PO Box 1515, Red Bluff, CA 96080	Ombudsman: (916) 376-8910 Adult Protective Services: (530) 749-6471 5730 Packard Ave., Marysville, CA 95901

Sierra – Sacramento Valley EMS Agency Program Policy			
Active Shooter/Mass Violence Incidents			
	Effective: 12/01/2023	Next Review: 09/2026	**834**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE:

To establish guidelines for EMS response to an active shooter/mass violence incident. It is imperative to have pre-plans and continual training/coordination with law enforcement (LE) to ensure personnel can rapidly affect rescue, save lives, and enable operations with mitigated risk to first responder and EMS personnel during these incidents.

BACKGROUND:

Active shooter/mass violence events are volatile and complex. Research and history have indicated that the active risk at most incidents is over before first responders arrive on scene, or shortly thereafter, but they may also require extended operations. Usually LE resources in the initial moments of an active shooter/mass violence event are focused on locating, containing and eliminating the threat, thus EMS resources should emphasize planning for rapid triage, treatment and extrication of the wounded in coordination with LE and as directed by Unified Command (UC). Tactical EMS support personnel are not a typical resource because they are usually very limited in number, not immediately available, and committed to their tactical team's assignment which may preclude them from casualty care activities until the tactical team's objective is met.

Considerations, planning and interagency training should occur around the concept of properly trained and equipped medical personnel who are escorted by LE into areas of mitigated risk, which are cleared but not secured, to execute triage, medical stabilization at the point-of-wounding, and provide for evacuation or sheltering-in-place.

AUTHORITY:

A. HSC, Division 2.5.

B. CCR, Title 22, Division 9, Chapter 2, 3 and 4.

DEFINITIONS:

A. **Active Shooter –** An incident involving a suspect/suspects who are actively shooting or attempting to shoot people in a confined and populated area.

B. **Casualty Collection Point –** A cleared area located within the Warm Zone where injured patients are brought to begin the process of triage and immediate life-saving treatment, usually limited to controlling massive external hemorrhage, placing occlusive dressings on open chest wounds and basic airway management.
C. **Cleared –** An area that has been checked by LE and no apparent threats have been found.

D. **Cold Zone –** The area surrounding the active shooter incident that is secured by LE. All normal EMS activities should take place in the Cold Zone.

E. **Concealment –** Anything that obscures you from view of the suspect such as smoke, vegetation, etc. Concealment will not provide ballistic protection.

F. **Cover –** Any object that provides ballistic protection, such as a reinforced concrete wall, large dirt mound, etc.

G. **Hot Zone –** The area immediately surrounding the shooter(s) that has not been cleared or secured by LE. Only LE or specially trained and equipped EMS personnel (i.e. tactical medics) should enter the Hot Zone.

H. **Secured –** An area that has been slowly, methodically and deliberately searched by LE and no threats have been found.

I. **Warm Zone –** The area outside of the Hot Zone that has been swept/cleared by LE, but has not been completely secured. Limited numbers of EMS personnel, as determined by UC, may enter the Warm Zone for the purposes of extrication or to establish a Casualty Collection Point. The Warm Zone should be staffed by armed LE when possible for EMS personnel protection.

POLICY:

A. Incident Command System (ICS) concepts shall be implemented for all active shooter/mass violence incidents. These incidents are primarily a LE event, but also require coordination with fire/rescue/EMS personnel. Therefore, responders should consider establishing UC as soon as possible.

B. Consider early ordering of additional triage, treatment and transportation resources. All resources shall be requested through the IC/UC.

C. S-SV EMS policies/protocols shall apply during an active shooter/mass violence incident. The utilization of Tactical Emergency Casualty Care (TECC) principals may initially be necessary at scene, depending on specific incident details.

D. If possible, the Control Facility (CF) should be quickly notified for any active shooter/mass violence incident and should be utilized for patient dispersal during any event that meets Multiple Casualty Incident (MCI) criteria (S-SV EMS MCI Policy 837).

CONSIDERATIONS:

A. While the community-accepted practice has been staging EMS assets at a safe distance (usually out of line-of-sight) until the area is completely secured by LE, considerations should be made for more aggressive EMS operations in areas of higher but mitigated risk to ensure casualties can be rapidly retrieved, triaged, treated, and evacuated. Rapid triage, utilizing the START/JumpSTART method (see S-SV EMS Multiple Casualty Incidents Policy 837), and treatment are critical to survival.

B. Utilize staging areas to limit the number of responders. Don't stack up responders and resources in one location as responders may be targets.

C. Stage responders for rapid evacuation and always have an escape route open to leave the scene quickly if needed.

D. Use a deliberate and cautious approach to the scene. EMS personnel should be escorted by LE whenever possible.

E. Use identification that is discernable from a distance. Be aware that responders may be wearing uniforms and civilian attire, so exercise caution in identifying individuals.

F. Consider establishing a duress code known to all responder personnel.

G. If bystanders become hostile, extricate yourself and advise the IC/UC.

H. If exposed to gunfire, explosions or threats, withdraw to a safe area or shelter in place if necessary.

I. Consider the use of apparatus solid parts such as motor, pump, water tank and wheels as cover in the Hot Zone. Understand the difference between cover and concealment.

J. Consider additional devices and hazards at the main scene and secondary scenes in close proximity to the main scene. Such threats, if identified, would necessitate upgrading the area to a Hot Zone and requiring rapid evacuation of all medical personnel/surviving casualties.

K. Communicate with the IC/UC to determine which agency or personnel will locate casualties, triage them, provide point-of-wounding medical stabilization, and/or remove them to a safe location. Be aware that LE officers may bypass casualties in order to eliminate the threat.

L. Adopt a "scoop and run" response within the Warm Zone. Treatment, including splinting/spinal motion restriction/ALS procedures, can wait until the victim is in a cleared or secured location. Utilize gurneys to transport multiple patients, and uninjured victims to assist walking wounded patients as appropriate.

M. Work as teams or in pairs at a minimum. If possible, assign an extra responder to serve as a team spotter. Their role is to observe, identify and avoid threats while the balance of the team executes their EMS assignment. If resources are available, LE should be assigned as the team spotter.

N. Use internal Casualty Collection Points (CCPs) for large facilities with multiple casualties where evacuation distances are long. Point-of-wounding medical stabilization should occur prior to evacuation to the CCP. Identify all responders and casualties at the CCP for accountability and protection/security purposes.

O. For larger geographic incidents or incidents with travel barriers, consider the use of multiple staging, triage and other supporting setup areas.

P. Events with mobile perpetrators or sequenced attacks may necessitate CCP or staging area relocation and additional protection/security.

PROCEDURE:

A. Evacuation Care (Hot or Warm Zone):

Only LE or specially trained and equipped EMS personnel (i.e. tactical medics) should enter the Hot Zone to provide Evacuation Care. The goal of Evacuation Care is to provide life-saving interventions and to prevent casualties from sustaining additional injuries. Minimal trauma interventions are warranted in this phase of care.

1. Consider quickly placing and/or directing casualties to be placed in position to open or protect their airway if necessary.

2. Consider hemorrhage control and treat according to S-SV EMS Hemorrhage Treatment Protocol (T-8), with the following additional considerations:
   - If required and available, tourniquets should be applied over clothing.
   - Consider moving to safety prior to tourniquet application if the situation warrants.
   - Consider instructing casualties and/or bystanders to apply direct pressure to the wound if no tourniquet is available or application is not feasible.

3. Upon approval of the IC/UC, non-tactical EMS personnel may enter the area once it has been cleared by LE in order to provide Evacuation Care. These personnel should be issued appropriate protective gear, if available, and escorted by LE personnel.

4. Casualty Extraction:

    - If casualties can move to safety, they should be instructed to do so.
    - If casualties are unresponsive, quickly assess for respirations. If they are not breathing, leave them and move on to the next casualty.
    - If casualties are responsive but cannot move, a tactically feasible rescue plan should be devised.
    - Recognize that threats are dynamic and may be ongoing, requiring continuous threat assessments.

B. Casualty Collection Point (CCP) Care (Warm Zone):

Limited numbers of EMS personnel (as determined by the IC/UC) should enter the Warm Zone for the purposes of patient extrication or to establish a CCP. The goal of CCP Care is to stabilize casualties to permit safe evacuation to dedicated medical treatment and transport assets.

1. LE casualties should have weapons made safe by appropriate personnel once the threat is neutralized or if their mental status is altered.

2. Assess casualties and initiate appropriate life-saving interventions based on the provider's level of training and scope of practice according to S-SV EMS Treatment Protocols (as permitted by personnel/equipment resources).

3. Limit environmental exposure:

    - Minimize casualties' exposure to the elements (sun, rain, etc.). Keep protective gear on or with the casualty if feasible.
    - Replace wet clothing with dry if possible. Place casualties onto an insulated surface as soon as possible.

4. Document Evacuation/CCP Care rendered on a Triage Tag.

5. Prepare Casualties for Evacuation:

    - Consider environmental factors for safe and expeditious evacuation.
    - Secure casualties to a movement assist device when available.
    - Appropriate spinal motion restriction should be implemented when indicated (as permitted by personnel/equipment resources).

Sierra – Sacramento Valley EMS Agency Program Policy			
Medical Control At The Scene Of An Emergency			
	Effective: 06/01/2023	Next Review: 03/2026	**835**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE:

To define patient care and incident management responsibilities at the scene of a medical emergency.

AUTHORITY:

A. HSC, Division 2.5, § 1797.220, 1798.6.

B. CCR, Title 22, Division 9.

POLICY:

A. Authority for patient health care management in an emergency shall be vested in that licensed or certified health care professional, which may include any paramedic, or other prehospital emergency personnel, at the scene of the emergency, who is most medically qualified specific to the provision of rendering emergency medical care. If no licensed or certified health care professional is available, the authority shall be vested in the most appropriate medically qualified representative of public safety agencies who may have responded to the scene of the emergency.

B. Notwithstanding the above, authority for the overall management of the scene of an emergency shall be vested in the appropriate public safety agency having primary investigative authority. The scene of an emergency shall be managed in a manner designed to minimize the risk of death or health impairment to the patient and to other persons who may be exposed to the risks as a result of the emergency condition, and priority shall be placed upon the interests of those persons exposed to the more serious and immediate risks to life and health. Public safety officials shall consult EMS personnel or other authoritative health care professionals at the scene in the determination of relevant risks. Some limited examples are as follows:

   1. California Highway Patrol – All freeways; all roadways in unincorporated areas to include right-of-way.

   2. Sheriff's Office – Off-highway unincorporated areas (parks, private property, etc.).

3. Local Fire/Police – Specific areas of authority within their jurisdiction, except freeways.

4. Airport Fire/Police – Airports.

5. U.S. Military – National Defense Area; a military reservation or an area with "military reservation status" that is temporarily under military control, e.g., military aircraft crash site.

PROCEDURE:

A. Medical management at the scene of a medical emergency includes:

1. Medical evaluation and care.

2. Medical aspects of extrication and patient movement.

3. Patient destination decisions, in consultation with base/modified base hospital when necessary.

4. Method and mode of transport.

B. The first on duty ALS licensed/accredited or certified responder on the scene shall assume responsibility for the patient's care unless they are cancelled by BLS personnel prior to patient contact, and there is no indication that ALS assessment/ treatment is necessary.

Sierra – Sacramento Valley EMS Agency Program Policy			
Hazardous Materials Incidents			
	Effective: 06/01/2023	Next Review: 01/2026	**836**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE:

To establish guidelines for the response of EMS prehospital personnel to hazardous materials incidents.

AUTHORITY:

A. HSC, Division 2.5, § 1797.150, 1797.151, 1797.204, 1797.214, 1798.6.

B. CCR, Title 22, 100172 and 100175.

C. OSHA Regulations, CFR 1910.120.

D. Applicable County Hazardous Materials Response Plans.

DEFINITIONS:

A. **County Hazardous Materials Response Plan –** County specific plan defining hazardous materials incident types and establishing response protocols/ responsibilities of agencies within the county.

B. **Hazardous Materials (Haz Mat) –** Any material which is explosive, flammable, poisonous, corrosive, reactive, or radioactive, or any combination, and requires special care in handling because of the hazards it poses to public health, safety, and/or the environment.

C. **Hazardous Materials (Haz Mat) Response Team –** An emergency team that has received specialized training and equipment for the purpose of protecting the public and the environment in the event of an accidental or intentional release of hazardous materials into the environment.

D. **Decontamination –** The process of removing or neutralizing contaminates that have accumulated on a victim to the extent necessary to prevent/alleviate the occurrence of heath and/or environmental effects.

E. **First Responder Awareness Level –** First responders at the awareness level are individuals who are likely to witness or discover a hazardous substance release and who have been trained to initiate an emergency response sequence by notifying the proper authorities of the release.

F. **Exclusion Zone (Hot Zone) –** The contaminated area, Immediately Dangerous to Life and Health (IDLH).

G. **Contamination Reduction Zone (Warm Zone) –** The area where decontamination takes place.

H. **Support Zone (Cold Zone) –** The uncontaminated area where individuals should not be exposed to hazardous conditions.

TRAINING AND COMPETENCY:

The minimum training for EMS prehospital personnel is Haz Mat First Responder Awareness level. Annual refresher training is required to be provided by the employer to be of sufficient content and duration to maintain competencies or to demonstrate those competencies. Additional training may be required to function at an emergency incident.

POLICY:

A. Responsibility for Haz Mat containment, identification, decontamination, and victim evacuation rests with the Incident Commander (IC)/Unified Command (UC).

B. Responding ambulances should stage off-site until the IC/UC provides for safety, a clear assignment and approach to scene.

C. EMS personnel must avoid contamination and not transport patients until they have been completely decontaminated. (Exception: For radiation contaminated patients that meet immediate triage criteria, treatment and transport should not be delayed for decontamination processes).

D. EMS personnel shall not enter or provide treatment in the Contamination Reduction Zone (Warm Zone) or Exclusion Zone (Hot Zone) unless specifically trained, equipped and authorized to do so.

E. EMS personnel shall not use Haz Mat specific personal protective equipment (PPE), including self-contained breathing apparatus (SCBA), unless specifically trained, fit tested and authorized to do so.

F. EMS personnel shall contact the base/modified base or receiving hospital as soon as possible, so they may prepare to receive victims. The base/modified base hospital may also assist field personnel in determining a decontamination and treatment plan.

DISPATCH:

Ambulances dispatched to a possible hazardous materials incident shall be advised by dispatch of the following additional information when known/available:

A. On scene wind direction and recommended approach route (coordinated with IC/UC).

B. Staging area location.

C. Location of incident command post.

D. Communication frequencies.

E. Type of hazardous material(s) involved.

F. Estimated number of patients.

SCENE MANAGEMENT:

A. Once cleared to respond into the scene (Support Zone/Cold Zone) from staging, ambulance personnel shall follow directions provided by IC/UC or designee.

B. Recognition of a Haz Mat on-scene or during transport:

If ambulance personnel become aware of hazardous materials while on scene or during transport, they shall:

1. Consider themselves contaminated and part of the incident (Hot Zone).

2. Evacuate to a safe location (if safe/appropriate to do so) to minimize exposure, and consider self-decontamination.

3. Isolate the scene and deny entry (keep others away). Move uninvolved victims to a safe zone.

4. Confirm Haz Mat using DOT Emergency Response Guidebook and notify appropriate jurisdictional authorities to respond to the scene for site control and decontamination.

PATIENT CARE:

A. EMS personnel shall not render medical care beyond the Support Zone (Cold Zone) unless specifically trained, equipped, and authorized to do so.

B. Medical treatment and transportation is secondary to the prevention of spreading the contaminate, and the management of the Haz Mat incident. The IC/UC or designee is responsible for determining the treatment priority for the patient(s). EMS transport personnel may be requested to receive non-ambulatory patients from the Contamination Reduction Zone (Warm Zone) after decontamination has been completed.

C. For radiation contaminated patients that meet immediate triage criteria, treatment and transport should not be delayed for decontamination processes.

D. Deceased victims shall be left undisturbed at the scene, or moved at the direction of the coroner, IC/UC, or designee.

E. The use of HEMS aircraft for the transport of potentially contaminated Haz Mat patient(s) is generally not appropriate. Patient transport by HEMS aircraft shall only occur by direction of the IC/UC or designee. HEMS aircraft may be utilized, at the discretion of the IC/UC or designee, to transport immediate radiation contaminated patients under the same criteria as ground based transportation assets.

F. If necessary, request CHEMPACK resources utilizing county specific activation procedures (refer to S-SV EMS Nerve Agent Treatment Protocol E-8).

G. Treat patients as directed by applicable S-SV EMS protocols, and/or direction from the base/modified base hospital.

Sierra – Sacramento Valley EMS Agency Program Policy			
Multiple Casualty Incidents (MCI)			
	Effective: 12/01/2020	Next Review: 09/2023	**837**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: Victoria Pinette – Executive Director		SIGNATURE ON FILE

PURPOSE:

To establish procedures for EMS operations during a multiple-casualty incident (MCI). This policy is intended to be utilized in coordination with applicable regional MCI plans, and to support the operational framework established in the California Public Health and Medical Emergency Operations Manual.

AUTHORITY:

A. HSC, Division 2.5, § 1797.218, 1797.220.

B. CCR, Title 22, Division 9.

C. CCR, Title 19, Division 2, Articles 1-8, § 2400 et seq.

D. California Public Health and Medical Emergency Operations Manual (July, 2011).

E. California Medical and Health Operational Area Coordinator Manual (January, 2017).

DEFINITIONS:

A. **Multiple Casualty Incident (MCI) –** An incident which requires more emergency medical resources to adequately deal with victims, than those available during routine responses. This includes an incident that meets any of the following criteria:

1. Five (5) or more IMMEDIATE and/or DELAYED patients, or

2. Ten (10) or more MINOR patients, irrespective of the number of IMMEDIATE and/or DELAYED patients, or

3. At the discretion of prehospital or hospital providers.

B. **Control Facility (CF) –** An acute care hospital or EMS dispatch center responsible for patient dispersal during an MCI (Refer to S-SV EMS Hospital Capabilities Policy No. 505-A for a list of S-SV EMS designated CFs).

POLICY:

A. The Nor-Cal EMS/S-SV EMS Regional MCI Plan, in coordination with S-SV EMS policies, shall be used as a standard for training personnel and managing MCIs within the S-SV EMS region. Provider agencies are responsible for ensuring that their personnel have appropriate knowledge/training to adequately manage MCI's.

B. S-SV EMS treatment and destination policies/protocols shall apply during an MCI. The CF shall consider trauma triage criteria before directing the transport of trauma patients. IMMEDIATE trauma patients shall be transported to designated trauma centers until the trauma centers are unable to accept further trauma patients.

PROCEDURE:

A. MCI Response/Management:

EMS personnel shall utilize the following procedures for any event that meets the criteria of an MCI as defined in this policy:

1. CF Notification:

- CF notification ('pre-alert') shall be made as soon as possible, by the initial responding medical unit or dispatch center, to allow adequate time for hospital patient receiving capabilities polling. Pertinent updates shall be communicated to the CF in a timely manner (including MCI confirmation/cancellation once on scene, and when all patients have been transported and the scene is clear).

2. Establish/Utilize ICS:

- Once on scene, EMS personnel shall check in with the Incident Commander (IC) and establish Medical Command. The Medical Branch is responsible for the following:
  - **R**esources (Additional resources shall be ordered through the IC).
  - **A**ssignments (Refer to 'MCI Medical Organizational Chart' 837-A).
  - **C**ommunications (Establish incident and CF communications).
  - **I**ngress/Egress (Determine/communicate best ingress/egress routes).
  - **N**ame (Confirm/establish incident name).
  - **G**eography (Establish staging, triage, treatment and transport areas)
- Appropriate medical position identification vests shall be utilized on scene.
  - Ground transport providers shall carry a minimum of Medical Group Supervisor and Triage Unit Leader vests on all 911 response units.
  - Additional position vests should be available on supervisor vehicles and/or disaster/MCI support units.

3. Triage:

    - The START method shall be utilized.
    - A colored ribbon system may be utilized for initial triage.
    - Approved triage tags shall be applied to all patients prior to transport.
    - Treatment rendered during initial triage shall be limited to airway repositioning and major hemorrhage control.
    - CPR shall not be initiated, unless there are sufficient personnel on scene to not result in the detriment of care to other patients.
    - Any patient who has a tourniquet or hemostatic dressing applied shall be triaged IMMEDIATE, regardless of the START RPM algorithm criteria.
    - Patients placed in spinal motion restriction and/or unaccompanied pediatric patients shall be categorized as DELAYED at a minimum.

4. Treatment:

    - Designate treatment areas and assign staff as needed. Treatment areas should be located in safe locations, large enough to handle the number of victims and easily accessible to patient transport vehicles.
    - Once initial triage has been completed, patients may be moved to appropriate treatment areas. Continuous re-triage and patient evaluation shall occur in treatment areas until the patient is transported.
    - Medical supplies from the first-in ambulance or disaster/MCI support units should be used for on scene treatment.

5. Patient Tracking:

    - S-SV EMS approved prehospital patient tracking worksheets (837-B) shall be utilized to track all patients. Copies of the patient tracking worksheets shall be submitted to S-SV EMS as soon as possible.

6. Transportation/CF Communication:

    - If a staging area has been established, transport crews shall remain with their vehicle in the staging area until requested or released.
    - The Patient Transportation Unit Leader (or Medical Communications Coordinator if established) will contact the CF and provide patient information and total number of transport resources available. Patient information provided to the CF will be limited to age, gender, triage category, triage tag number, primary injury type and any special considerations (pregnancy, burns, etc.).
    - The Patient Transportation Unit Leader/Medical Communications Coordinator will work collaboratively with the CF to ensure appropriate patient distribution, based on patient conditions and available transportation resources.
    - IMMEDIATE patients should be transported first.

- If necessary, patients may be transported by BLS ambulances and/or non-traditional transport resources (e.g. buses, vans) as determined appropriate by the Patient Transportation Unit Leader/Medical Communications Coordinator in consultation with the CF. EMS personnel shall accompany patients transported by non-traditional transport resources.
- The first-in ambulance should generally be the last ambulance to leave.
- The Patient Transportation Unit Leader/Medical Communications Coordinator will notify the CF of the following:
  - When patients are ready for transport (to obtain destinations).
  - When units depart the scene (with unit # and ETA to receiving hospital).
  - When all patients are transported and the scene is clear.
- The CF will relay pertinent patient information to the receiving facilities.

7. S-SV EMS Notification:

   - Prehospital ground transport providers (dispatch, supervisor, manager, etc.) shall notify the S-SV EMS Duty Officer of an MCI as soon as possible, and provide pertinent updates related to the incident and/or other system impacts resulting from the incident.

8. Incident Documentation:

   - An electronic patient care report shall be completed for all patients, unless this requirement is waived by S-SV EMS on an incident specific basis.
   - EMS personnel shall complete additional ICS paperwork if requested by the IC based on the nature/size of the incident (Medical Branch Worksheet, Ambulance Resource Staging Log, ICS 214 Activity Log, etc.). The Medical Group Supervisor is responsible to ensure all paperwork is complete.

B. MCI Review:

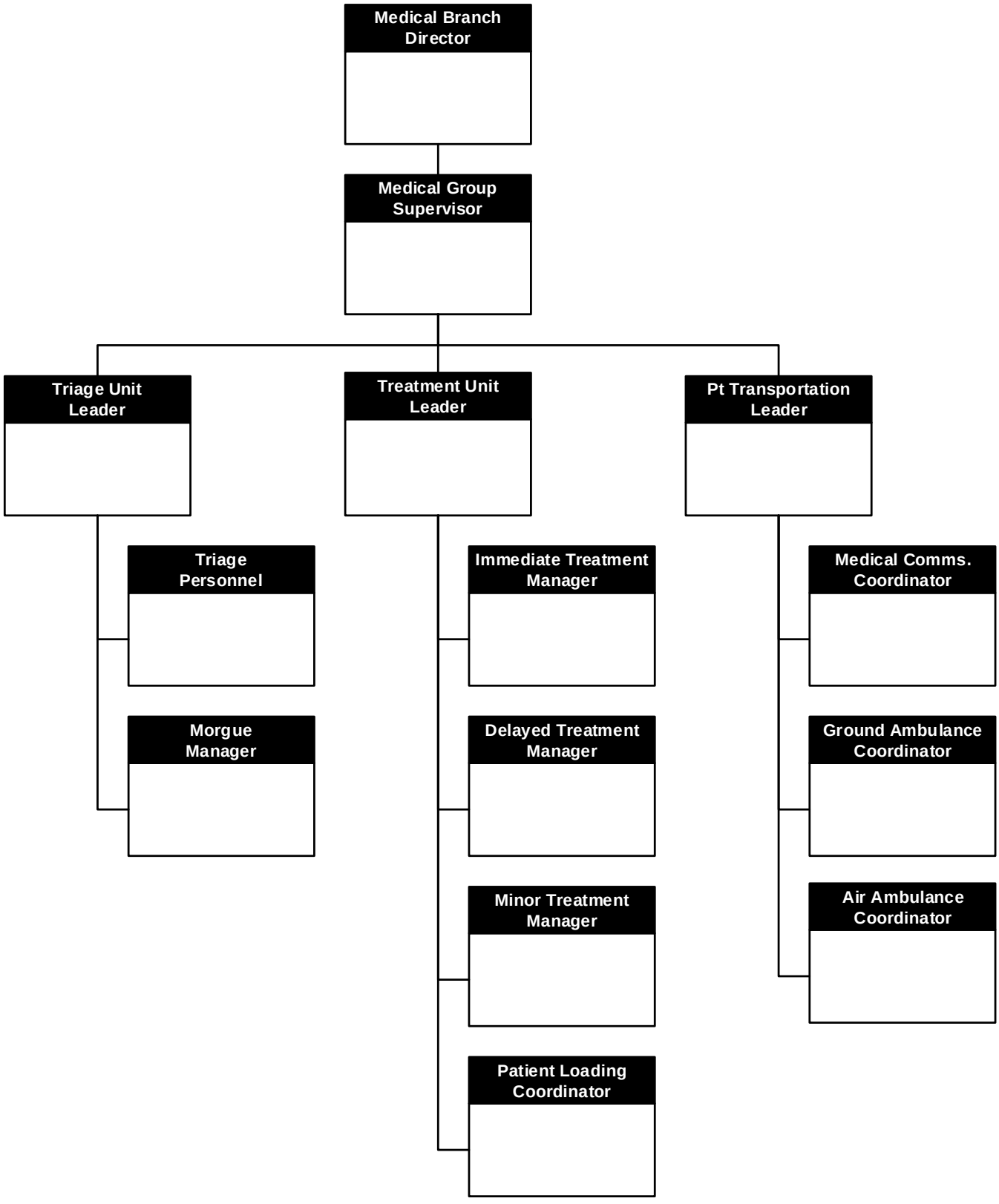
1. EMS provider agencies should conduct a hotwash as soon as possible after the conclusion of the incident.

2. An MCI Details/Feedback Form shall be submitted to S-SV EMS within seven (7) calendar days by the following providers:

   - Prehospital ground and air transport providers.
   - Control Facility (CF) and receiving facilities.
   - Prehospital non-transport/first responder providers (recommended/optional).

3. S-SV EMS will evaluate the incident details/documentation and determine if additional formal after-action review/follow-up is necessary.

MCI MEDICAL BRANCH ORGANIZATIONAL CHART



MCI MEDICAL BRANCH ORGANIZATIONAL CHART NOTES

- Positions are assigned based on incident size and personnel qualifications.
- The Medical Branch Director is typically only assigned on larger incidents.
- Smaller incidents may only utilize a Medical Group Supervisor and Triage Unit Leader, who are also responsible for Treatment Unit and Patient Transportation Unit duties.

MCI MEDICAL BRANCH PRIMARY TASK CHECKLIST

Task	Completed
1. Ensure Control Facility (CF) MCI notification (including pre-alert if applicable)	
2. Check in with the Incident Commander (IC) and establish Medical Command	
3. Establish appropriate roles/functions (Triage, Treatment, Transportation)	
4. Utilize appropriate MCI vests for identification	
5. Order additional transport/medical resources through the IC	
6. Ensure that triage tags are applied to all patients prior to transport	
7. Maintain adequate CF communications to ensure appropriate patient distribution	
8. Utilize the patient tracking worksheet to adequately track all patients	

Notes

Patient Tracking Worksheet (837-B)

Incident Name/Location	Incident Date	Form Completed By	Contact Telephone #

Triage Status	Triage Tag # (Last 4) Patient Name (First & Last)	Age Sex	Primary Injury Type	County of Origin Code	Transport Destination	Trans. Unit ID	Trans. Time	ETA	CF Advised
I D M		M F U							
I D M		M F U							
I D M		M F U							
I D M		M F U							
I D M		M F U							

County of Origin Codes

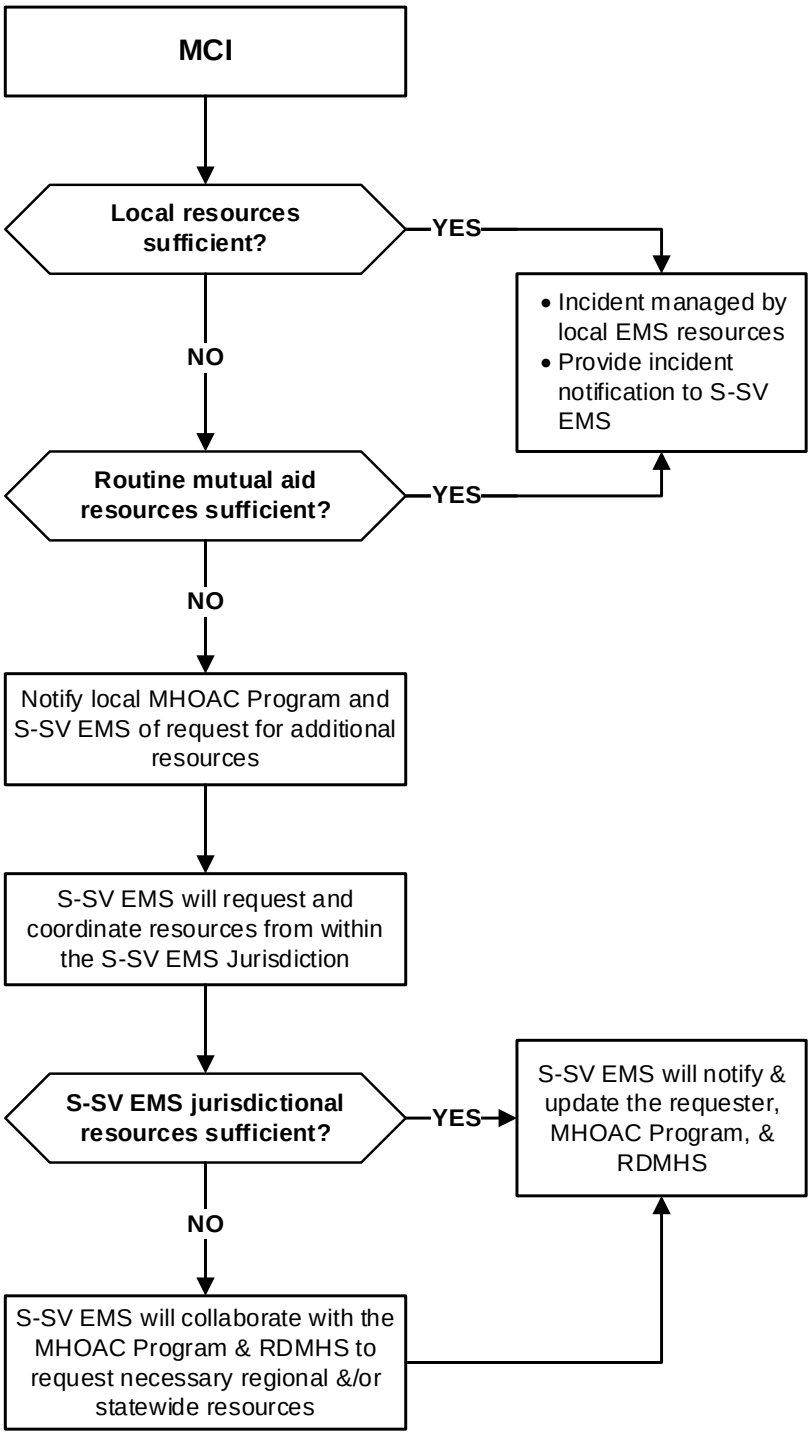
Butte **(XBU)** Colusa **(XCO)** Glenn **(XGL)** Lassen **(XLS)** Modoc **(XMO)** Nevada **(XNE)** Placer **(XPL)** Plumas **(XPU)**

Shasta **(XSH)** Sierra **(XSI)** Siskiyou **(XSK)** Sutter **(XSU)** Tehama **(XTE)** Trinity **(XTR)** Yuba **(XYU)**

Submit completed worksheets via email (RDMHS.Region3@ssvems.com), or fax (916-625-1720)

MCI SUPPORT RESOURCES

- Ambulance resources needed beyond the capacity of local providers & routine mutual aid agreements are requested through the Medical Health Operational Area Coordinator (MHOAC).
- Non-traditional transport resources (buses, vans, etc.) & other MCI resources (trailers, caches, DMSUs, etc.) are requested & coordinated through the IC &/or local OES/EOC/ MHOAC.
- S-SV EMS will collaborate with the local MHOAC &/or the RDMHS as needed regarding the ordering & coordination of prehospital EMS resources, & will assist with submission of required OA Resource Request & SITREP forms as needed.
- Immediate need EMS transport resources may be requested directly from S-SV EMS to reduce response delays in the event that requested resources are available from within the S-SV EMS jurisdiction.
- Routine MCI events (managed with local/S-SV EMS jurisdictional mutual aid resources) do not involve an expectation of reimbursement from the requesting OA by the EMS mutual aid provider.
- Large/extended events (including requests for ambulance strike team resources, patient evacuations, etc.) must be requested/authorized by an appropriate OA entity (OES/EOC/ MHOAC). The requesting OA maintains financial responsibility for any EMS resource utilization costs incurred in these situations.



Sierra – Sacramento Valley EMS Agency Program Policy			
Physician On Scene			
	Effective: 06/01/2023	Next Review: 03/2026	**839**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE:

To define patient care responsibilities when a physician is on the scene of a medical emergency.

AUTHORITY:

A. HSC, Division 2.5, § 1797.220, 1798.2.

B. CCR, Title 22, Division 9.

POLICY:

A. EMS personnel encountering a physician on the scene of a medical emergency shall initiate and maintain responsibility for patient care, unless the physician assumes responsibility for patient care and accompanies the patient to the hospital (if required). EMS personnel may assist the physician as long as they operate within their applicable scope of practice.

B. If necessary, EMS personnel are responsible for confirming that the individual is in fact a California licensed physician. If needed, utilize the EMSA/CMA Physician on Scene Card included in this policy.

C. In the event of a conflict with a physician on scene, EMS personnel shall consult with the base/modified base hospital and document the events appropriately.

PROCEDURE:

A. Physician is a bystander:

1. If the physician wishes to do more than offer assistance, they must:

- Assume responsibility for the patient.
- Provide the care s/he wishes.
- Accompany the patient to the hospital (if safety allows).

2. If there is a conflict between the physician's requested treatment and the EMS personnel's scope of practice, EMS personnel shall explain that they can only treat within their applicable scope of practice.

3. If necessary, contact the base/modified base hospital and request the physician to discuss any issues directly with base/modified base hospital personnel.

B. Physician is patient's physician:

1. The physician may provide treatment prior to transfer of patient care to EMS personnel.

2. If there is a conflict between the physician's requested treatment and the EMS personnel's scope of practice following transfer of patient care, EMS personnel shall explain that they can only treat within their applicable scope of practice.

3. If necessary, contact the base/modified base hospital and request the physician to discuss any issues directly with base/modified base hospital personnel.

4. Patient care may be transferred to EMS personnel. There is no requirement for the physician to accompany the patient to the hospital in these circumstances.

EMSA/CMA PHYSICIAN ON SCENE CARD:

FRONT

NOTE TO PHYSICIANS ON INVOLVEMENT WITH EMS PERSONNEL

EMS personnel operate under standard policies and procedures developed by the Local EMS Agency and approved by their Medical Director under Authority of Division 2.5 of the California Health and Safety Code. The drugs they carry and procedures they can do are restricted by law and local policy.

If you want to assist, this can only be done through one of the alternatives listed on the back of this card. These alternatives have been endorsed by CMA, State EMS Authority and CCLHO.

Assistance rendered in the endorsed fashion, without compensation, is covered by the protection of the "Good Samaritan Code" (see Business and Professional Code, Sections 2144, 2395-2298 and Health and Safety Code, Section 1799.104).

BACK

ENDORSED ALTERNATIVES FOR PHYSICIAN INVOLVEMENT

After identifying yourself by name as a physician licensed in the State of California, and, if requested, showing proof of identity, you may choose one of the following:

1. Offer your assistance with another pair of eyes, hands or suggestions, but let EMS personnel remain under base hospital control; or,
2. Request to talk to the base station physician and directly offer your medical advice and assistance; or,
3. Take total responsibility for the care given by EMS personnel and physically accompany the patient until the patient arrives at a hospital (if safety allows) and responsibility is assumed by the receiving physician. In addition, you must sign for all instructions given in accordance with local policy and procedures.

Sierra – Sacramento Valley EMS Agency Program Policy			
Medical Control For Transfers Between Acute Care Facilities			
	Effective: 06/01/2023	Next Review: 05/2026	**840**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE:

To assure medical control of patients during ambulance transfers between acute care facilities. This policy does not exempt any acute care hospital or physician from meeting their regulatory/statutory obligations for patient transfers. The medical/legal responsibility for the patient rests with the transferring physician.

AUTHORITY:

A. HSC, Division 2.5, § 1797.185, 1797.194, 1797.218, 1797.220, 1798.102, 1798.170, and 1798.172.

B. CCR, Title 22, Division 9.

C. USC, Title 42, Section 395dd, EMTALA Statute.

D. CFR 42, Sections 489.20 and 489.24, EMTALA Regulations.

POLICY:

A. Prior to accepting an acute care interfacility transfer patient, EMS personnel shall:

1. Obtain patient information to include diagnosis, history and any therapies received while in the hospital or within the previous four (4) hours, whichever is less.

2. Complete a physical assessment, including vital signs.

B. EMS personnel shall follow orders of the transferring physician, however they cannot provide care beyond the S-SV EMS approved scope of practice. Should medical consultation be required during transport, EMS personnel shall follow the S-SV EMS Base/Modified Base/Receiving Hospital Contact Policy (Reference No. 812).

C. If a patient is transferred outside of the S-SV EMS region or base/modified base hospital radio contact range, EMS personnel may provide care according to S-SV EMS standing order policies/protocols.

Sierra – Sacramento Valley EMS Agency Program Policy			
Paramedic Monitoring Of Magnesium Sulfate, Nitroglycerin, Heparin, &/Or Amiodarone Infusions During IFTs			
	Effective: 06/01/2023	Next Review: 03/2026	**841**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE:

To provide parameters for paramedic monitoring of magnesium sulfate, nitroglycerin, heparin, &/or amiodarone infusions during interfacility transports (IFTs).

AUTHORITY:

A. HSC, Division 2.5, § 1797.220.

B. CCR, Title 22, Chapter 4, Article 1, § 100145.

POLICY:

A. Only appropriately trained paramedics who are on duty with an S-SV EMS authorized paramedic IFT optional skills provider may monitor magnesium sulfate, nitroglycerin, heparin, &/or amiodarone infusions during IFTs.

B. Patients will have pre-existing infusions in peripheral or central IV lines.

C. Paramedics will not initiate magnesium sulfate, nitroglycerin, heparin, &/or amiodarone infusions.

D. Magnesium sulfate, nitroglycerin, heparin, &/or amiodarone infusions should have been running for at least 10 minutes prior to transport.

E. Patients should have maintained stable vital signs for the previous 30 minutes and will not have more than two (2) medication infusions running exclusive of potassium chloride concentrations authorized under the paramedic basic scope of practice.

PROCEDURE:

A. All patients shall be maintained on a cardiac monitor and a non-invasive blood pressure monitor throughout transport.

B. The paramedic shall receive written orders from the transferring physician prior to leaving the transferring hospital. These orders shall include a telephone number where the transferring and/or base/modified base hospital physician can be reached during transport, in addition to the type of solution, dosage and rate of infusion. These written orders shall be attached to the completed PCR.

C. Patients will be hemodynamically stable at time of transport.

D. If medication administration is interrupted, the paramedic may restart the infusion as delineated in the transfer orders.

E. All infusions (except for potassium chloride concentrations authorized under the paramedic basic scope of practice) will be monitored by a mechanical pump familiar to the paramedic. In cases of pump malfunction that cannot be corrected, the infusion shall be discontinued and the transferring physician and/or base/modified base hospital notified as soon as possible. S-SV EMS shall be notified of any mechanical pump malfunction no later than the end of the next business day.

F. The paramedic shall document on the PCR the total volume infused throughout the duration of the transport.

G. Magnesium sulfate infusion parameters:

1. Regulation of the infusion rate will be within parameters defined by the transferring physician.

2. If the patient develops signs/symptoms of magnesium toxicity, the medication drip shall be discontinued and the transferring physician and/or base/modified base hospital will be notified as soon as possible. Signs/symptoms of magnesium toxicity include:

    - Thirst
    - Diaphoresis
    - DTR’s (Deep Tendon Reflexes) – depressed or absent
    - Hypotension
    - Flaccid paralysis
    - Respiratory depression
    - Circulatory depression or collapse
    - CNS depression
    - Urine output < 30 ml/hr
    - Chest pain or pulmonary edema

3. Vital signs, including DTR's, shall be monitored and documented every 15 minutes and any time there is a change in patient condition or medication adjustment.

H. Nitroglycerin parameters:

1. Infusion fluid will be D5W.

2. Medication concentration will be 50mg/250mL.

3. Regulation of the infusion rate will be within parameters defined by the transferring physician, but in no case will changes be greater than 10mcg/minute increments every 5-10 minutes. In cases of severe hypotension, the medication drip will be discontinued and the transferring physician and/or base/modified base hospital will be notified as soon as possible.

4. Discuss with transferring physician concomitant use of analgesics during transport (i.e., morphine sulfate, fentanyl).

5. Vital signs shall be monitored and documented every 15 minutes and any time there is a change in patient condition or medication adjustment.

I. Heparin infusion parameters:

1. Infusion fluid will be D5W or NS.

2. Medication concentration shall not exceed 100units/mL of IV fluid (25,000 units/ 250mL).

3. Infusion rates shall be verified with the sending RN following changeover to the mechanical EMS transport pump and will remain constant during transport. No regulation of the rate will be performed by the paramedic except to turn off the infusion completely.

4. Vital signs shall be monitored and documented every 15 minutes and any time there is a change in patient condition.

J. Amiodarone infusion parameters:

1. Medication concentration must be a minimum concentration of 150mg/250mL (0.6 mg/mL).

2. Infusion rates may vary between 0.25 – 1 mg/min.

3. Infusion rates will remain constant during transport. No adjustment of the rate will be performed by the paramedic except to turn off the infusion completely.

4. Vital signs will be monitored and documented every 15 minutes and any time there is a change in patient condition.

5. Y-Injection incompatibility; the following will precipitate with amiodarone hydrochloride:

    - Heparin
    - Sodium bicarbonate

6. Amiodarone hydrochloride intravenous infusion monitoring is not approved for patients less than 14 years old without base/modified base physician contact.

7. For infusions greater than one hour, amiodarone hydrochloride concentrations should not exceed 2mg/mL unless a central venous catheter is used.

Sierra – Sacramento Valley EMS Agency Program Policy			
Paramedic Monitoring Of Blood Transfusions During IFTs			
	Effective: 06/01/2023	Next Review: 03/2026	**842**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE:

To provide parameters for paramedic monitoring of blood transfusions during interfacility transports (IFTs).

AUTHORITY:

A. HSC, Division 2.5, § 1797.220.

B. CCR, Title 22, Chapter 4, Article 1, § 100145.

POLICY:

A. Only appropriately trained paramedics who are on duty with an S-SV EMS authorized paramedic IFT optional skills provider may monitor blood transfusions during IFTs.

B. Paramedic monitoring of blood transfusions during IFTs is limited to those circumstances when there are no RN staffed Critical Care Transport (CCT) units available or when air ambulance transport is not appropriate/available.

C. Patients will have pre-existing blood transfusions in peripheral or central IV lines. Prehospital personnel will not initiate blood transfusions.

PROCEDURE:

A. All patients will be maintained on a cardiac monitor and a non-invasive blood pressure monitor throughout transport.

B. The paramedic shall receive written orders from the transferring physician prior to leaving the transferring hospital. These orders shall include a telephone number where the transferring and/or base/modified base hospital physician can be reached during the patient transport in addition to the transfusion rate. These written orders shall be attached to the completed PCR.

C. Patients will be hemodynamically stable at the time of transport.

D. Paramedic personnel must be knowledgeable in the operation of the specific blood delivery/warming equipment.

E. Regulation of the transfusion rate will be within the parameters defined by the transferring physician.

F. Verify the patient and blood with the sending RN by checking the patient ID band against the blood label(s) and blood order for name, blood type and unit identifying number.

G. Vital signs will be monitored and documented every 15 minutes and any time there is a change in patient condition or change in transfusion rate.

H. Monitor the patient for any signs and symptoms of a transfusion reaction. Monitor temperature for adverse effects if transport time exceeds 15 minutes. The following are the most common types of transfusion reactions that may occur:

1. Hemolytic reactions: Hemolytic reactions are the most life-threatening. Clinical manifestations may vary considerably: fever, headache, chest or back pain, pain at infusion site, hypotension, nausea, generalized bleeding or oozing from surgical site, shock. The most common cause is from ABO incompatibility due to a clerical error or transfusion to the wrong patient. Chances of survival are dose dependent therefore it is important to stop the transfusion immediately if a hemolytic reaction is suspected. Give a fluid challenge.

2. Febrile non-hemolytic reaction: Chills and fever (rise from baseline temperature of 1°C or 1.8°F). Document and report to hospital on arrival.

3. Allergic reaction: Characterized by appearance of hives and itching.

4. Anaphylaxis: May occur after administration of only a few ml's of a plasma containing component. Symptoms include coughing, bronchospasm, respiratory distress, vascular instability, nausea, abdominal cramps, vomiting, diarrhea, shock, and loss of consciousness.

5. Volume overload: Characterized by dyspnea, headache, peripheral edema, coughing, frothy sputum, or other signs of congestive heart failure occurring during or soon after transfusion. Restrict fluid.

I. If a suspected transfusion reaction occurs:

1. Interrupt the transfusion immediately.

2. Contact the transferring and/or base/modified base hospital physician.

3. Consult appropriate treatment protocol.

4. Document any suspected transfusion reactions.

5. Report to hospital staff immediately upon arrival.

J. The paramedic shall document on the PCR the total volume infused throughout the duration of the transport.

Sierra – Sacramento Valley EMS Agency Program Policy			
Paramedic Utilization Of Automatic Transport Ventilators During IFTs			
	Effective: 06/01/2023	Next Review: 03/2026	**843**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE:

To provide parameters for paramedic utilization of an Automatic Transport Ventilator (ATV) during interfacility transports (IFTs).

AUTHORITY:

A. HSC, Division 2.5, § 1797.220.

B. CCR, Title 22, Chapter 4, Article 1, § 100145.

POLICY:

A. Only appropriately trained paramedics who are on duty with an S-SV EMS authorized paramedic IFT optional skills provider may utilize an ATV during IFTs.

B. Patients will be on ventilator support prior to transport. Paramedics will not initiate ventilator support.

C. Provider agencies utilizing ATV equipment shall follow the manufacturer instructions for use, maintenance, cleaning, and regular testing. At a minimum, ATV equipment shall undergo annual preventative testing/maintenance by qualified manufacturer's representative personnel.

D. Paramedics must be adequately trained and regularly retrained on the use of the ATV equipment. Such training shall occur no less than annually and shall be documented.

PROCEDURE:

A. Written transfer orders from the transferring physician shall be obtained prior to transport. These orders must provide for maintaining and adjusting ventilations via ATV settings during transport and shall include a telephone number where the transferring and/or base/modified base hospital physician can be reached during the patient transport. These written orders shall be attached to the completed PCR.

B. Ventilator support must be regulated by an ATV familiar to the paramedic.

C. If an ATV equipment failure occurs and cannot be corrected, the paramedic shall discontinue use of the ATV, initiate ventilation by bag-valve device, and notify the transferring physician and/or base/modified base hospital as soon as possible. S-SV EMS shall also be notified of any ATV failure by the end of the next business day.

D. Paramedics shall continually observe the patient and document patient response to any changes while the ATV is operational.

E. Initial ATV settings and any subsequent changes shall be documented on the PCR.

F. The paramedic is responsible for airway management and must frequently reassess tracheostomy/endotracheal tube placement, including after each patient movement.

G. Non-invasive BP monitoring equipment shall be utilized. Vital signs shall be monitored and documented every 15 minutes and any time there is any change in patient condition or adjustment of the ATV setting.

H. Continuous pulse oximetry, waveform capnography, and cardiac monitoring shall be maintained throughout transport, and values/rhythms shall be documented every 15 minutes and any time there is a change in patient condition.

I. The ATV equipment must be able to match the existing ventilator settings, and shall include the following minimum features (including circuit):

1. Modes:
   - Assist Control (AC).
   - Synchronized Intermittent Mandatory Ventilation (SIMV).

2. Ventilation rate control.

3. Tidal volume control.

4. FiO_2 control.

5. Positive End-Expiratory Pressure (PEEP) control.

6. Inspiratory (I) time control.

7. Peak airway pressure gauge.

8. Alarms:
   - Peak airway pressure.
   - Disconnect.

Sierra – Sacramento Valley EMS Agency Program Policy			
Paramedic Utilization Of Non-Invasive High Flow Nasal Cannula During IFTs			
	Effective: 06/01/2023	Next Review: 03/2026	**844**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE:

To provide parameters for paramedic utilization of non-invasive High Flow Nasal Cannula (HFNC) during interfacility transports (IFTs).

AUTHORITY:

A. HSC, Division 2.5, § 1797.220.

B. CCR, Title 22, Chapter 4, Article 1, § 100145.

POLICY:

A. Only appropriately trained paramedics who are on duty with an S-SV EMS authorized paramedic IFT optional skills provider may utilize non-invasive HFNC during IFTs.

B. Patients will be on non-invasive HFNC prior to transport. Paramedics will not initiate non-invasive HFNC.

C. Provider agencies utilizing non-invasive HFNC equipment shall follow the manufacturer instructions for use, maintenance, cleaning, and regular testing. At a minimum, non-invasive HFNC equipment shall undergo annual preventative testing/ maintenance by qualified manufacturer's representative personnel.

D. Paramedics must be thoroughly trained and regularly retrained on the use of the non-invasive HFNC equipment. Such training shall occur no less than annually and shall be documented.

PROCEDURE:

A. Written transfer orders from the transferring physician shall be obtained prior to transport. These orders must provide for maintaining and titrating flow (LPM), FiO2 and SpO2 goals for non-invasive HFNC during transport and shall include a telephone number where the transferring and/or base/modified base hospital physician can be reached during the patient transport. These written orders shall be attached to the completed PCR.

B. Non-invasive HFNC support must be administered utilizing non-invasive HFNC equipment familiar to the paramedic.

C. If a non-invasive HFNC equipment failure occurs and the paramedic is unable to maintain oxygen administration utilizing non-invasive HFNC, the paramedic shall discontinue use of non-invasive HFNC, provide appropriate oxygenation/ventilation support, and notify the transferring physician and/or base/modified base hospital as soon as possible. S-SV EMS shall also be notified of any non-invasive HFNC failure by the end of the next business day.

D. Paramedics shall continually observe the patient and document patient response to treatment and any changes while the non-invasive HFNC is operational.

E. Initial non-invasive HFNC settings and any subsequent changes shall be documented on the PCR.

F. The paramedic is responsible for airway management and must frequently reassess respiratory effort for effectiveness of non-invasive HFNC oxygen delivery.

G. Non-invasive BP monitoring equipment shall be utilized. Vital signs shall be monitored and documented every 15 minutes and any time there is any change in patient condition or adjustment of the non-invasive HFNC settings

H. Continuous pulse oximetry, waveform capnography, and cardiac monitoring shall be maintained throughout transport, and values/rhythms shall be documented every 15 minutes and any time there is a change in patient condition.

Sierra – Sacramento Valley EMS Agency Program Policy			
Reduction/Cancellation Of ALS Response			
	Effective: 06/01/2023	Next Review: 01/2026	**848**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE:

To establish criteria for the reduction or cancellation of responding ALS resources.

AUTHORITY:

A. HSC, Division 2.5, § 1797.204, 1797.220 and 1798.

B. CCR, Title 22, Division 9, Chapter 4, § 100147, 100169 and 100170.

DEFINITIONS:

A. **Code 2 –** Proceeding expeditiously but obeying all traffic laws without exception.

B. **Code 3 –** Proceeding with red lights and siren according to the vehicle code.

C. **Competent Individual –** An individual responsible for their own healthcare, or legally responsible for healthcare decisions involving the patient (parent, legal guardian, conservator, agent/attorney-in-fact, etc.), who has the capacity to understand the circumstances for which EMS care is indicated and the risks associated with refusing all or part of such care. They are alert and their judgement is not impaired by alcohol, drugs/medications, illness, injury, or grave disability.

POLICY:

A. The IC/designee on the scene of a medical incident may reduce a responding ALS resource from Code 3 to Code 2 upon determination that the patient's illness or injury is not immediately life-threatening and the difference in Code 3 and Code 2 response time would not likely have an impact on patient safety (note: when an ALS ambulance is reduced to Code 2, it is possible that the resource will be redirected to a higher priority call, resulting in a delayed subsequent ambulance response).

B. The IC/designee may cancel a responding ALS resource upon determination that the incident does not involve an illness or injury which would require assessment, treatment and/or transport by ALS personnel, or when a competent individual is refusing ALS assessment, treatment and/or transport.

1. BLS personnel should not cancel responding ALS resources for ‘high risk’ patients, including but not limited to:

    - Cardiac arrest with active CPR.
    - Cardiac symptoms.
    - Difficulty breathing.
    - Altered mental status.
    - Drug ingestion.
    - Attempted suicide, verbalized suicidal/homicidal ideations.
    - Seizures.
    - Near drowning.
    - Active or significant hemorrhage.
    - Pediatric patient’s ≤3 years old.
    - Patients who meet Field Trauma Triage Criteria as defined in S-SV EMS General Trauma Management Protocol (Reference No. T-1).

2. Once they have arrived on scene, ALS personnel shall attempt to make patient contact unless they are cancelled by BLS personnel prior to patient contact, and there is no indication that the patient meets any of the ‘high risk’ criteria listed in this policy.

Sierra – Sacramento Valley EMS Agency Program Policy			
Transfer Of Patient Care			
	Effective: 12/01/2023	Next Review: 07/2026	**849**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE

To establish requirements for transfer of patient care by EMS personnel.

AUTHORITY

A. HSC, Division 2.5, § 1791.220.

B. CCR, Title 22, Division 9, Chapters 1.5, 2, 3, and 4.

POLICY

A. The first on duty EMS personnel at the scene of a medical emergency shall initiate EMS assessment/treatment unless cancelled prior to patient contact. This individual shall be the EMS primary care provider and shall maintain that role until patient care is transferred to other EMS or receiving hospital personnel.

B. Transfer of patient care to higher level EMS personnel shall occur as soon as possible after their arrival at scene, unless cancelled prior to patient contact or it has already been determined by other EMS personnel that a higher level of EMS care is not required.

C. Other EMS personnel shall provide pertinent incident/patient information and assistance to the EMS primary care provider.

D. Base/modified base hospital consultation shall be utilized for any significant disagreement regarding EMS treatment or transfer of patient care.

PROCEDURE

A. EMS personnel are authorized to transfer patient care to other EMS personnel when determined appropriate and mutually agreed to.

1. Transfer of patient care to lower-level EMS personnel shall only occur if the patient condition permits, and the care required is within the scope of practice of the lower-level EMS personnel.

2. Prior to transfer of patient care to an EMT, AEMT/paramedic personnel shall perform an adequate patient assessment and obtain a patient history to confirm that AEMT/paramedic care is not required. In the event of subsequent changes to patient condition requiring a higher level of EMS care, AEMT/paramedic personnel shall re-assume primary patient care as soon as possible.

3. Transfer of care from AEMT/paramedic personnel to an EMT is not allowed for any of the following types of patients:

    - Any patient who requires ALS/LALS management according to any S-SV EMS policies/protocols.
    - Patients refusing EMS care (S-SV EMS Policy 850).
    - Patients meeting trauma triage criteria (S-SV EMS Policy 860).
    - Pregnant patients in active labor or greater than 20 week's gestation with an obstetric complaint.

4. If EMS personnel refuse to accept transfer of patient care due to the patient's condition or complexity of treatment, the initial EMS primary care provider shall maintain patient care and accompany the patient to the hospital, if transported.

5. Equivalent or higher level EMS personnel shall not refuse transfer of patient care in the following situations:

    - Transfer of patient care from EMS personnel functioning in a specialized role (tactical, fireline, ski patrol, bike team, special event, etc.).
    - During a declared Multi Casualty Incident (MCI).
    - Transfer of patient care from ground EMS to EMS aircraft personnel (unless safety reasons prevent such transfer). Patient care shall not be transferred to EMS aircraft personnel until they are safely ready to accept care of the patient.

6. EMS personnel transferring patient care to other EMS personnel shall:

    - Provide pertinent patient assessment and treatment information to EMS personnel accepting responsibility for the patient.
    - AEMT/paramedic personnel who transfer patient care shall ensure the completion of a PCR as required by S-SV EMS Prehospital Documentation policy (Reference No. 605). The PCR shall include the time of patient care transfer and the name/provider agency of the EMS personnel accepting transfer.

Sierra – Sacramento Valley EMS Agency Program Policy			
Refusal Of EMS Care			
	Effective: 12/01/2023	Next Review: 09/2026	**850**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE:

To establish criteria and procedures for the refusal of EMS assessment, treatment, and/or transportation (collectively referred to in this policy as "EMS care") by a patient, or an individual acting on behalf of a patient.

AUTHORITY:

A. HSC, Division 2.5, § 1797.204, 1797.220, and 1798.

B. CCR, Title 22, Division 9.

C. WIC, § 5008, 5150 and 5170.

D. PROB, § 810-813, 4609, 4711, 4712

DEFINITIONS:

A. **Emergency Medical Condition (EMC)** – A medical condition that, if not immediately diagnosed and treated will lead to serious disability or death, or treatment is necessary to alleviate severe pain.

B. **Capacity –** An individual's ability to 1) understand the nature and consequences of a decision and 2) to make/communicate a decision and understand the significant benefits, risks, and alternatives of their decision. An individual who has a mental or physical disorder may still be capable of making medical decisions. An individual has the capacity to give informed consent for EMS care if they can do all the following:

1. Respond knowingly and intelligently to queries about EMS care.

2. Participate in EMS care decision by means of a rational thought process.

3. Understand the following:

- The nature and seriousness of the illness, disorder, or defect.
- The nature of the EMS care that is being recommended.

- The probable degree and duration of benefits and risks of medical interventions or reasonable alternatives and the consequences of lack of treatment.

C. **Legal Guardian –** An individual granted legal authority to care for another individual, including a court appointed conservator.

D. **Parent –** The lawful mother or father of a non-emancipated minor.

E. **Patient –** An individual who has a complaint suggestive of an illness/injury, requests evaluation of an illness/injury, and/or in the judgment of EMS personnel, demonstrates a known or suspected illness/injury that requires EMS care.

F. **Person –** An individual who does not have a complaint suggestive of an illness/injury, does not request evaluation of an illness/injury, and/or in the judgement of EMS personnel, does not demonstrate a known or suspected illness/injury that requires EMS care.

G. **Surrogate Health Care Decision Maker** – In the event that a patient lacks capacity, a health care provider caring for the patient may choose a surrogate to make health care decisions on the patient's behalf as appropriate to the situation. Prior to implementing any decision made by a surrogate for a patient, the healthcare provider is required by law to inform the patient of the decision made and the person making it. Surrogate decision makers shall be, in descending order of preference, determined as follows:

1. The patient's designated adult surrogate.

2. The patient's agent pursuant to an advance health care directive or a power of attorney for health care.

3. The conservator or guardian of the patient having the authority to make health care decisions for the patient.

4. If none of the above are available, then the healthcare provider can choose a surrogate decision maker. A surrogate decision maker must:

   - Be an adult 18 years or older.
   - Have demonstrated special care and concern for the patient.
   - Be familiar with the patient's personal values and beliefs to the extent known.
   - Be reasonably available and willing to serve.

5. The surrogate decision maker can be chosen from the following list:

   - The spouse or domestic partner of the patient.

- An adult child of the patient.
- A parent of the patient.
- An adult sibling of the patient.
- An adult grandchild of the patient.
- An adult relative or close personal friend.

POLICY:

A. No individual shall be encouraged to refuse EMS care.

B. No individual shall be denied EMS care based on age, sex, race, creed, color, origin, economic status, language, sexual preference, disease, or injury, or any other actual or potential discriminatory reason.

C. Individuals determined by EMS personnel to meet the definition of a person, according to this policy, do not require EMS care.

D. A patient, legal guardian, or surrogate health care decision maker may decline all or part of EMS care if EMS personnel, in consultation with the base/modified base hospital when appropriate, have determined that the patient, legal guardian, or surrogate health care decision maker has capacity.

E. Refusal of EMS care procedures shall be performed by the highest-level medical provider on scene. If the non-transport and transport providers are certified/licensed at the same level, and both are on scene, the primary care provider shall be responsible for completing the required refusal of EMS care procedures.

PROCEDURE:

A. Unless refused by the patient, legal guardian, or surrogate healthcare decision maker, EMS personnel shall perform a complete and appropriate patient assessment, including obtaining vital signs and if applicable, performing diagnostic procedures (EKG/12-Lead, finger stick blood glucose testing, etc.).

B. If EMS personnel have determined that an EMC exists:

1. If the patient does not have capacity and no legal guardian or surrogate health care decision maker with capacity is available, the patient should be transported to the closest appropriate facility. This should occur in collaboration with other public safety personnel on-scene and the base/modified base hospital.

2. If the patient has capacity, or a legal guardian or surrogate health care decision maker with capacity is available, EMS personnel shall provide the patient, legal guardian, or surrogate health care decision maker with enough information to understand the nature and consequences of refusing EMS care. EMS providers

shall document the reason why the patient is refusing care and efforts taken to support the patient in receiving care. This may include base/modified base hospital contact.

C. Law enforcement assistance shall be requested for any of the following circumstances:

1. Any individual who has attempted suicide or verbalized suicidal/homicidal ideations and is refusing EMS care.

2. There is concern for patient neglect or endangerment.

3. EMS personnel have determined that the patient should be considered for a mental health hold and no EMC exists.

4. Any circumstance where EMS personnel believe law enforcement assistance would be beneficial.

D. Base/modified base hospital contact shall be made, while in close proximity to the patient, for any of the following circumstances:

1. Any situation in which EMS providers believe that a patient lacks capacity and is attempting to communicate a desire to not receive EMS care, unless an EMC exists and doing so would delay emergent care/transport.

2. Patients with a new altered level of consciousness who meet any of the following criteria:

- Continuing altered level of consciousness.
- Diabetic patients who meet any of the following criteria:
  - No known cause for hypoglycemic episode (i.e. missed meal, pump failure).
  - Suspected medication error/overdose of prescribed diabetes medications.
  - Experienced a seizure.
  - Required more than one dose of dextrose and/or glucagon by EMS.
  - Repeat blood glucose is ≤100mg/dl.
  - A reliable adult will not be staying with the patient.

3. Seizure patients, with a known seizure disorder, who meet any of the following criteria:

- Prolonged seizure (>5 min) or multiple seizures.
- Seizures resulting from a traumatic injury.
- No known cause for seizure (i.e. compliant with seizure medications).
- New or different seizure symptoms.

- Pregnant patients.
- Patient has recently started a new medication.
- A reliable adult will not be staying with the patient.

4. Patients experiencing a potentially life-threatening condition, including but not limited to patients meeting STEMI, stroke, or trauma triage criteria.

5. A patient exhibiting unstable vital signs.

6. Any situation where law enforcement request/assistance was unsuccessful in facilitating EMS care, and EMS personnel believe that further EMS care is in the patient's best interest.

7. Any circumstance where EMS personnel believe base/modified base hospital assistance would be beneficial or are requesting direct MICN or base/modified base hospital physician communication with the patient.

8. A patient who is an unemancipated minor (<18 years of age) or under the care of a legal guardian or surrogate healthcare decision maker, who is being discharged to themselves or another person present at the scene who is not their parent or legal guardian.

E. Prior to releasing unemancipated minor patients, or patients under the care of a legal guardian, EMS personnel shall attempt to contact the patient's parent/legal guardian if they are not already on scene. Pertinent contact details, as well as information on who the patient was released to, shall be documented in the patient care report.

F. In the event of communication failure for circumstances that require base/modified base hospital contact, a patient, legal guardian, or surrogate health care decision maker with legal capacity may be released by EMS personnel after all other requirements contained in this policy are met. EMS personnel must document the method of communication attempted and the reason for the communication failure in the patient care report.

G. A patient, legal guardian, or surrogate health care decision maker refusing EMS care must sign a Refusal of EMS Care Form (850-A or similar), witnessed by one of the following individuals (listed in order of preference):

1. Immediate family member.

2. Law enforcement officer.

3. Other EMS personnel.

4. Involved third party.

If the patient, legal guardian, or surrogate health care decision maker refuses to sign the Refusal of EMS Care Form, EMS personnel shall document this information in both the patient care report and the Refusal of EMS Care Form and obtain a witness signature indicating that the patient refused to sign.

H. Provider agencies are responsible for routinely auditing refusal of EMS care calls. Random auditing of these types of calls shall occur on a minimum of a monthly basis.

Sierra – Sacramento Valley EMS Agency Program Policy			
EMS Care Of Minor Patients			
	Effective: 12/01/2023	Next Review: 07/2026	**851**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE:

To establish criteria and procedures for EMS assessment, treatment and/or transport (collectively referred to in this policy as "EMS care") of minor patients.

AUTHORITY:

A. HSC, Division 2.5.

B. CCR, Title 22, Division 9.

C. FAM, § 6922, 6924, 6925, 6926, 6927, 6928, and 6929.

D. WIC, § 305 and 625.

DEFINITIONS:

A. **Emancipated –** An individual under the age of 18 years old who is married, on active duty in the military, or emancipated by court declaration.

B. **Emergency –** A situation requiring immediate services for alleviation of severe pain or immediate diagnosis of unforeseen medical conditions, which, if not immediately diagnosed and treated, would lead to serious disability or death.

C. **Legal Guardian –** An individual granted legal authority to care for another individual.

D. **Minor –** An individual under the age of 18 years.

E. **Parent –** The lawful mother or father of a non-emancipated minor.

POLICY:

A. Parent/legal guardian consent for EMS care is not required for minor patients meeting any of the following criteria:

1. Has an emergency medical condition and a parent/legal guardian is not available.

2. Is an emancipated minor.

3. Is fifteen (15) years of age or older, living separate and apart from their parents and managing their own financial affairs.

4. Is twelve (12) years of age or older and in need of medical care for an infectious, contagious communicable disease, or for a sexually transmitted disease.

5. Is twelve (12) years of age or older and in need of medical care for drug or alcohol abuse.

6. Is in need of medical care for rape or sexual assault.

7. Is pregnant and requires medical care related to the pregnancy.

B. EMS personnel shall make every effort to inform a parent/legal guardian of a non-emancipated minor of the situation requiring EMS care, and where their child has been transported.

1. EMS personnel are not permitted to inform a parent/legal guardian without the minor's consent under the following circumstances:

   - Is pregnant and requires medical care related to the pregnancy.
   - Is twelve (12) years of age or older and in need of medical care for an infectious, contagious communicable disease, or for a sexually transmitted disease.

2. EMS personnel are not permitted to inform a parent or legal guardian of a minor who needs medical care for rape or sexual assault when they reasonably believe that the parent/guardian committed the rape or assault.

C. If EMS personnel believe a parent or legal guardian is making a decision which appears to be endangering the health and welfare of a minor patient, law enforcement involvement shall be utilized.

Sierra – Sacramento Valley EMS Agency Program Policy			
Patient Restraint Mechanisms			
	Effective: 06/01/2024	Next Review: 04/2027	**852**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE:

To provide guidelines on the use of restraint mechanisms by EMS personnel for patients who are violent, potentially violent, or who may harm themselves or others.

AUTHORITY:

A. HSC, Division 2.5, § 1797.202, 1797.220, and 1798.

B. CCR, Title 22.

C. WIC, 5150.

PRINCIPLES:

A. Restraint mechanisms are to be used only when necessary, in situations where the patient is potentially violent or is exhibiting behavior that is dangerous to self or others.

B. Prehospital personnel must consider that aggressive or violent behavior may be a symptom of medical conditions such as head trauma, hypoxia, alcohol or drug related problems, hypoglycemia or other metabolic disorders, stress, or psychiatric disorders.

C. The method of restraint used shall allow for adequate monitoring of vital signs and shall not restrict the ability to protect the patient's airway or compromise vascular or neurological status.

D. Restraints applied by law enforcement require the officer to remain available at the scene and/or during transport to remove or adjust the restraints for patient safety.

POLICY:

A. General Principals

1. Restrained patients shall not be transported in a prone position. EMS personnel must ensure that the patient's position does not compromise their respiratory/ circulatory systems and does not preclude any necessary medical intervention to protect or manage the airway should vomiting occur.

2. Monitor vital signs and be prepared to provide airway/ventilation management.

3. The base and/or receiving hospital shall be informed as soon as possible that the patient has been restrained, the type of restraint used and the reason for restraint.

B. Forms of Restraint

1. Physical Restraint:

- Restraint devices applied by EMS personnel must be padded soft restraints that will allow for quick release.
- Restrained extremities should be evaluated for pulse quality, capillary refill, color, temperature, nerve, and motor function immediately following application and every 10 minutes thereafter. It is recognized that the evaluation of vascular and neurological status requires patient cooperation, and thus may be difficult or impossible to monitor.
- Restraints shall be applied in such a manner that they do not cause vascular, neurological, or respiratory compromise. Any abnormal findings require the restraints to be removed and reapplied, or supporting documentation as to why restraints could not be removed and reapplied.
- Restraints shall not be attached to movable side rails of a gurney.
- It the patient is actively spitting; a surgical mask or oxygen mask (at appropriate flow rate) may be placed over the patient's mouth to protect EMS personnel and others. If this method fails, a light weight, sheer, protective mesh hood may be used. When the mesh hood is placed over the patient's head, their mouth and/or nose shall never be obstructed, and the patient's airway/respiratory status shall be continuously monitored. The mesh hood shall never be tightened in any manner to secure it around the patient's neck.
- The following forms of restraint shall not be applied by EMS personnel:
  - Hard plastic ties or any restraint device requiring a key to remove.
  - Restraining a patient's hands and feet behind the patient.
  - "Sandwich" restraints, using backboard, scoop-stretcher, or flats.

2. Chemical Restraint:

- If a patient is combative, such that harm to self or others is likely, consider chemical restraint as follows:
  - Pediatric patients: Contact base/modified base hospital for consultation.
  - Adult patients: Midazolam* 5 mg IV/IO **OR** 10 mg IM/IN.

  *Continuous cardiac & EtCO2 monitoring required following administration of Midazolam

C. Law Enforcement Applied Restraints

1. The general principles of this policy shall pertain to patients with restraints applied by law enforcement who are treated/transported by EMS personnel.

2. Restraint devices applied by law enforcement must provide sufficient slack to allow the patient to straighten their abdomen/chest and to take full tidal volume breaths.

3. Restraint devices applied by law enforcement require the officer's continued presence to ensure patient and scene safety. The officer should accompany the patient in the ambulance or follow the ambulance during transport. Patients in custody/arrest remain the responsibility of law enforcement.

4. At the discretion of law enforcement, applied restraint devices may be replaced by EMS restraints if doing so does not threaten the safety of the patient and/or EMS personnel.

D. Interfacility Transport of Psychiatric Patients

Two-point, locking, padded cuff and belt restraints and/or two-point locking, padded ankle restraints may only be used during interfacility transport of psychiatric patients on a 5150 hold, under the following circumstances:

1. Transport personnel must be provided with a written restraint order from the transferring physician/designee as part of the transfer record.

2. Transport personnel shall always have immediate access to the restraint key during transport.

3. Restrained extremities should be evaluated for pulse quality, capillary refill, color, temperature, nerve, and motor function immediately following application and every 10 minutes thereafter. Any abnormal findings require the restraints to be adjusted or removed and reapplied, or supporting documentation as to why restraints could not be adjusted or removed and reapplied.

E. Documentation

The following information shall be documented on the patient care report:

1. Reason for restraint.

2. Type of restraint utilized and identity of personnel applying restraint.

3. Assessment of the vascular/neurological status of the restrained extremities and cardiac/respiratory status of the restrained patient.

Sierra – Sacramento Valley EMS Agency Program Policy			
Tasered Patient Care & Transport			
	Effective: 12/01/2023	Next Review: 07/2026	**853**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE:

To establish guidelines for EMS personnel on the treatment and transportation of patients on whom a Taser has been used.

AUTHORITY:

A. HSC, § 1797.204, 1797.220, and 1798.

B. CCR, Title 22, § 100169.

GENERAL CONSIDERATIONS:

A. A Taser is designed to transmit electrical impulses that temporarily disrupt the body's nervous system. The Electro-Muscular Disruption (EMD) technology causes an uncontrollable contraction of the muscle tissue, allowing the Taser to physically debilitate a target regardless of pain tolerance or mental focus.

B. The scene must be safe and secured by law enforcement before EMS personnel will evaluate or treat the patient.

C. Assess the patient for any potential cause of the abnormal or combative behavior such as head trauma, hypoxia, alcohol or drug related problems, hypoglycemia or other metabolic disorders, stress or psychiatric disorders.

D. Assess the patient for any potential injury resulting from Taser deployment.

POLICY:

A. Taser probes may be removed by EMS personnel if they interfere with the treatment or safe transportation of the patient. Only EMT, AEMT and paramedic personnel are approved to remove Taser probes in the prehospital setting.

B. If removed by EMS, Taser probes shall be offered to law enforcement prior to disposal.

C. Mode of transportation and destination will be determined by law enforcement, in consultation with EMS personnel and/or the base/modified base hospital if necessary.

Tasered Patient Care & Transport	853

PROCEDURE:

A. When safe to do so, patients should be immediately evaluated, with particular attention to signs and symptoms of excited delirium.

B. Treat any injuries/medical conditions according to appropriate protocol(s).

C. The patient will normally be in law enforcement custody, and will require transportation to an emergency department for medical clearance.

D. If EMS personnel determine that the patient is a danger to self or others, law enforcement may be requested to accompany the patient during transport.

E. The patient should be appropriately restrained if indicated.

F. If one or both of the Taser probes requires removal:

1. Verify the wires to the probes have been severed.

2. Use routine biohazard precautions. Place one hand on the patient in the area where the probe is embedded and stabilize the skin surrounding the puncture site between two fingers. Keep your hand away from the probe. With your other hand, in one fluid motion pull the probe straight out from the puncture site.

3. Inspect probes to ensure that all parts were removed, and all barbs are intact.

4. Follow law enforcement direction regarding the preservation or disposal of probes.

5. Apply direct pressure for bleeding and apply a sterile dressing to the wound site.

6. Bo not remove probes located in the eyes, face, neck, genitals, or any other potentially vulnerable area.

DOCUMENTATION:

The following information shall be documented on the patient care report:

A. Patient’s presenting behavior or signs/symptoms which resulted in Taser use.

B. Adequate patient assessment including, but not limited to, neurological assessment, oxygen saturation, blood glucose level, and other pertinent vital signs.

C. Anatomic location of the Taser probes (note: if Taser probes were removed by EMS, document time of removal and if probes were intact following removal).

Sierra – Sacramento Valley EMS Agency Program Policy			
HEMS Aircraft Requesting & Utilization			
	Effective: 06/01/2022	Next Review: 09/2025	**862**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE:

To establish criteria for the requesting and utilization of HEMS aircraft on 911 incidents.

AUTHORITY:

A. HSC, Division 2.5, § 1797.200 – 1797.276, 1798 – 1798.8 & 1798.170.

B. CCR, Title 22, Division 9, Chapters 4 & 8.

DEFINITIONS:

A. **Air Ambulance Coordination Center –** An emergency dispatch center designated by S-SV EMS for the purpose of coordinating air ambulance requests within the S-SV EMS region. The following EMS Aircraft Coordination Centers have been designated by S-SV EMS:

1. CAL FIRE Grass Valley Emergency Command Center: Colusa, Nevada, Placer, Sutter, and Yuba counties.

2. CAL FIRE Oroville Emergency Command Center: Butte, Glenn, Shasta, and Tehama counties.

3. CAL FIRE Yreka Interagency Command Center: Siskiyou County

B. **Public Safety Answering Point (PSAP) –** A public safety dispatch center where a 911 call is first received (primary PSAP) or where a 911 call is transferred/relayed for the purpose of dispatching resources (secondary PSAP).

C. **Helicopter Emergency Medical Services Aircraft (HEMS Aircraft) –** Rotor wing aircraft utilized for the purpose of prehospital emergency response and patient transport. HEMS aircraft include air ambulances and all ALS/BLS rescue aircraft.

D. **Air Ambulance –** Any aircraft specially constructed, modified or equipped and used for the primary purpose of responding to emergency incidents and transporting critically ill and/or injured (life or limb) patients, whose medical flight crew has, at a minimum, two (2) attendants certified or licensed in advanced life support.

E. **Rescue Aircraft –** Aircraft whose usual function is not patient transport but may be used for patient transport when the use of an air or ground ambulance is inappropriate or not readily available. Rescue aircraft are classified as one of the following:

1. **Advanced Life Support (ALS) Rescue Aircraft –** A rescue aircraft whose medical flight crew has, at a minimum, one (1) attendant licensed as a paramedic.

2. **Basic Life Support (BLS) Rescue Aircraft –** A rescue aircraft whose medical flight crew has, at a minimum, one (1) attendant certified as an EMT.

3. **Auxiliary Rescue Aircraft –** A rescue aircraft that does not have a medical flight crew, or whose flight crew does not meet ALS/BLS rescue aircraft requirements.

POLICY:

A. HEMS aircraft utilization criteria:

1. Trauma patients who meet RED Field Trauma Triage Criteria, and transport time to an appropriate level trauma center is ≥30 minutes by ground.

2. Prolonged extrication of an entrapped patient.

3. Multi-casualty incidents with a need for additional resources or distribution of patients to facilities ≥30 minutes by ground from the incident location.

4. Time-sensitive conditions where a decrease in transport time may reduce the risk of long-term disability or death.

5. Significantly reduced transport time for patients with specialty resource needs (significant burns, pediatric trauma, etc.).

6. Patients who are likely to require advanced procedures/medications beyond the scope of practice of ground providers.

7. Delayed accessibility to the scene by ground personnel and/or transport resources.

8. Initial dispatch for significant trauma mechanism or time-sensitive medical condition with ground transport provider time to scene ≥20 minutes.

B. HEMS aircraft transportation should not be used for the following patients:

1. Patients with CPR in progress.

2. Patients contaminated by hazardous materials who cannot be completely decontaminated prior to transport.

3. Patients who are combative, uncooperative, or have behavioral emergencies. However, a patient may be transported at the discretion of the flight crew.

C. The use of HEMS aircraft should provide a significant reduction (≥20 minutes) in arrival time to a receiving facility capable of providing definitive care, including designated specialty care centers.

D. After assessing the incident location, conditions and patient needs, the most medically qualified provider on scene shall be responsible for determining if the patient/event meets HEMS aircraft utilization criteria and shall advise the Incident Commander (IC)/ designee regarding the need for HEMS aircraft. The final authority to request or cancel HEMS aircraft is at the discretion of the IC/designee.

E. The pilot in command shall have the final authority in decisions to continue or abort the response. The pilot may also dictate the need to identify an alternate LZ/ rendezvous location or deviate from S-SV EMS patient destination policies.

F. The most medically qualified provider on scene has the authority/obligation to ensure that the patient meets HEMS aircraft utilization criteria. If the patient does not meet HEMS aircraft utilization criteria, the flight crew may transfer care to the ground ambulance for transport to the most appropriate facility.

G. HEMS Aircraft Requesting and Coordination:

1. For incidents likely meeting HEMS utilization criteria, appropriate HEMS resources should be requested early by applicable dispatch or ground EMS personnel, and may be cancelled prior to lift off, overhead or at scene when appropriate.

2. An air ambulance should be utilized for any incident that does not require the need for air rescue operations. Rescue aircraft may be utilized when, in the opinion of the most medically qualified provider at scene, the patient's condition warrants immediate transport and/or air ambulance resources are not readily available. Consideration should be given to airway stabilization and/or the need for higher level medical procedures.

3. No air ambulance shall respond to an EMS incident in the S-SV EMS region without the request of a designated air ambulance coordination center.

4. HEMS aircraft shall be requested by the IC/designee on scene, through the PSAP of the agency having jurisdiction over the incident. A responding ground EMS provider may request appropriate HEMS resources while enroute to an incident ('rolling request'), if they believe the patient/event meets HEMS utilization criteria.

   - If communication with the IC is not possible or practical, HEMS aircraft shall be requested through the applicable PSAP.

- If a private ambulance arrives on scene before the arrival of public safety personnel, HEMS aircraft shall be requested through the applicable PSAP. If unable to contact the PSAP directly from the field, the private ambulance dispatch center may be used to relay the request to the PSAP.

5. HEMS aircraft requests received from providers still enroute may be overridden by the IC/designee on scene. Excluding safety reasons, the IC/designee shall consult with the most medically qualified provider on scene to determine the necessity for HEMS aircraft.

6. The PSAP shall utilize the following procedures, based on the type and availability of HEMS aircraft resource requested:

   - Air ambulance resource request:
     - Contact the designated air ambulance coordination center for air ambulance resource requesting.
   - Rescue aircraft resource request:
     - The PSAP is responsible for contacting the applicable air rescue provider directly for resource requesting.

7. PSAPs are required to provide the following information to the air ambulance coordination center or air rescue provider for all HEMS aircraft resource requests:

   - Incident or LZ location: the general geographic location will suffice.
   - Nature of call: type of incident and severity of injuries, if known.
   - The designated LZ contact – as follows:
     - Identified by incident name (i.e., ‘Jones Road LZ’), if HEMS aircraft is being requested to respond directly to the incident scene; or
     - Identified by LZ name (i.e., ‘Rood Center LZ’), if HEMS aircraft is being requested to respond to a pre-established local/regional LZ location.
   - Any known aircraft hazards in the area, including hazardous materials, other aircraft, or inclement weather conditions at the scene.

8. The air ambulance coordination center will complete the following for all air ambulance resource requests:

   - Verify the incident/LZ location and identify the closest air ambulance.
   - Contact the closest air ambulance provider to obtain their availability to respond to the incident.
     - If the air ambulance resource is available and accepts the request, they will be assigned to the incident by the air ambulance coordination center.
     - If the air ambulance resource is unavailable/declines the request, the air ambulance coordination center will contact the next closest air ambulance provider to obtain their availability to respond to the incident. This process

will continue until an air ambulance is assigned, or it is determined that no timely air ambulance resources are available to respond to the incident.
    - Air ambulance coordination centers shall consider the location of an available airborne air ambulance in determining the closest resource to the incident when this information is known to the coordination center.
    - Air ambulance providers who have multiple aircraft shall accept/decline the request based on the availability of the specific aircraft resource requested.
    - The air ambulance provider will be allowed up to five (5) minutes to check weather. If the air ambulance provider does not accept/decline the assignment within five (5) minutes, the air ambulance coordination center will re-contact the air ambulance provider to confirm their status prior to contacting the next closest air ambulance provider.
        - If an air ambulance provider declines due to inclement weather at the incident/LZ location, it is unlikely that an alternate air ambulance provider will subsequently accept the request. The IC/designee shall be notified of this information as soon as possible. Personnel on scene may consider appropriate alternatives (utilizing an alternate LZ/rendezvous location; requesting the availability of rescue aircraft which are allowed to operate under different weather minimums; initiating ground ambulance transport; etc.).
- Relay the assigned air ambulance resource identifier and initial ETA to the requesting PSAP.

9. The requesting PSAP shall notify all responding agencies when a HEMS aircraft has been requested/assigned and shall keep responding agencies updated as to the HEMS aircraft status (delays, aborts, etc.).

10. HEMS aircraft personnel are responsible for communicating to the requesting PSAP any response delays or aborts in a timely manner.

11. Once assigned to an incident, HEMS aircraft shall not commit/respond to another assignment unless cancelled by the initial incident requestor.

12. If multiple aircraft are responding to or in the area of the incident, the air ambulance coordination center and/or the requesting PSAP shall notify all agencies of multiple aircraft responders.

13. All parties are responsible for informing HEMS aircraft providers of inclement weather related to the response, including previous HEMS aircraft providers who declined the flight due to weather conditions (at base, enroute, or at scene).

14. CALCORD operational frequency (156.075) should be utilized for air-to-ground communication. The IC/designee will communicate to all responding agencies if an alternate frequency will be utilized for the event.

H. Ground Provider Responsibilities:

1. If the event is a declared MCI, the IC/designee is responsible for notifying all responding HEMS aircraft of such.

2. If required by S-SV EMS policies/protocols, the most medically qualified provider on scene shall contact the appropriate facility for patient destination consultation prior to EMS aircraft arrival (when possible).

3. If ground personnel are at scene, the IC/designee shall assign appropriate personnel to establish/prepare a landing zone (LZ) and assure scene safety during landing. The LZ should meet the following criteria:

   - 100’ x 100’ open area, clear of hazards, obstacles, sloped terrain, loose surface materials, animals, overhead wires, foreign object debris (FOD).
   - If the LZ is on a dirt surface, assure that the area is watered down to reduce the risk of brown out upon aircraft landing.
   - Locate the LZ upwind from any incident with known hazardous materials.

   The pilot has final authority to determine if a landing is appropriate, including instances when no ground personnel are at scene.

4. Ground personnel shall not approach the aircraft under a running/hot rotor unless accompanied by HEMS personnel.

5. If requested, ground EMS personnel may accompany a patient in a rescue aircraft if the appropriate medical equipment is available and they have received an adequate safety briefing prior to transport.

6. S-SV EMS Transfer of Patient Care policy shall be followed, and a verbal patient care report shall be provided to HEMS aircraft personnel.

I. HEMS Aircraft Provider Responsibilities:

1. HEMS aircraft providers are expected be enroute within 15 minutes of incident acceptance. Response delays shall be documented in the PCR.

2. HEMS aircraft providers are expected to transport within 15 minutes from the time patient contact is made. Scene delays shall be documented in the PCR.

3. S-SV EMS Patient Destination policies/protocols shall be followed for all patients requiring HEMS aircraft transport. Patients shall be transported to the closest/most appropriate hospital with an approved helipad or HEMS aircraft landing site.

Sierra – Sacramento Valley EMS Agency Program Policy			
Prohibition On Carrying Of Weapons By EMS Personnel			
	Effective: 12/01/2023	Next Review: 09/2026	**883**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE:

To establish a policy prohibiting the carrying of weapons by on-duty EMS personnel. This policy does not apply to on-duty peace officers or members of an approved Tactical Emergency Medical Support (TEMS) program who may also provide emergency patient care during the course of their assigned duties. This policy also does not apply to EMS supervisor personnel who have a current/valid carrying a concealed weapon (CCW) permit, if the EMS provider agency has a policy specifically addressing this matter (including minimum training requirements, storage, etc.).

AUTHORITY:

A. California Health and Safety Code, Division 2.5, § 1797.200, 1797.204 and 1798.200.

B. California Code of Regulations, Title 22, Division 9.

POLICY:

A. On-duty EMS personnel shall not carry or possess on or about their person, or have in EMS equipment or vehicles, any of the following articles:

1. Firearms or concealed weapons of any sort.
2. Stun guns or Tasers.
3. Night sticks, batons, billy clubs, saps, or lead weighted gloves.
4. Dirk, dagger, or switchblade knife.
5. Any other deadly weapon.
6. Tear gas, mace, pepper spray, or chemical agents.
7. Handcuffs.

B. This policy does not include pocket knives or similar tools, instruments/equipment used in EMS rescue operations, or animal repellent.

Sierra – Sacramento Valley EMS Agency Program Policy			
Communication Failure			
	Effective: 12/01/2023	Next Review: 07/2026	**890**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE:

To define conditions under which prehospital personnel may utilize certain advanced life support (ALS) procedures/medications in the event of a communication failure.

AUTHORITY:

A. HSC, Division 2.5, § 1797.84, 1797.185, 1797.220, 1798, 1798.100, and 1798.102.

B. CCR, Title 22, Division 9.

POLICY:

If during patient care an AEMT or paramedic attempts but cannot establish or maintain adequate base/modified base hospital contact:

A. They may continue to utilize procedures/medications listed in S-SV EMS standing order policies/protocols, as warranted by the patient's condition.

B. Procedures/medications designated as 'Base/Modified Base Hospital Order Only' may be utilized under communication failure conditions, as warranted by the patient's condition.

C. The following procedures/medications designated as 'Base/Modified Base Hospital Physician Order Only' shall not be utilized without a direct order from a base/modified base hospital physician:

1. Terminating resuscitative efforts utilizing the BLS termination of resuscitation criteria if no ROSC in an adult pulseless arrest patient (Reference No. C-1).

2. Administration of activated charcoal (Reference No. M-5).

3. Utilization of the Nerve Agent Treatment Protocol (Reference No. E-8).

Communication Failure	890

PROCEDURE:

In each instance where LALS/ALS procedures and/or medications are utilized under communication failure conditions, the AEMT or paramedic shall:

A. Attempt to establish base/modified base hospital contact by telephone and/or radio throughout the call as circumstances permit.

B. Immediately upon voice contact, provide a verbal report to the base/modified base hospital MICN or physician.

C. Document the existence and reason for the communication failure condition in the patient care report (PCR).

S-SV EMS Adult Patient Treatment Protocols

Sierra – Sacramento Valley EMS Agency Treatment Protocol	C-1
Non-Traumatic Pulseless Arrest	
Approval: Troy M. Falck, MD – Medical Director	Effective: 06/01/2024
Approval: John Poland – Executive Director	Next Review: 01/2027

MANUAL CHEST COMPRESSIONS

- Rate: 100-120/min
- Depth: 2 inches – allow full chest recoil
- Minimize interruptions (≤10 secs)
- Rotate compressors every 2 mins
- Perform CPR during AED/defibrillator charging
- Resume CPR immediately after shock

MECHANICAL CHEST COMPRESSION DEVICES

Indications

- Adult pt (≥15 yo)

Contraindications

- Pt does not fit in the device
- 3rd trimester pregnancy

ⓘ Use in accordance with manufacturer indications/ contraindications

ⓘ Apply following completion of at least one manual CPR cycle, or at the end of a subsequent cycle

DEFIBRILLATION & GENERAL PT MANAGEMENT

- Analyze rhythm/check pulse after every 2 min CPR cycle
- Biphasic manual defibrillation detail:
  - Follow manufacturer recommendations
  - If unknown, start at 200 J (subsequent doses should be equivalent or higher)
- Movement of pt may interrupt CPR or prevent adequate depth and rate of compressions
- Consider resuscitation on scene up to 20 mins
- Go to ROSC protocol (C-2) if ROSC is obtained

ADVANCED AIRWAY MANAGEMENT

- Consider/establish advanced airway at appropriate time during resuscitation
- Do not interrupt chest compressions to establish an advanced airway
- Waveform capnography (if available) shall be used on all pts with an advanced airway in place
  - An abrupt increase in $PETCO_2$ is indicative of ROSC
  - Persistently low $PETCO_2$ levels (<10 mmHG) suggest ROSC is unlikely

TREAT REVERSIBLE CAUSES

- **H**ypovolemia
- **H**ypoxia
- **H**ydrogen Ion (acidosis)
- **H**ypo-/hyperkalemia
- **H**ypothermia
- **T**amponade, cardiac
- **T**ension pneumothorax
- **T**hrombosis, pulmonary
- **T**hrombosis, cardiac
- **T**oxins

ⓘ Refer to Hypothermia & Avalanche/Snow Immersion Suffocation Resuscitation Protocol (E-2) or Traumatic Pulseless Arrest Protocol (T-6) as appropriate

ⓘ Contact the base/modified base hospital for consultation & orders as appropriate

ⓘ Consider early transport of pts who have reversible causes that cannot be adequately treated in the prehospital setting

TERMINATION OF RESUSCITATION

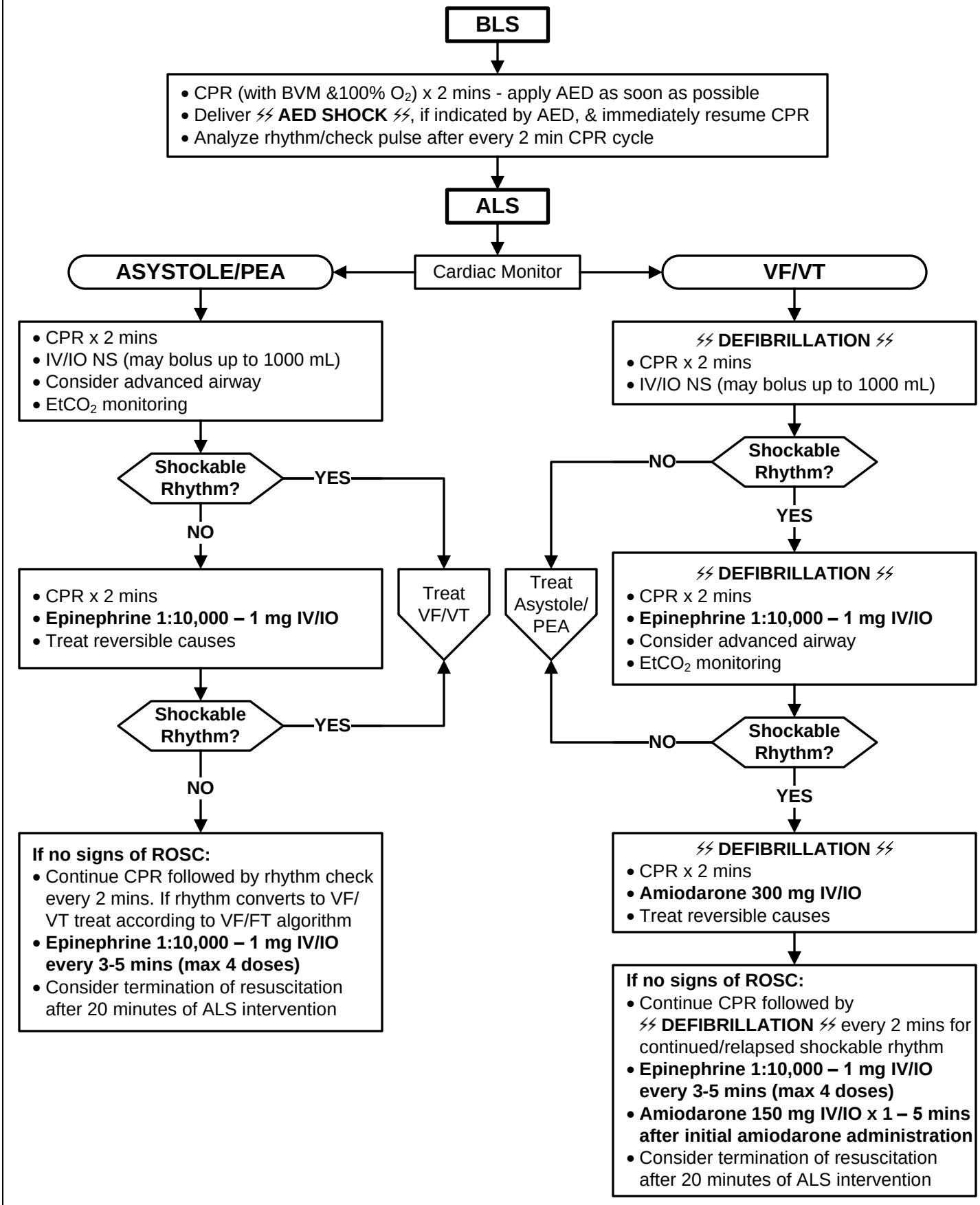
Base/Modified Base Hospital Physician Order**

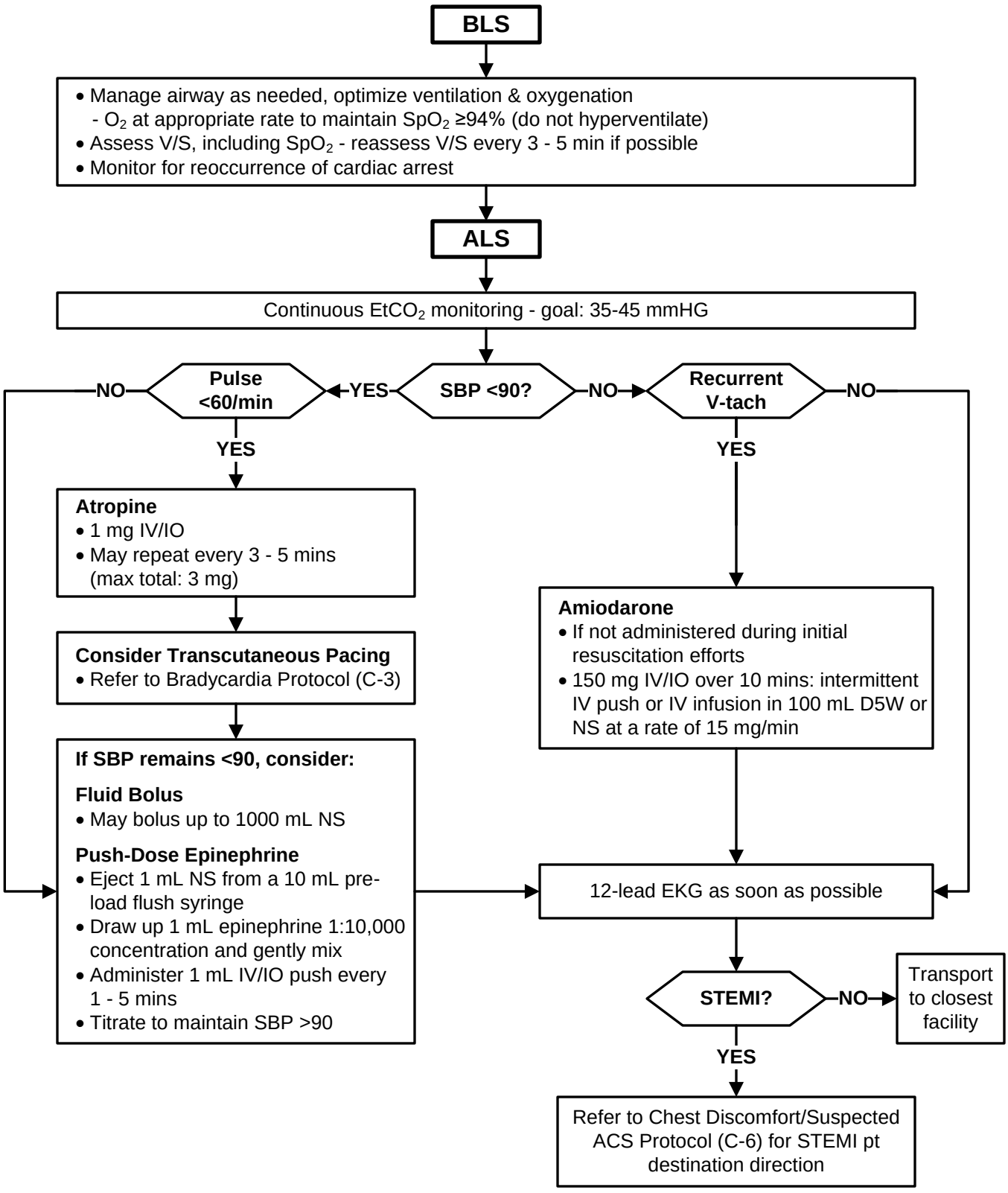
- If resuscitation attempts do not obtain ROSC, consider termination of resuscitation efforts
- BLS termination of resuscitation criteria (all):
  (1) Arrest not witnessed by EMS
  (2) No AED shocks delivered
  (3) No ROSC after 3 rounds of CPR/AED analysis
- ALS Termination of Resuscitation Criteria (all):
  (1) Arrest not witnessed by EMS
  (2) No effective bystander CPR was provided, or effective CPR cannot be maintained
  (3) No AED shocks or defibrillations delivered
  (4) No ROSC after full ALS care

**In the event of communication failure, EMS personnel may terminate resuscitation without a base/modified base hospital physician order on a pt who meets ALS termination of resuscitation criteria.

SEE PAGE 2 FOR TREATMENT ALGORITHM

Non-Traumatic Pulseless Arrest




BLS
• Manage airway as needed, optimize ventilation & oxygenation
- O_2 at appropriate rate to maintain SpO_2 ≥94% (do not hyperventilate)
• Assess V/S, including SpO_2 - reassess V/S every 3 - 5 min if possible
• Monitor for reoccurrence of cardiac arrest
ALS
Continuous $EtCO_2$ monitoring - goal: 35-45 mmHG
Pulse <60/min
NO
YES
SBP <90?
NO
YES
Recurrent V-tach
NO
YES
YES
Atropine
• 1 mg IV/IO
• May repeat every 3 - 5 mins (max total: 3 mg)
Consider Transcutaneous Pacing
• Refer to Bradycardia Protocol (C-3)
If SBP remains <90, consider:
Fluid Bolus
• May bolus up to 1000 mL NS
Push-Dose Epinephrine
• Eject 1 mL NS from a 10 mL pre-load flush syringe
• Draw up 1 mL epinephrine 1:10,000 concentration and gently mix
• Administer 1 mL IV/IO push every 1 - 5 mins
• Titrate to maintain SBP >90
Amiodarone
• If not administered during initial resuscitation efforts
• 150 mg IV/IO over 10 mins: intermittent IV push or IV infusion in 100 mL D5W or NS at a rate of 15 mg/min
12-lead EKG as soon as possible
STEMI?
NO
Transport to closest facility
YES
Refer to Chest Discomfort/Suspected ACS Protocol (C-6) for STEMI pt destination direction

Bradycardia With Pulses

Approval: Troy M. Falck, MD – Medical Director | Effective: 06/01/2024

Approval: John Poland – Executive Director | Next Review: 01/2027

- **Symptomatic bradycardia exists clinically when the following 3 criteria are present: 1) The HR is slow (<60/min), 2) The pt has symptoms & 3) The symptoms are due to the slow HR.**
- **Bradycardia that causes symptoms is typically <50/min. The pt's cardiac rhythm should be interpreted in the context of symptoms, & atropine/TCP utilized only for symptomatic bradycardia.**

BLS

- Manage airway & assist ventilations as necessary
- Assess V/S, including SpO_2 - reassess V/S every 3 - 5 min if possible
- O_2 at appropriate rate if hypoxemic (SpO_2 <94%), short of breath, or signs of heart failure/shock

ALS

- Cardiac monitor, 12-lead ECG at appropriate time (do not delay therapy)
- IV/IO NS at appropriate time (may bolus up to 1000 mL for hypotension)

Persistent bradycardia with SBP <90 & any of the following signs/ symptoms of hypoperfusion?

- Acutely altered mental status
- Signs of shock
- Ischemic chest discomfort
- Acute heart failure

YES

Atropine

- 1 mg IV/IO
- May repeat every 3 - 5 mins (max total: 3 mg)
- Should not be used for wide-complex rhythms or for second-degree Type II or third-degree heart blocks

Wide-complex rhythms, second-degree Type II or third-degree heart blocks, or atropine ineffective:

Transcutaneous Pacing (TCP)

- Set initial rate at 60/minute
- Set initial current at 10 mA and increase by 10 mA increments while assessing for mechanical capture
- Once mechanical capture is achieved, adjust rate based on clinical response - most pts will improve with a rate of 60 - 70/min if the symptoms are primarily due to bradycardia
- Monitor/re-evaluate frequently, increase current as necessary to maintain mechanical capture.
- Consider sedation/pain control as needed*

If SBP remains <90 after atropine/TCP:

Push-Dose Epinephrine

- Eject 1 mL NS from a 10 mL pre-load flush syringe
- Draw up 1 mL epinephrine 1:10,000 concentration and gently mix
- Administer 1 mL IV/IO push every 1 - 5 mins
- Titrate to maintain SBP >90

NO

- Monitor & reassess
- Contact base/modified base hospital for consultation if necessary

***Transcutaneous Pacing Sedation/Pain Control**

- For pts receiving transcutaneous pacing in need of sedation/pain control, consider one of the following:
  - **Midazolam:** 2 - 5 mg IV/IO; **OR**
  - **Fentanyl:** 25 - 50 mcg IV/IO
- May repeat dose x 1 after 5 mins
- Fentanyl is preferred for pts with chest pain or suspected MI

**** For pts ≥65yo Midazolam dosing is limited to 2mg. Fentanyl dosing is limited to 25mcg.**

- **Unstable pts with persistent tachycardia require immediate cardioversion.**
- **It is unlikely that symptoms of instability are caused primarily by the tachycardia if the HR is <150/min.**

BLS

- Manage airway & assist ventilations as necessary
- Assess V/S, including SpO_2 - reassess V/S every 3 - 5 min if possible
- O_2 at appropriate rate if hypoxemic (SpO_2 <94%), short of breath, or signs of heart failure/shock

ALS

- Cardiac monitor, 12-lead ECG at appropriate time (do not delay therapy)
- IV/IO NS at appropriate time (may bolus up to 1000 mL for hypotension)

Persistent tachycardia causing any of the following?
- Hypotension
- Acutely altered mental status
- Signs of shock
- Ischemic chest discomfort
- Acute heart failure

YES

Synchronized Cardioversion
- Initial synchronized cardioversion doses:
  - Narrow regular: 50 - 100 J
  - Narrow irregular: 120 - 200 J
  - Wide regular: 100 J
- Consider pre-cardioversion sedation/pain control*
- If no response to initial shock, increase dose in a stepwise fashion for subsequent attempts
- If rhythm is wide-irregular or monitor will not synchronize, & pt is critical, treat as VF with unsynchronized defibrillation doses (protocol C-1)

NO

Does cardiac rhythm meet any of the following criteria?
- Wide QRS (≥0.12 seconds)
- Atrial Fibrillation
- Atrial Flutter
- Sinus Tachycardia

NO

Valsalva Maneuver

If no response to Valsalva Maneuver, consider:

Adenosine
- First dose: 6 mg rapid IV/IO push
- Second dose (if rhythm does not convert within 1 - 2 mins): 12 mg rapid IV/IO push
- Flush IV/IO line with 20 mL NS after each dose

YES

- Monitor & reassess
- Contact base/modified base hospital for consultation if necessary

***Pre-Cardioversion Sedation/Pain Control**

- Consider one of the following for pts in need of sedation/pain control:

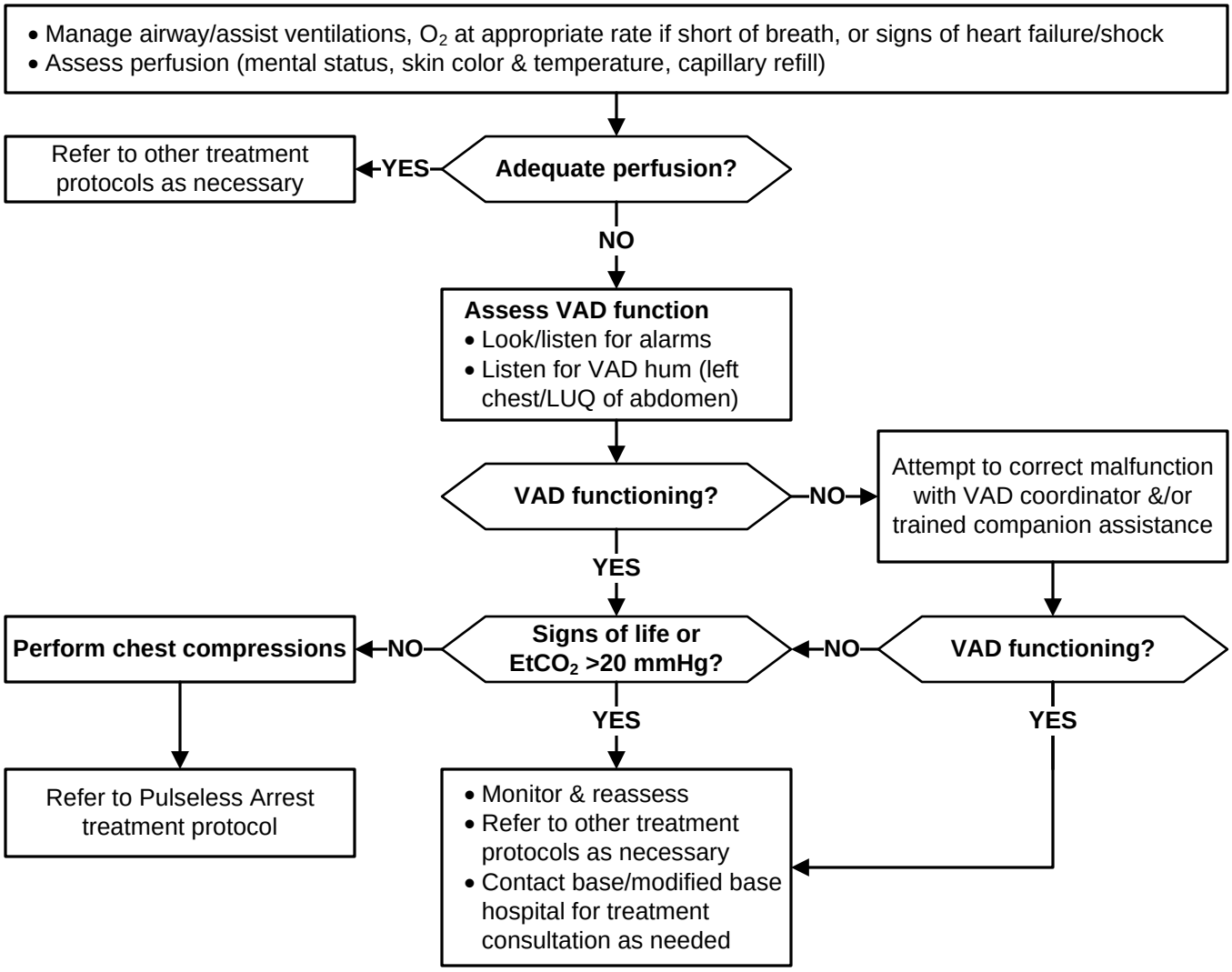
- Midazolam: 2 - 5 mg IV/IO
OR
- Fentanyl: 25 - 50 mcg IV/IO

**** For pts ≥65yo Midazolam dosing is limited to 2mg. Fentanyl dosing is limited to 25mcg.**

Ventricular Assist Device (VAD)

Approval: Troy M. Falck, MD – Medical Director	Effective: 06/01/2022
Approval: Victoria Pinette – Executive Director	Next Review: 05/2025

- **VAD pts may also have an Implanted Cardioverter-Defibrillator (ICD) or a Pacemaker/ICD.**
- **VAD pts may not have a palpable pulse as these are continuous flow devices. Utilize a cardiac monitor to accurately establish the pt's heart rate/rhythm. Arrhythmias with signs of inadequate perfusion should be treated according to applicable S-SV EMS protocols. If defibrillation or cardioversion is indicated, follow the applicable treatment protocol (the pump is insulated so that electrical therapy should not be an issue).**
- **VAD pts may not have a blood pressure obtainable by standard EMS measurement methods. An accurate blood pressure is typically obtained via doppler, however, auscultation or NIBP readings may be possible.**
- **SpO_2 may not be measurable or accurate. $EtCO_2$ monitoring should be utilized.**
- **VAD pts/companions are taught to call 911 and page the on-call VAD coordinator in an emergency. The VAD coordinator will typically be on the telephone to provide additional assistance to EMS personnel. Contact information for the VAD coordinator is usually attached to or located inside the pt's VAD equipment bag.**
- **VAD pts should be transported to the nearest appropriate VAD center. If the pt's condition does not warrant transportation to the VAD center, the base/modified base hospital shall be consulted for pt destination. The VAD equipment bag, power source, battery & charger shall be brought with any transported VAD pt.**



- **Common symptoms associated with ACS include, but are not limited to:**
  - **Dyspnea/SOB**
  - **Palpitations**
  - **Diaphoresis**
  - **Nausea/vomiting**
  - **Lightheadedness/near-syncope/syncope**
  - **Upper abdominal pain or heartburn unrelated to meals**
  - **Discomfort in the throat or abdomen may occur in pts with diabetes, women & elderly pts**
- **Fleeting or sharp chest pain that increases with inspiration & lying supine is unlikely to be ACS related.**
- **Pt assessment, treatment & transport destination determination should occur concurrently.**

BLS

- Assess V/S, including SpO_2
- O_2 at appropriate rate if hypoxemic (SpO_2 <94%), short of breath, or signs of heart failure or shock
- P-Q-R-S-T

Aspirin
- 160 - 325 mg chewable PO (anticoagulant use is not a contraindication to administration)

ALS

- Cardiac monitor
- 12-lead EKG as soon as possible (prior to nitroglycerin administration)
  - Criteria for ST Elevation Myocardial Infarction (STEMI):
    1. Machine readout: 'Meets ST Elevation MI Criteria', 'Acute MI', 'STEMI' (or equivalent)
    2. ST elevation in 2 or more contiguous leads
  - For pts with suspected ACS, serial 12-lead EKGs should be obtained if the pt's clinical status changes or if EKG changes are noted on the monitor, and every 15 mins if transport times are long

- IV/IO at appropriate time during treatment
  - Administer 250 mL NS fluid boluses to maintain SBP >90
  - Do not administer fluid if signs of heart failure

If discomfort persists following initial 12-lead acquisition:

Nitroglycerin
- 0.4 mg SL (tablet or spray), repeat every 5 mins if discomfort persists
- Do not administer if SBP <100,
- Use with caution for pts with suspected inferior MI (establish vascular access prior to administration)
- Consult with base/modified base hospital prior to administration if pt takes erectile dysfunction or pulmonary hypertension medication

SEE PAGE 2 FOR ADDITIONAL ALS TREATMENT & PT DESTINATION

Chest Discomfort/Suspected Acute Coronary Syndrome (ACS)

ADDITIONAL ALS TREATMENT & PT DESTINATION

If discomfort persists following one or more EMS administered nitroglycerine doses:

Fentanyl
- 25 mcg slow IV/IO
- May repeat every 5 mins if discomfort persists (maximum cumulative dose: 200 mcg)

ⓘ Do not administer fentanyl to pts with any of the following contraindications:
- Systolic BP <100 - Hypoxia or RR <12 - ALOC or evidence of head injury

For current or potential nausea/vomiting:

Zofran (Ondansetron)
- 4 - 8 mg slow IV/IO, IM or ODT
- May be administered concurrently with fentanyl to reduce potential nausea/vomiting

STEMI Criteria Met?
- NO → **Transport to Closest Facility**
- YES ↓

Both STEMI Criteria Met?
- NO → **Contact closest facility for destination consultation**
  - Transmit 12-lead to closest facility if able
- YES ↓

≤45 min to STEMI Receiving Center (SRC)
- NO → **Contact closest facility for destination consultation**
- YES ↓

Any of the following criteria met?
- CPR in progress
- Unmanageable airway
- Unstable v-tach

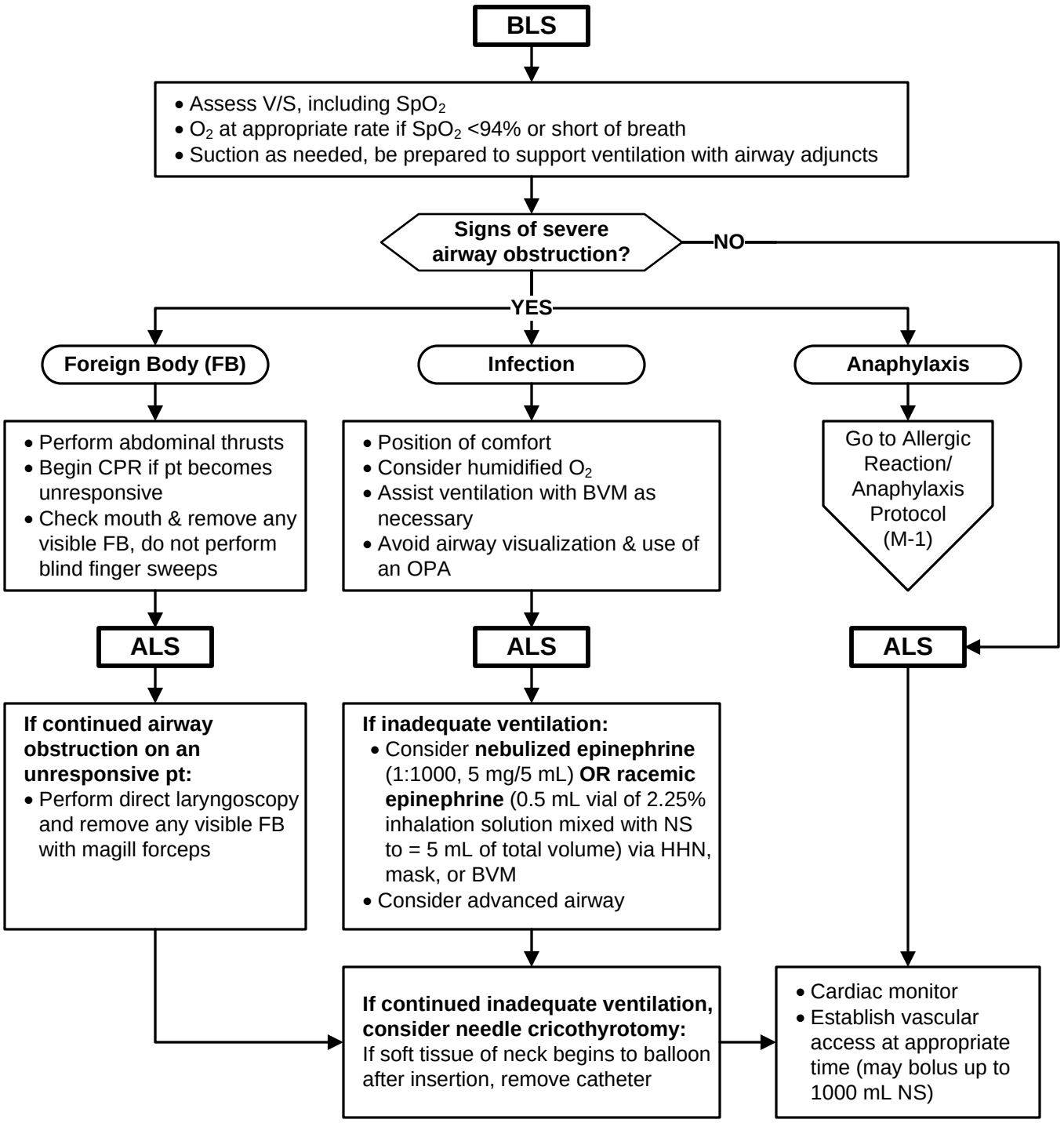
- YES → **Contact closest facility for destination consultation**
- NO ↓

Transport Directly to SRC
- Transmit 12-lead to SRC if able
- Advise SRC of "STEMI ALERT"

STEMI Pt Notes

- When possible, any 12-lead meeting STEMI criteria shall be transmitted within 10 mins of first STEMI positive 12-lead.
- Scene time for STEMI pts should be ≤10 mins.
- When possible, obtain & relay to the receiving hospital the name/contact information of an individual who can make decisions on behalf of the pt.
- Always relay pertinent medical directives (DNR, POLST, etc.) to the receiving hospital.

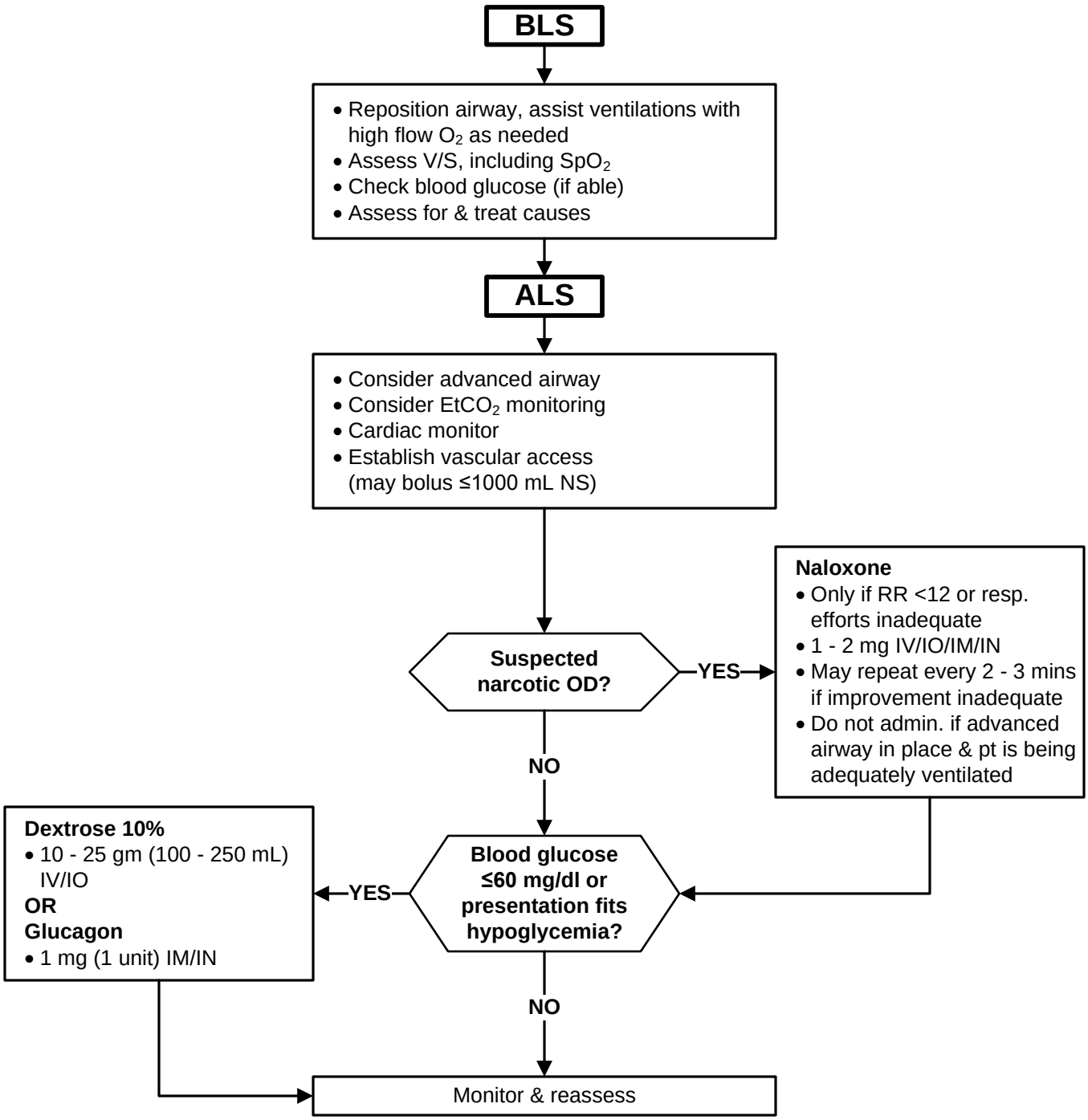
- **Signs of severe airway obstruction:**
  - Poor air exchange
  - Cyanosis
  - Increased breathing difficulty
  - Inability to speak/breathe
  - Silent cough



Respiratory Arrest

Approval: Troy M. Falck, MD – Medical Director | Effective: 12/01/2022

Approval: John Poland – Executive Director | Next Review: 09/2025

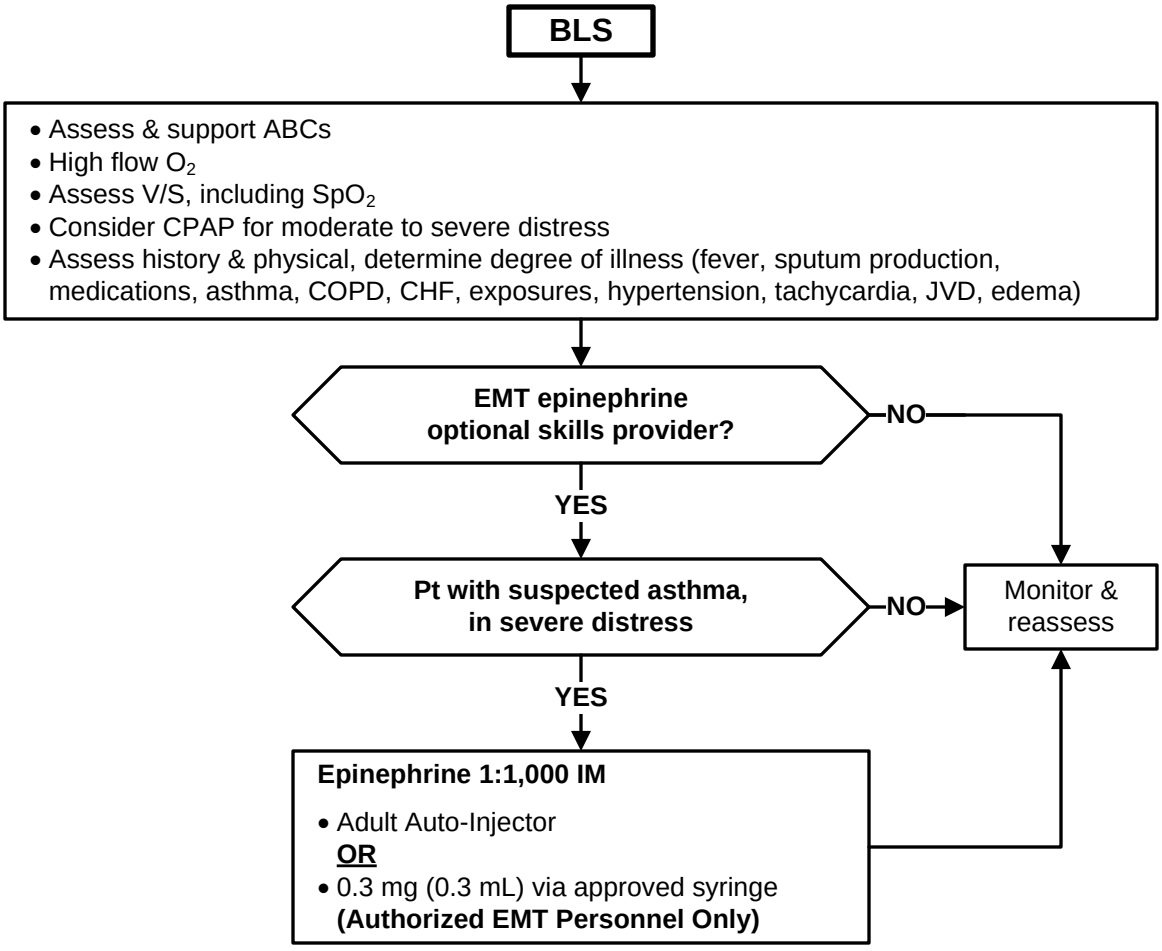


Continuous Positive Airway Pressure (CPAP) Utilization

- **Indications:**
  - CHF with pulmonary edema
  - Moderate to severe respiratory distress
  - Near drowning
- **Contraindications:**
  - <8 years of age
  - Respiratory or cardiac arrest
  - Severe decreased LOC
  - Agonal respirations
  - Inability to maintain airway
  - Suspected pneumothorax
  - SBP <90
  - Major trauma, especially head injury or significant chest trauma
- **Complications:**
  - Hypotension
  - Pneumothorax
  - Corneal drying

Epinephrine Administration

- Epinephrine is only indicated for pts with suspected asthma who are in severe distress.
- **Use epinephrine cautiously in pts >35yo, or with a history of coronary artery disease or hypertension.**
- Administer Auto-Injector/IM epinephrine into the lateral thigh, midway between waist & knee.



SEE PAGE 2 FOR ALS TREATMENT

Acute Respiratory Distress

Asthma/COPD

ALS

Mild Distress

- Mild wheezing
- Mild shortness of breath
- Cough

- Cardiac monitor
- Consider IV NS (may bolus up to 1000 mL)

Albuterol 5 mg & Ipratropium 500 mcg

- Nebulizer
- May repeat **(albuterol 2.5-5 mg only)** for continued respiratory distress

Moderate to Severe Distress

- Cyanosis
- Accessory muscle use
- Inability to speak >3 words
- Severe wheezing/shortness of breath
- Decreased or absent air movement

- Cardiac monitor
- IV/IO NS (may bolus up to 1000 mL)

Albuterol 5 mg & Ipratropium 500 mcg

- Nebulizer/CPAP/BVM
- May repeat **(albuterol 2.5-5 mg only)** for continued respiratory distress

History of asthma with severe distress only

Epinephrine 1:1,000

- 0.01 mg/kg IM (max: 0.5 mg)

CHF/Pulmonary Edema

ALS

Mild Signs & Symptoms

- Cardiac monitor
- IV NS TKO

***Nitroglycerin**

- 0.4 mg SL
- May repeat every 5 mins

***Nitroglycerin Notes/Precautions**

- Do not administer if SBP <100
- Do not delay due to difficult vascular access
- Consult with base/modified base hospital prior to administration to pts taking erectile dysfunction or pulmonary HTN medication

Moderate to Severe Signs & Symptoms

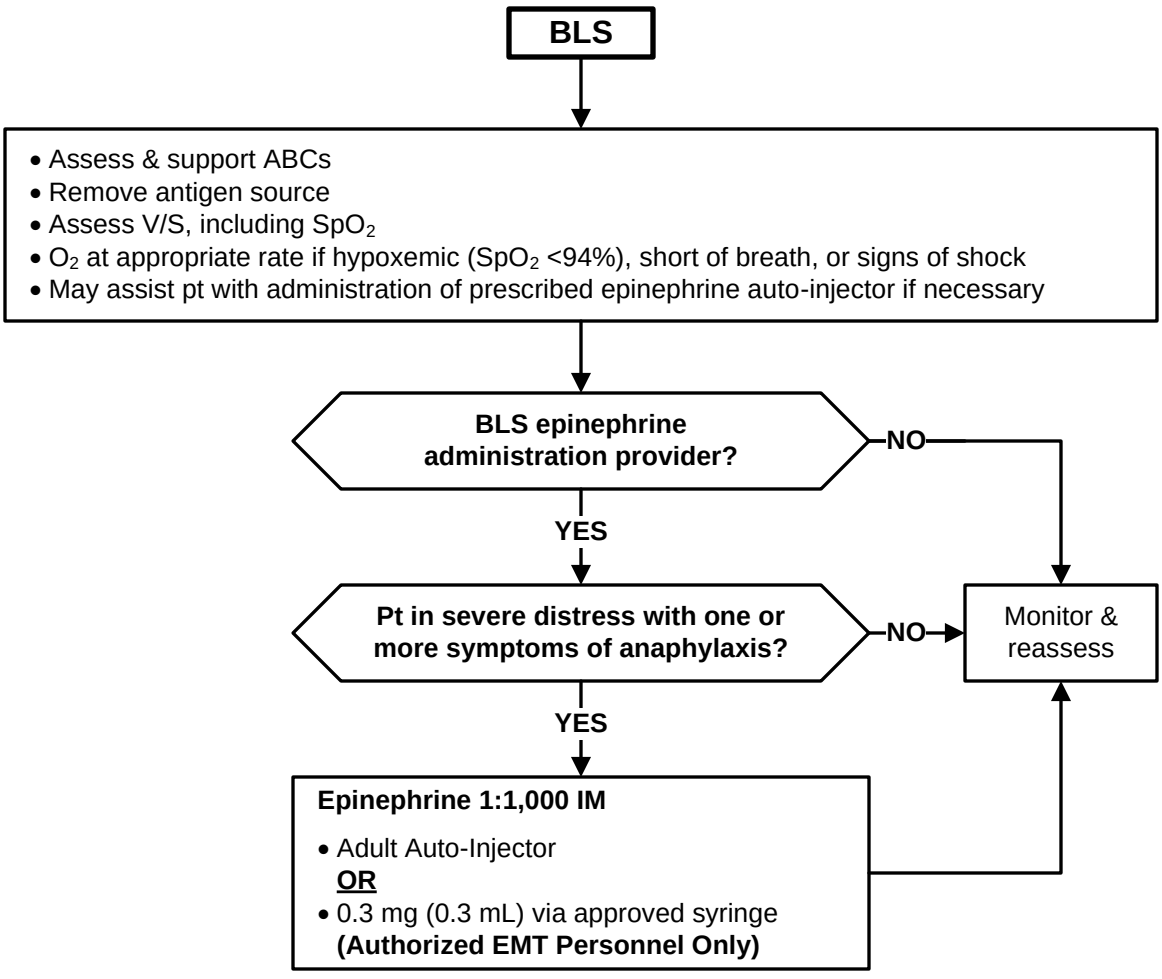
- Cardiac monitor
- Assess BP x 2 to confirm accuracy
- IV/IO NS TKO

***Nitroglycerin: titrate dose based on SBP**

- SBP 100-150: 0.4 mg SL
- SBP 150-200: 0.8 mg SL
- SBP >200: 1.2 mg SL
- May repeat titrated doses every 5 mins based on repeat SBP

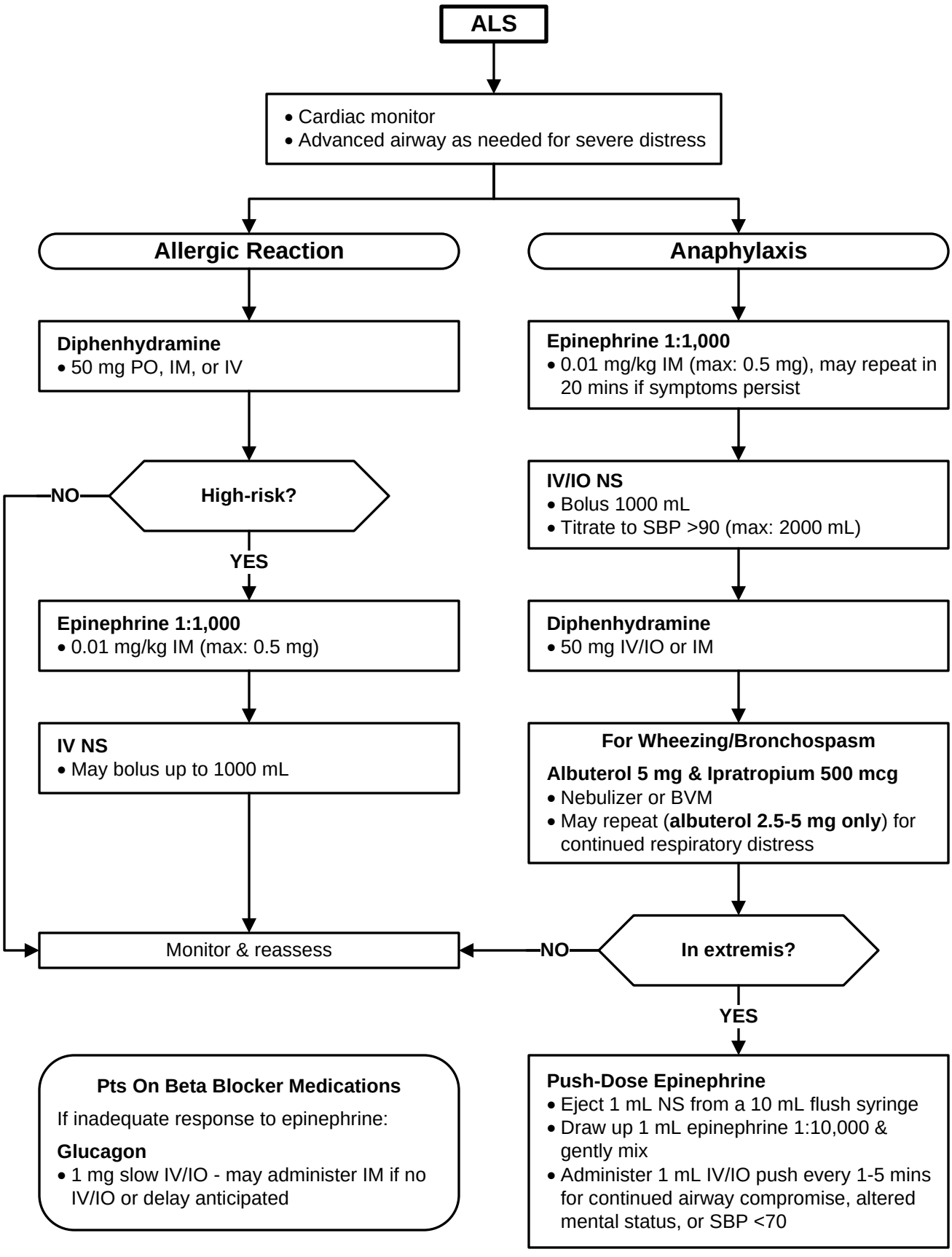
Sierra – Sacramento Valley EMS Agency Treatment Protocol	M-1
Allergic Reaction/Anaphylaxis	
Approval: Troy M. Falck, MD – Medical Director	Effective: 06/01/2024
Approval: John Poland – Executive Director	Next Review: 01/2027

- **Allergic reaction:** Sensitivity to an allergen causing hives, pruritus, flushing, rash, nasal congestion, watery eyes, &/or angioedema not involving the airway.
- **High-risk allergic reaction:** Allergic reaction with a history of anaphylaxis, or significant exposure with worsening symptoms.
- **Anaphylaxis:** Severe allergic reaction with one or more of the following: respiratory distress, bronchospasm, wheezes, diminished breath sounds, hoarseness, stridor, edema involving the airway, hypotension (SBP <90).
- **In extremis:** Anaphylaxis with one or more of the following: airway compromise, altered mental status, SBP <70.
- **Use epinephrine cautiously in pts >35yo, or with a history of coronary artery disease or hypertension.**
- Administer Auto-Injector/IM epinephrine into the lateral thigh, midway between waist & knee.



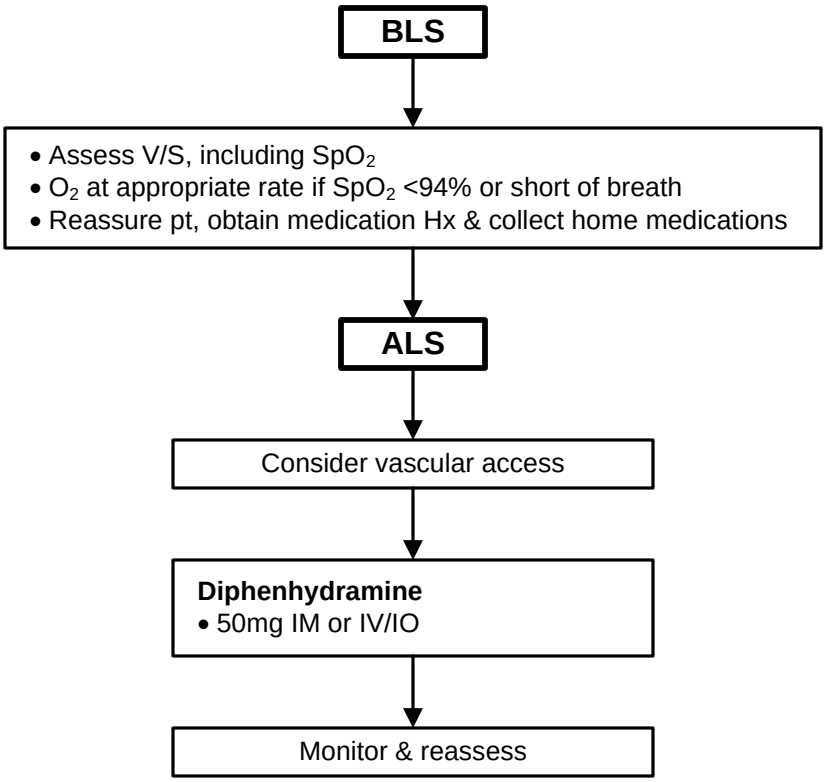
SEE PAGE 2 FOR ALS TREATMENT

Allergic Reaction/Anaphylaxis



Sierra – Sacramento Valley EMS Agency Treatment Protocol	M-3
Phenothiazine/Dystonic Reaction	
Approval: Troy M. Falck, MD – Medical Director	Effective: 12/01/2021
Approval: Victoria Pinette – Executive Director	Next Review: 09/2024

- **Assessment:**
  - History includes possible ingestion of phenothiazine
  - Symptoms often mistaken for a seizure disorder or tetany
- **Signs & Symptoms:**
  - Facial grimaces
  - Protruding tongue/jaw muscle spasm
  - Oculogyric crisis (circular movement of the eyeballs)
  - Spasms of the back muscles, causing the head and legs to bend backward and the trunk to arch up
  - Anxiety/restlessness
  - Torticollis (twisting of the neck)



Approval: Troy M. Falck, MD – Medical Director	Effective: 12/01/2022
Approval: John Poland – Executive Director	Next Review: 09/2025

Guidelines for EMS use of Activated Charcoal

BASE/MODIFIED BASE HOSPITAL PHYSICIAN ORDER ONLY

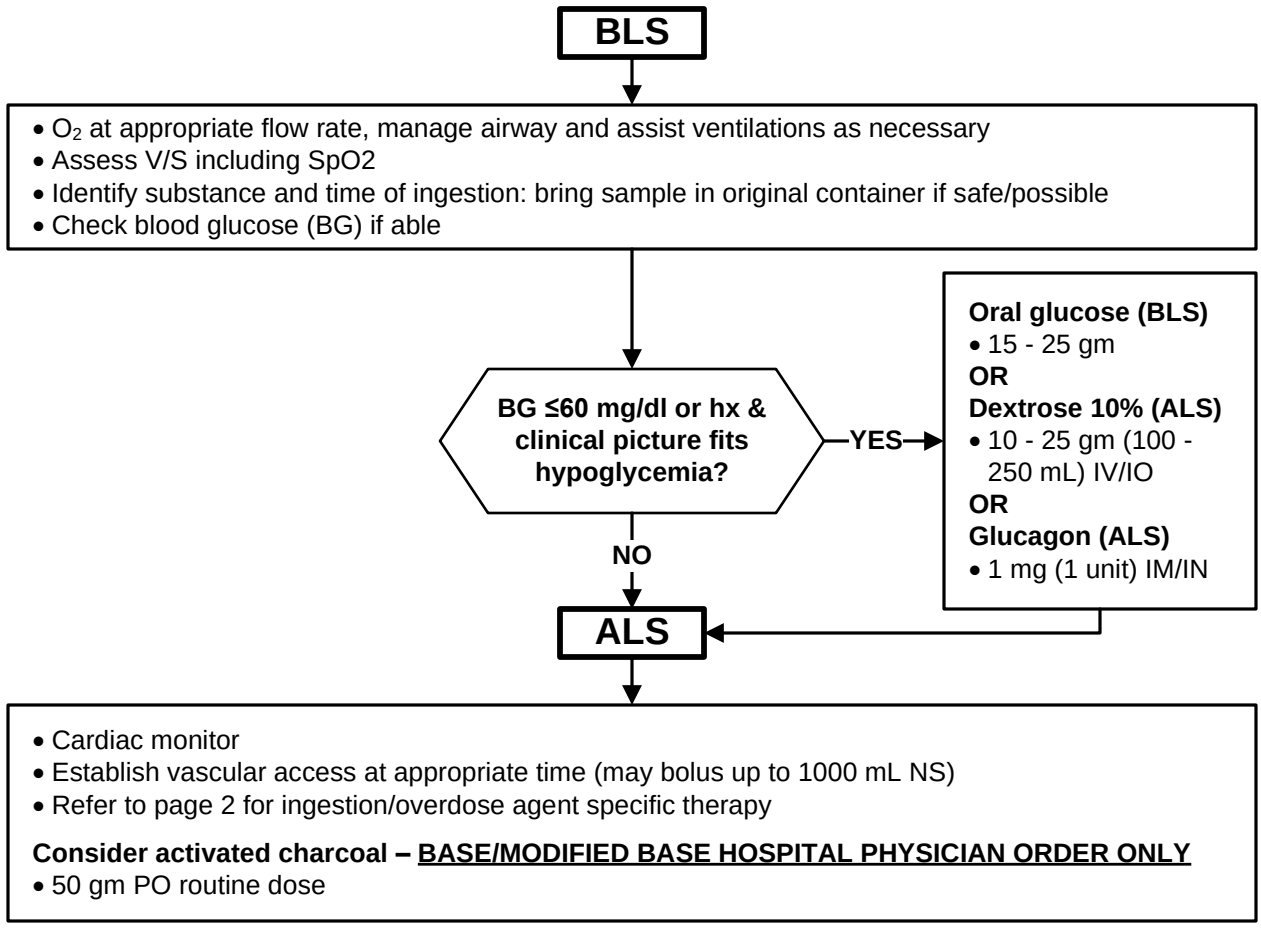
- Activated charcoal is an agent used for gastric decontamination following overdose ingestion. Clinical research only supports its use when given early after ingestion. While activated charcoal may be helpful when given rapidly after an overdose, it is very important to avoid administration in cases where potential contraindications exist.

Activated Charcoal Indications

- Early administration - usually within 1 hour of ingestion (agent still in stomach)
- Potentially deadly agent
- No effective antidote
- No contraindications
- Suggested agents where EMS administration of activated charcoal is appropriate:
  - Antidepressants - Anticonvulsants - Digoxin
  - Calcium channel blockers - Beta blockers

Activated Charcoal Contraindications

- Obtunded/altered level of consciousness
- Known caustic ingestion (acid or alkali)
- Known hydrocarbon ingestion
- Suspected GI obstruction (vomiting)
- Agents not well absorbed by activated charcoal (relative contraindication), examples include:
  - Lithium
  - Iron
  - Toxic alcohol



Ingestions & Overdoses

Treatment Notes

- Poison Control telephone number: (800) 876-4766 or (800) 222-1222.
- Refer to S-SV EMS Hazardous Materials Exposure Protocol (E-7) if pt exposed externally to organophosphate, carbamate or hydrofluoric acid.
- Oral ingestions of hydrofluoric acid require immediate treatment as it can cause fatal hypocalcemia – early signs of hypocalcemia include:
  - Tingling sensation around mouth, lips, hands or feet
  - Hand or foot spasms
  - QT interval prolongation

Ingestion/Overdose Agent Specific Therapy

Beta Blockers

May admin. up to 1000 mL NS bolus if SBP <90

↓

Atropine 1 mg IV/IO
- Only if HR <50 and SBP <90 after NS bolus
- May repeat every 5 mins (max total: 3 mg)

↓

Glucagon 1 mg (1 unit) IV/IO
- Only if HR <50 and SBP <90
- If no IV/IO, may admin. 1 mg IM/IN

↓

Push-Dose Epinephrine
- Only if HR <50 and SBP <90
- Eject 1 mL NS from a 10 mL pre-load syringe
- Draw up 1 mL epinephrine 1:10,000 concentration and gently mix
- Admin. 1 mL IV/IO push every 1 - 5 mins
- Titrate to maintain SBP >90

Calcium Channel Blockers

May admin. up to 1000 mL NS bolus if SBP <90

↓

Calcium Chloride 10% 10 mL slow IV/IO
- Only if SBP <90
- Admin. no faster than 1 mL/min
- May repeat every 5 mins (maximum: 4 total doses)

Narcotics

Naloxone
- Only if RR <12 or respiratory efforts inadequate
- 1 - 2 mg IV/IO/IM/IN
- May repeat every 2 - 3 mins if improvement inadequate
- Do not admin. if advanced airway in place & pt is being adequately ventilated

Tricyclic Antidepressants

Sodium Bicarbonate 1 mEq/kg IV/IO - if any of the following are present:
- SBP <90
- QRS >0.12 seconds (3 small boxes)
- Seizures

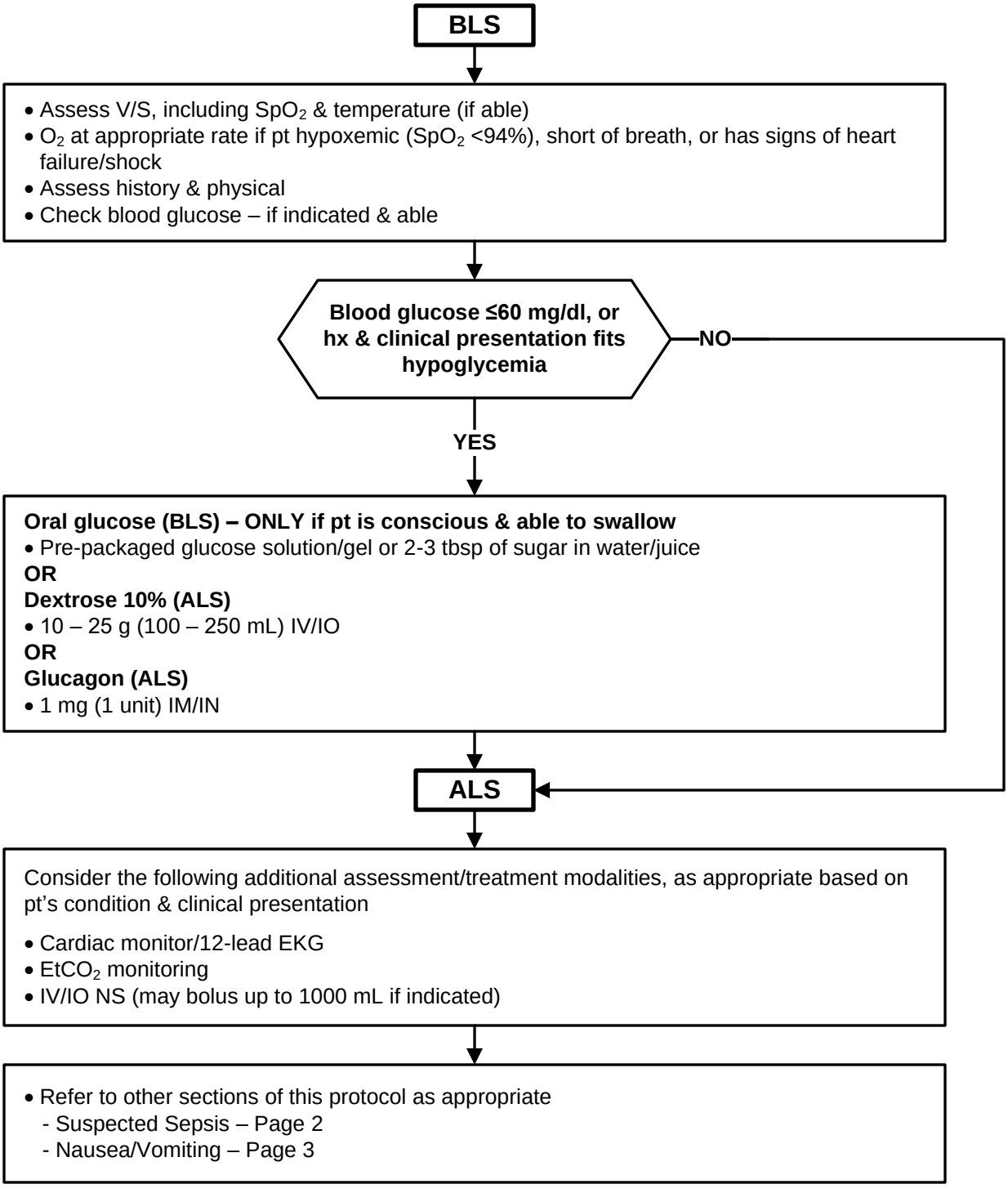
Hydrofluoric Acid

Calcium Chloride 10% 10 mL slow IV/IO
- Only if signs of hypocalcemia
- Admin. no faster than 1 mL/min

Organophosphate Or Carbamate

Atropine 2 mg IV/IO
- Only if HR <60
- May repeat every 3 mins – no max dose

- The purpose of this protocol is to provide standing order assessment and treatment modalities for pt complaints not addressed by other S-SV EMS treatment protocols – including nausea/vomiting and suspected sepsis.



- Early recognition of sepsis is critical to expedite hospital care and antibiotic administration.
- Aggressive IV fluid therapy is the most important prehospital treatment for sepsis.
- Septic pts are especially susceptible to traumatic lung injury and ARDS. If BVM ventilation is necessary, avoid excessive tidal volumes.
- Attempt to identify the source of infection (skin, respiratory, etc.), previous treatment and related history.
- Consider the possibility of sepsis when a combination of two or more of the following Systemic Inflammatory Response Syndrome (SIRS) criteria are present:
  - Temperature <96.8°F or >100.4°
  - RR >20bpm
  - HR >90bpm
  - ETCO2 ≤25 mmHg

High-Risk Indicators for Sepsis:

- Hx of pneumonia, UTI, MRSA
- Cancer pts
- Nursing home residents
- Pts with indwelling catheters
- Immune-compromised pts

Shock Index (SI):

- SI is used to assess the severity of hypovolemic shock
- SI = HR/SBP
  - Normal SI range is 0.5 to 0.7
  - HR>SBP (SI>1) may indicate sepsis

ALS

- Assess Temperature
- $EtCO_2$ monitoring
- IV/IO NS 500 mL boluses to a maximum of 2 L if SIRS criteria remain present
  - Reassess vital signs between boluses
  - Discontinue boluses and provide supportive care if signs of pulmonary edema develop

If SBP <90 after 2 L NS:
Push-Dose Epinephrine

- Eject 1 mL NS from a 10 mL flush syringe
- Draw up 1 mL epinephrine 1:10,000 & gently mix
- Administer 1 mL IV/IO push every 1-5 mins for continued SBP <90

If pt is febrile:
Acetaminophen

- 1 g IV/IO infusion over 15 mins (single dose)

- Monitor & reassess
- Provide early notification to the receiving hospital for suspected sepsis pts

- Nausea/vomiting can be symptoms of a multitude of different causes. If possible, the specific underlying cause should be determined and treated. The use of an antiemetic may relieve symptoms while leaving the cause untreated, and possibly, more difficult to detect. EMS personnel should weigh the benefits of antiemetic use against the possible risk of making an accurate diagnosis more difficult, and the possible side effects of the antiemetic agent.
- Treatment of nausea/vomiting is indicated for pts where it may contribute to a worsening of their medical condition, or where the pt's airway may be endangered.
- EMS personnel may consider administering Zofran (Ondansetron) prophylactically, prior to or immediately after opioid administration, for a pt with a history of nausea/vomiting secondary to opioid administration. Zofran (Ondansetron) may also be administered prior to transport to a pt with a history of motion sickness.

BLS

Assess/treat underlying cause of nausea/vomiting as appropriate

ALS

Zofran (Ondansetron)

<u>Base/modified base hospital consultation is required prior to administration of Zofran (Ondansetron) to any pt <4 yo or any pt during the first 8 weeks of pregnancy</u>

Adult Pts (≥15 yo)

- 4 - 8 mg oral disintegrating tablet, **OR** 4 - 8 mg IM, **OR** 4 - 8 mg slow IV/IO (over 30 seconds)
- May repeat as needed (max total dose: 16 mg)

Pediatric Pts (4 - 14 yo)

- 4 mg oral disintegrating tablet, **OR** 4 mg IM, **OR** 4 mg slow IV/IO (over 30 seconds)
- Additional doses require base/modified base hospital consultation

Sierra – Sacramento Valley EMS Agency Treatment Protocol	M-8
Pain Management	
Approval: Troy M. Falck, MD – Medical Director	Effective: 06/01/2024
Approval: John Poland – Executive Director	Next Review: 01/2027

- All pts with a report of pain shall be appropriately assessed and treatment decisions/interventions shall be adequately documented on the PCR.
- A variety of pharmacological and non-pharmacological interventions may be utilized to treat pain. Consider the pt's hemodynamic status, age, and previous medical history/medications when choosing analgesic interventions.
- Treatment goals should be directed at reducing pain to a tolerable level; pts may not experience complete pain relief.

BLS

- Assess V/S including pain scale & SpO_2, every 15 mins or as indicated by pt's clinical condition
- Assess/document pain score using standard 1-10 pain scale before and after each pain management intervention and at a minimum of every 15 mins
- O_2 at appropriate rate if SpO_2 <94% or pt is short of breath
- Utilize non-pharmacological pain management techniques as appropriate, including:
  - Place in position of comfort and provide verbal reassurance to minimize anxiety
  - Apply ice packs &/or splints for pain secondary to trauma

Pain not effectively managed with non-pharmaceutical pain management techniques

Review/consider 'Medication Contraindications & Administration Notes' below & proceed to page 2

Medication Contraindications & Administration Notes

ⓘ **All slow IVP medications contained in this protocol shall be administered over 60 seconds**

Acetaminophen
ⓘ Do not administer to pts with any of the following:
- Severe hepatic impairment
- Active liver disease

ⓘ Discontinue infusion if SBP drops to <100

Ketamine
ⓘ Do not administer to pts with any of the following:
- Pregnancy
- Multi-system trauma
- Suspected internal bleeding
- Active external bleeding

Ketorolac
ⓘ Do not administer to pts with any of the following:
- ≥65 yo
- Pregnancy
- NSAID allergy
- Active bleeding
- Multi-system trauma
- ALOC or suspected moderate/severe TBI
- Current use of anticoagulants or steroids
- Hx of asthma, GI bleeding, ulcers
- Hx of renal disease/insufficiency/transplant

Fentanyl/Midazolam
ⓘ Do not administer to pts with any of the following:
- SBP <100
- SpO2 <94% or RR <12
- ALOC or suspected moderate/severe TBI

ⓘ Do not administer midazolam to pts ≥65 yo
ⓘ Reduce fentanyl doses to 25 mcg for pts ≥65 yo
ⓘ There is an increased risk of deeper level of sedation & airway/respiratory compromise when administering midazolam to pts receiving fentanyl

ALS

- Continuous cardiac monitoring
- IV/IO NS TKO – if indicated by pt's clinical condition or necessary for medication administration
  - May bolus up to 1000 mL if indicated by pt's clinical condition
- Administer analgesic intervention as indicated below when appropriate

Non-Trauma Related/Chronic Pain

Acetaminophen: 1 g IV/IO infusion over 15 mins **OR Ketorolac:** 15 - 30 mg IV/IO or IM

If pain not effectively managed:

- Contact base/modified base hospital for additional pain management consultation

Pain Related to Acute Injury/Burns/Frostbite

Moderate Pain

Acetaminophen: 1 g IV/IO infusion over 15 mins
OR
Ketorolac: 15 - 30 mg IV/IO or IM

If pain not effectively managed:

- Continuous $EtCO_2$ monitoring

Fentanyl: 25 - 50 mcg slow IV/IO or IM/IN every 5 mins (max cumulative dose: 200 mcg)

Severe Pain

- Continuous $EtCO_2$ monitoring

Fentanyl: 50 - 100 mcg slow IV/IO or IM/IN
OR
Ketamine: 15 - 30 mg slow IV/IO

Acetaminophen: 1 g IV/IO infusion over 15 mins

If pain not effectively managed:

- If fentanyl previously administered, may repeat fentanyl 50 - 100 mcg slow IV/IO or IM/IN every 5 mins (max cumulative dose: 200 mcg)
- If ketamine previously administered, may repeat ketamine 0.3 mg/kg slow IV/IO (max 30 mg) x 1

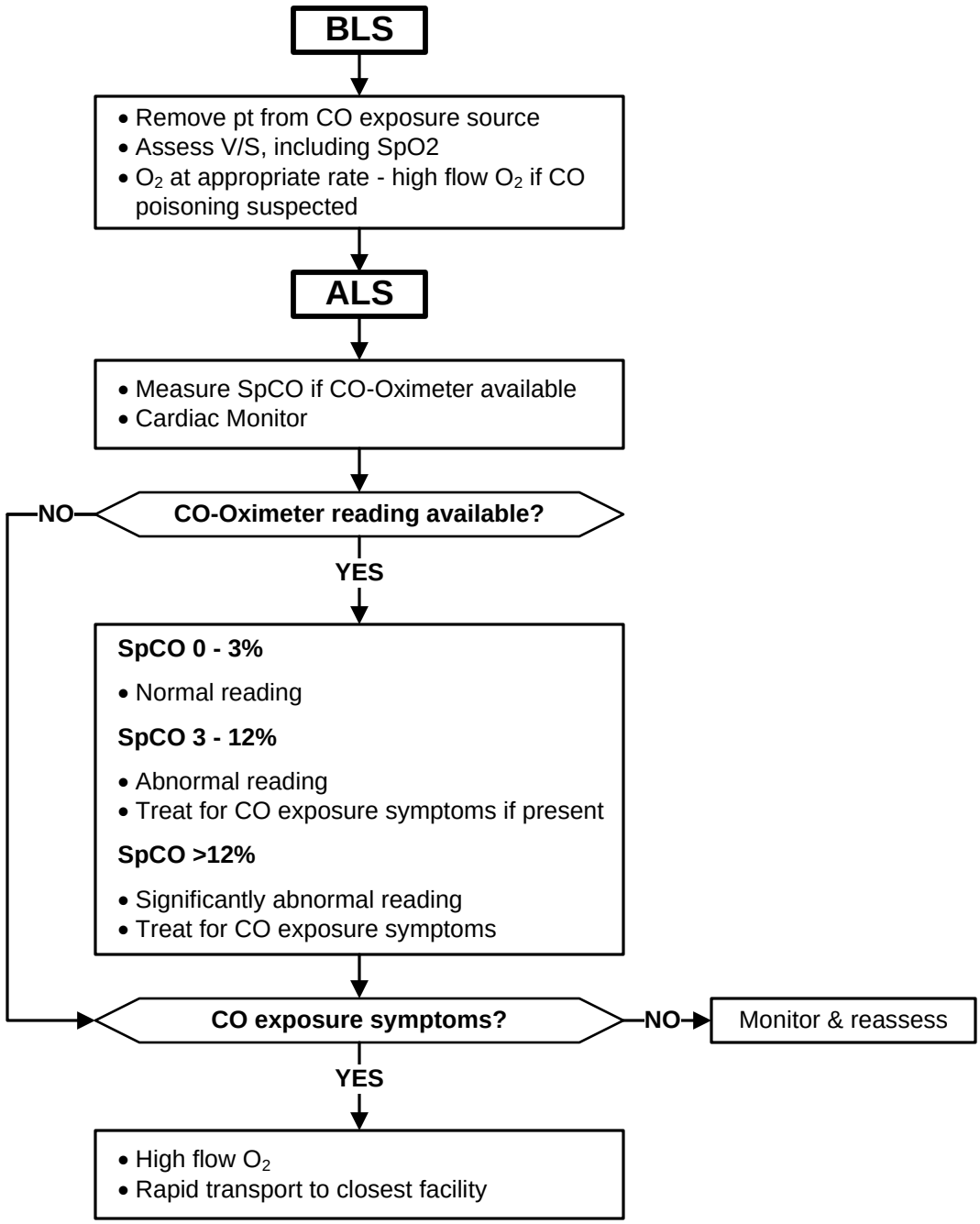
AND/OR
Midazolam: 1 mg slow IV/IO

- May repeat 1 mg slow IV/IO x 1
- Wait 5 mins after fentanyl/ketamine administration before administering midazolam

Sierra – Sacramento Valley EMS Agency Treatment Protocol	M-9
CO Exposure/Poisoning	
Approval: Troy M. Falck, MD – Medical Director	Effective: 12/01/2022
Approval: John Poland – Executive Director	Next Review: 09/2025

- **Initial symptoms of CO exposure are insidious, similar to the flu and thus seemingly benign. These symptoms increase in severity as the SpCO level rises & may include one or more of the following:**

- Confusion - Dizziness/vertigo - Headache - Shortness of breath - Nausea/vomiting
- Fatigue - Syncope - Confusion - Tachycardia - Cardiac arrhythmias
- Seizures - Shock - Coma - Apnea



BLS

- Attempt to de-escalate situation by determining triggering event, attempt calming talk & redirection techniques* - move pt to safe location & minimize stimulus
- Utilize appropriate restraint mechanisms in situations where the pt is violent, potentially violent, or exhibiting behavior that is dangerous to self or others (Reference: S-SV EMS policy 852)
- Assess V/S, including SpO2 and temperature (if able)
- Assess/treat for underlying medical/traumatic cause of behavioral issues as appropriate
- Check blood glucose (if able)

Blood glucose ≤60 mg/dl or H&P fits hypoglycemia?

YES

Oral glucose (BLS)
- 15 - 25 gm

OR

Dextrose 10% (ALS)
- 10 - 25 gm (100 - 250 mL) IV/IO

OR

Glucagon (ALS)
- 1 mg (1 unit) IM/IN

NO

ALS

- Consider cardiac monitor
- Consider IV/IO NS TKO

***Redirection Techniques**

- Coach pt in taking slow, deep breaths or have them attempt 'Box Breathing':
  - Breath in for 4 seconds
  - Hold for 4 seconds
  - Exhale for 4 seconds
  - Hold for 4 seconds
- Have pt name 5 things they can see right now
- Give pt a color and ask them to find something around them with that color

Severe Anxiety

- Uncontrollable feelings of panic, fear, doom, or impending danger
- Tachypnea/hyperventilation
- Tachycardia
- Cold, sweaty, numb, or tingling hands or feet

Severe Anxiety symptoms not adequately relieved by other means:

Midazolam
- 1 - 2 mg IV/IO/IM/IN
- May repeat dose x 1, after 5 mins, if severe anxiety symptoms persist

Behavioral Crisis (Including Excited Delirium)

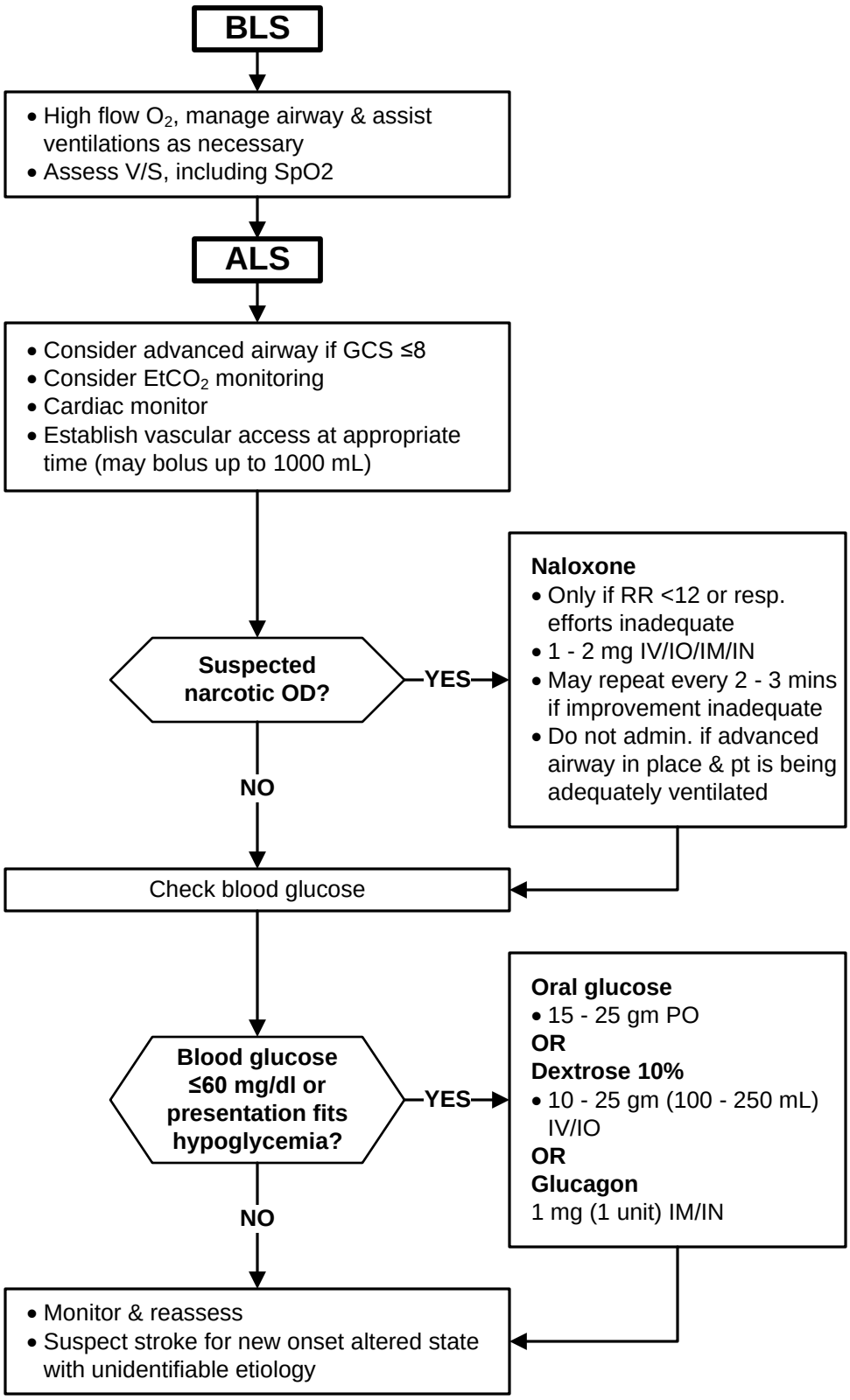
- Intense paranoia
- Disorientation/hallucinations
- Extreme aggression/violent behavior
- Danger to self/others
- Hyperthermia
- Increased strength

If pt combative, such that harm to self or others is likely:

Midazolam
- 10 mg IM/IN

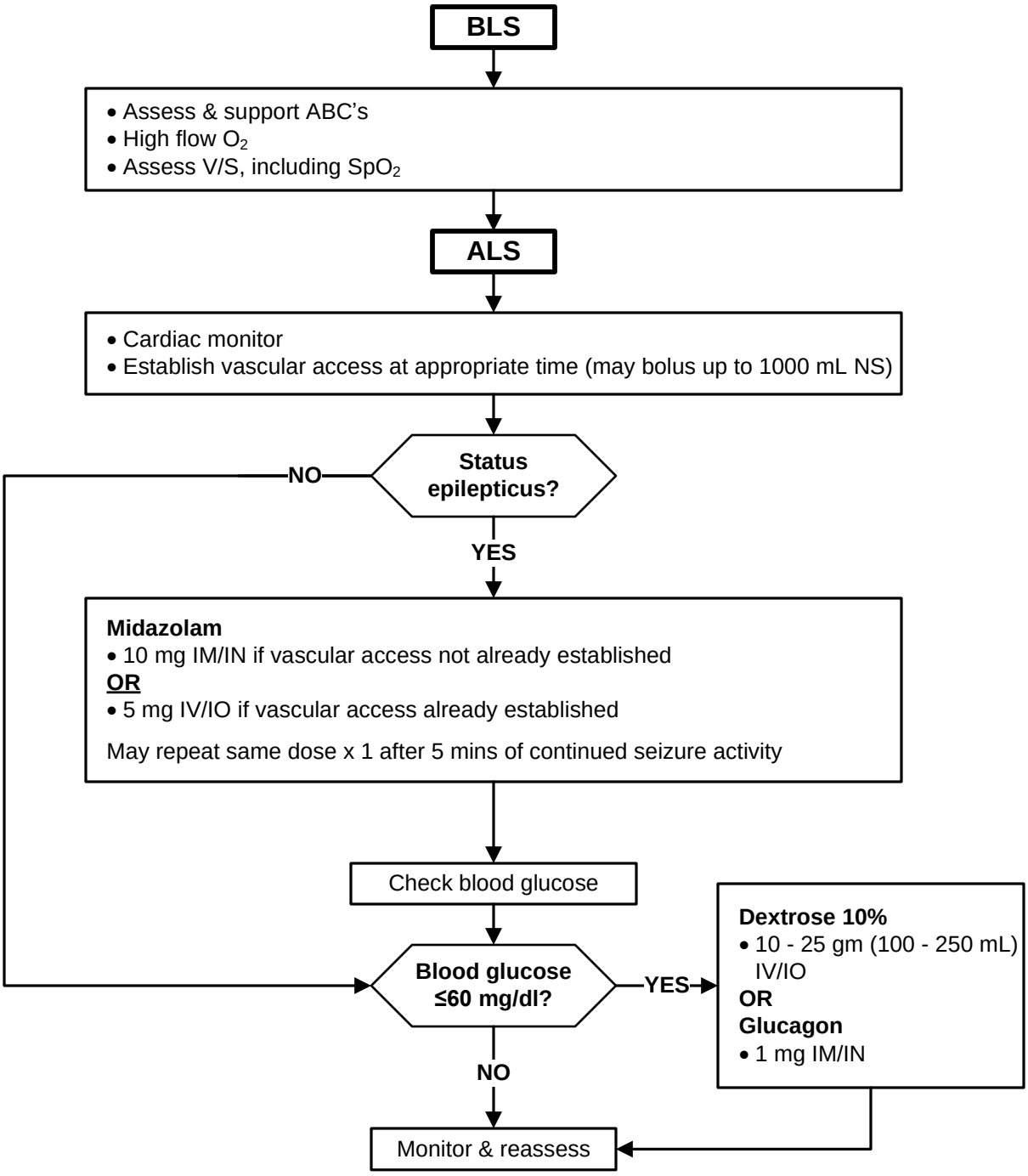
OR
- 5 mg IV/IO

	Sierra – Sacramento Valley EMS Agency Treatment Protocol	N-1
	Altered Level Of Consciousness	
Approval: Troy M. Falck, MD – Medical Director		Effective: 12/01/2022
Approval: John Poland – Executive Director		Next Review: 09/2025



Sierra – Sacramento Valley EMS Agency Treatment Protocol	N-2
Seizure	
Approval: Troy M. Falck, MD – Medical Director	Effective: 12/01/2022
Approval: John Poland – Executive Director	Next Review: 09/2025

- **Status Epilepticus:** 2 or more seizures without periods of consciousness, or a single seizure lasting >5 mins.
- Transport patients >20 weeks pregnant in left-lateral position.



Sierra – Sacramento Valley EMS Agency Treatment Protocol	N-3
Suspected Stroke	
Approval: Troy M. Falck, MD – Medical Director	Effective: 12/01/2021
Approval: Victoria Pinette – Executive Director	Next Review: 09/2024

Cincinnati Prehospital Stroke Scale (CPSS)

Component	Normal Result	Abnormal Result
Facial Droop (Ask pt to show teeth or smile)	Both sides of face move equally	One side of face does not move as well as the other side
Arm Drift (Ask pt to close eyes & hold both arms out with palms up)	Both arms move the same, or both arms do not move	One arm does not move, or one arm drifts down compared with the other
Speech (Ask pt to say "you can't teach an old dog new tricks")	Pt uses correct words with no slurring	Pt slurs words, uses the wrong words, or is unable to speak

BLS

- Assess V/S, including SpO_2
- O_2 at appropriate rate if hypoxemic (SpO_2 <94%) or short of breath
- Perform CPSS assessment

Suspect stroke for either of the following:

- New onset symptoms with abnormal CPSS
- New onset altered state (GCS <14) with unidentifiable etiology

If stroke suspected:

- Determine time of onset of symptoms (pt last known normal)
  - When possible, obtain and relay to the receiving hospital the name/contact information of the individual who can verify the time of onset of symptoms (pt last known normal)
- Check blood glucose (if glucometer available)
- Transport as soon as possible (scene time should be ≤10 mins)

ALS

- Consider advanced airway if GCS ≤8 or need for airway protection
- Cardiac monitor, consider 12-lead EKG (do not delay transport to perform 12-lead EKG)
- Obtain blood draw if requested by stroke receiving center
- IV/IO NS TKO (may bolus up to 1000 mL)

Are both the following present?
- Onset of symptoms ≤24 hrs (including wake-up stroke*)
- ≤45 minute transport time to a stroke receiving center

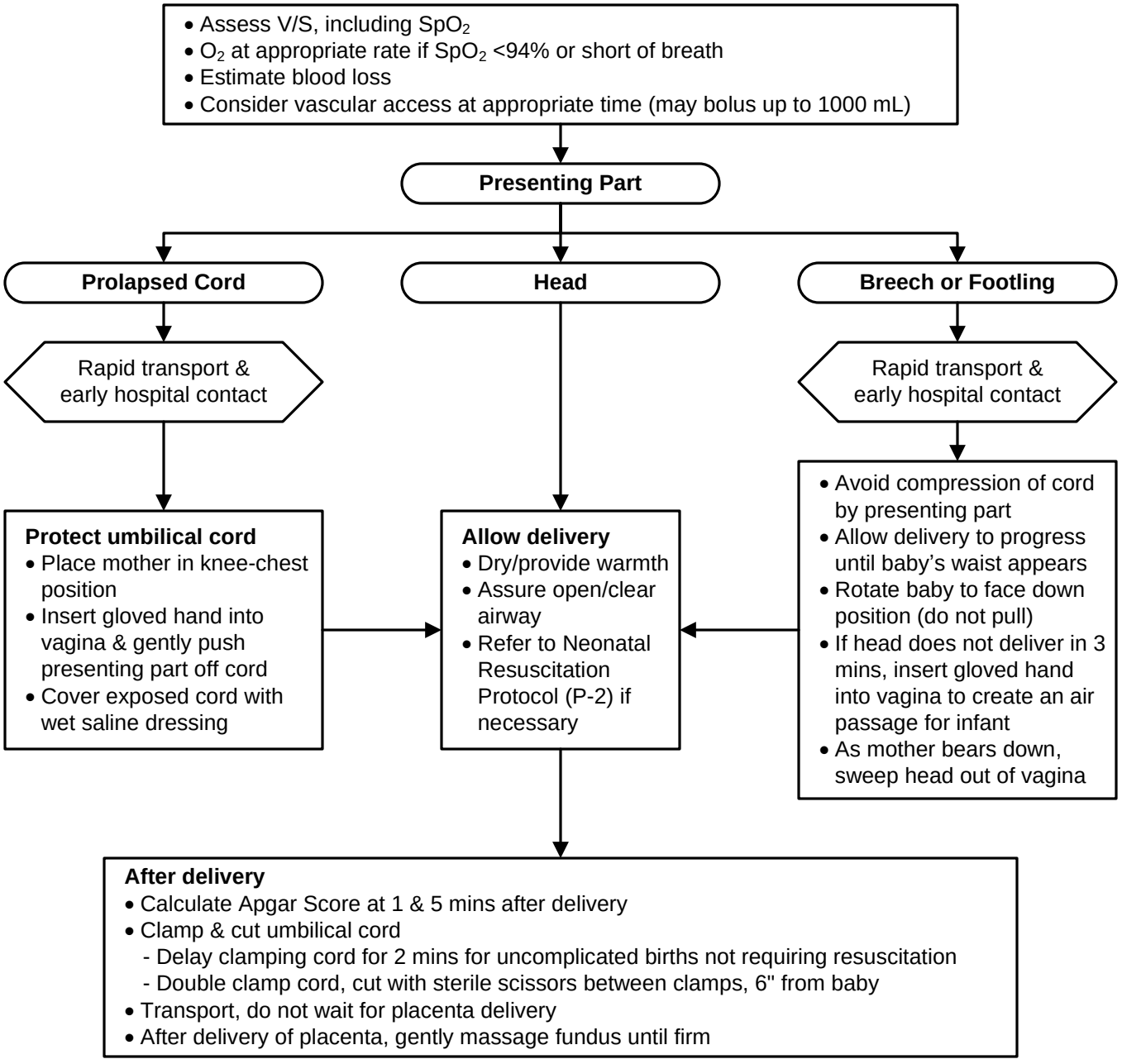
NO →
- Transport to closest appropriate hospital
- Contact base/modified base hospital for destination consultation if necessary

YES →
- Transport to closest stroke receiving center
- Advise of "Stroke Alert" & time pt. last known normal
- Provide pt. identifying information if requested by stroke receiving center

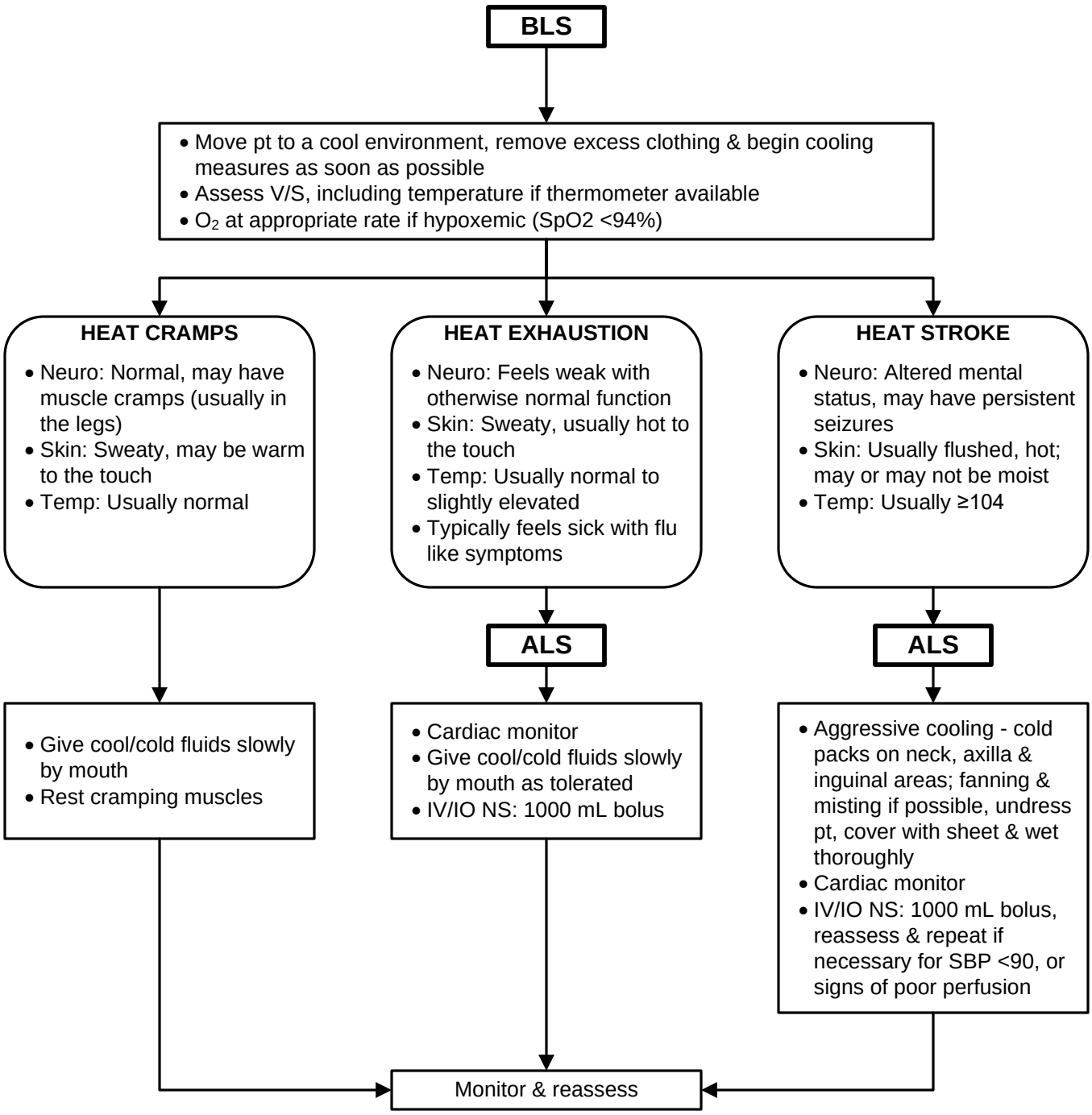
***Wake-up stroke definition:** Pt awakens with stroke symptoms that were not present prior to falling asleep

APGAR Score

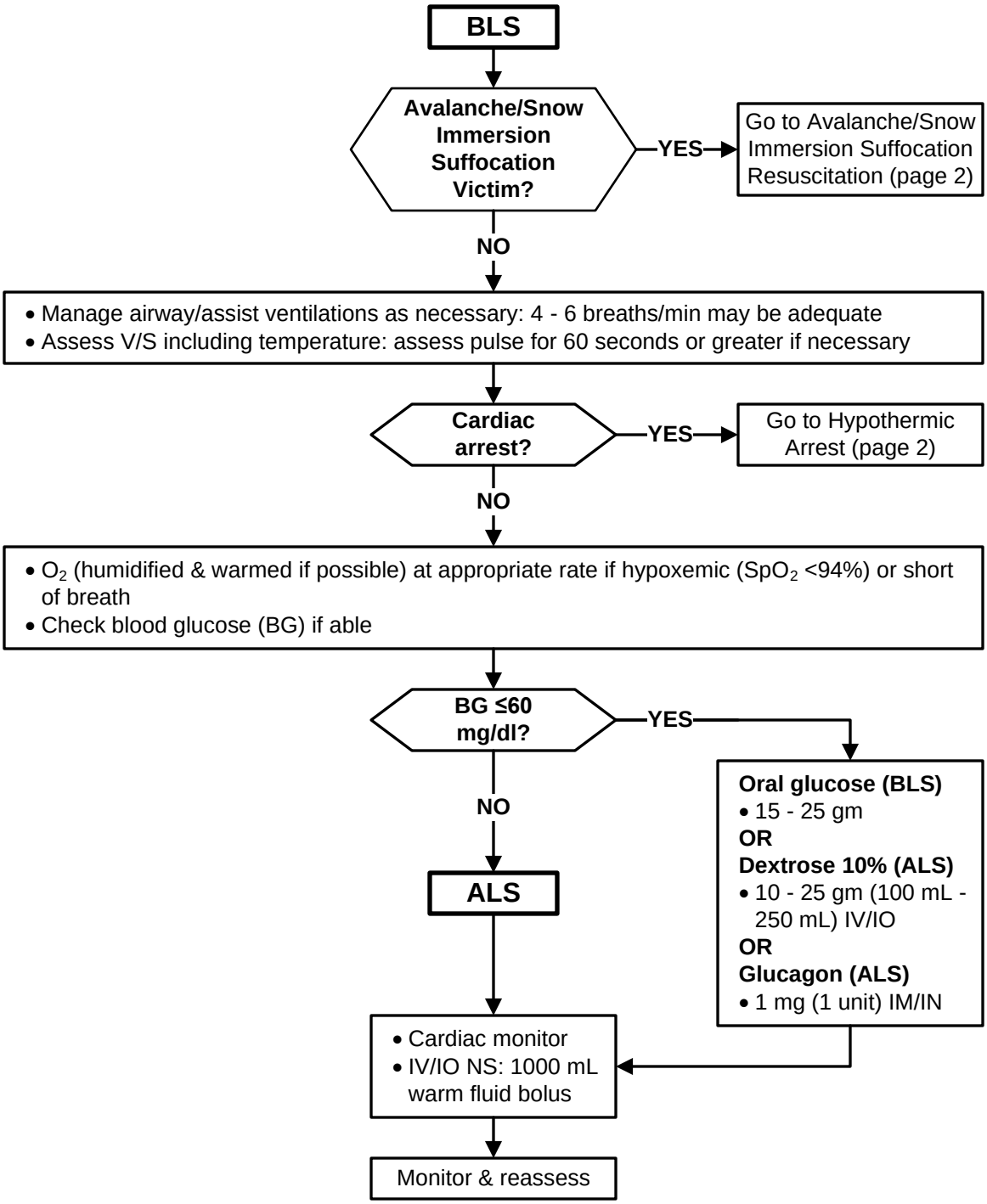
	Sign/Score	0	1	2
A	Appearance	Blue/Pale	Peripheral cyanosis	Pink
P	Pulse Rate	None	<100	>100
G	Grimace	None	Grimace	Cries
A	Activity	Limp	Some motion	Active
R	Respiration	Absent	Slow/irregular	Good/strong cry



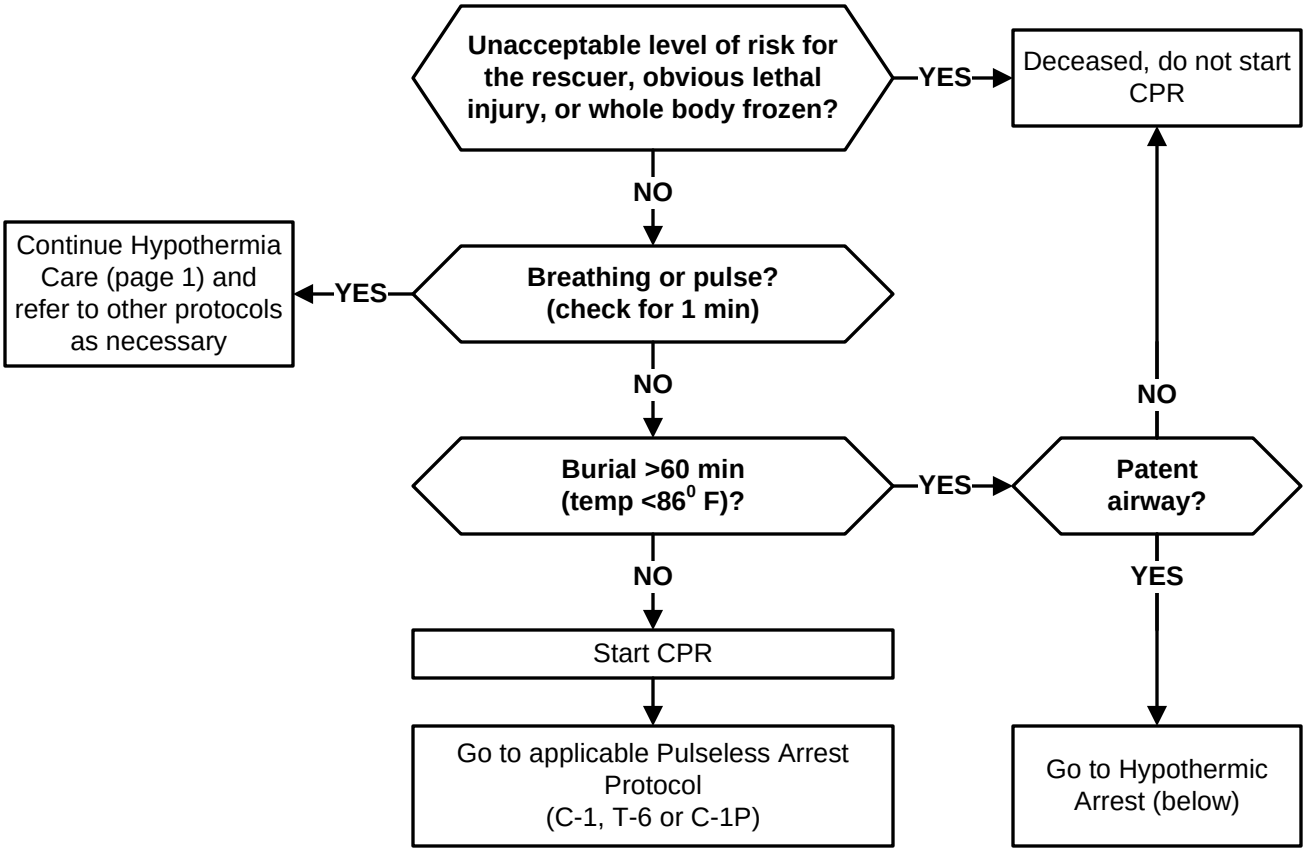
	Sierra – Sacramento Valley EMS Agency Treatment Protocol	E-1
	Hyperthermia	
Approval: Troy M. Falck, MD – Medical Director		Effective: 06/1/2022
Approval: Victoria Pinette – Executive Director		Next Review: 03/2025



- **Move pt to a warm environment, remove wet clothing, begin warming measures as soon as possible.**
- **Moderately & severely hypothermic pts should be handled as gently as possible.**
- **This protocol incorporates the official guidelines for the onsite treatment of avalanche victims established by the International Commission for Alpine Rescue (ICAR).**



Avalanche/Snow Immersion Suffocation Resuscitation



Hypothermic Arrest

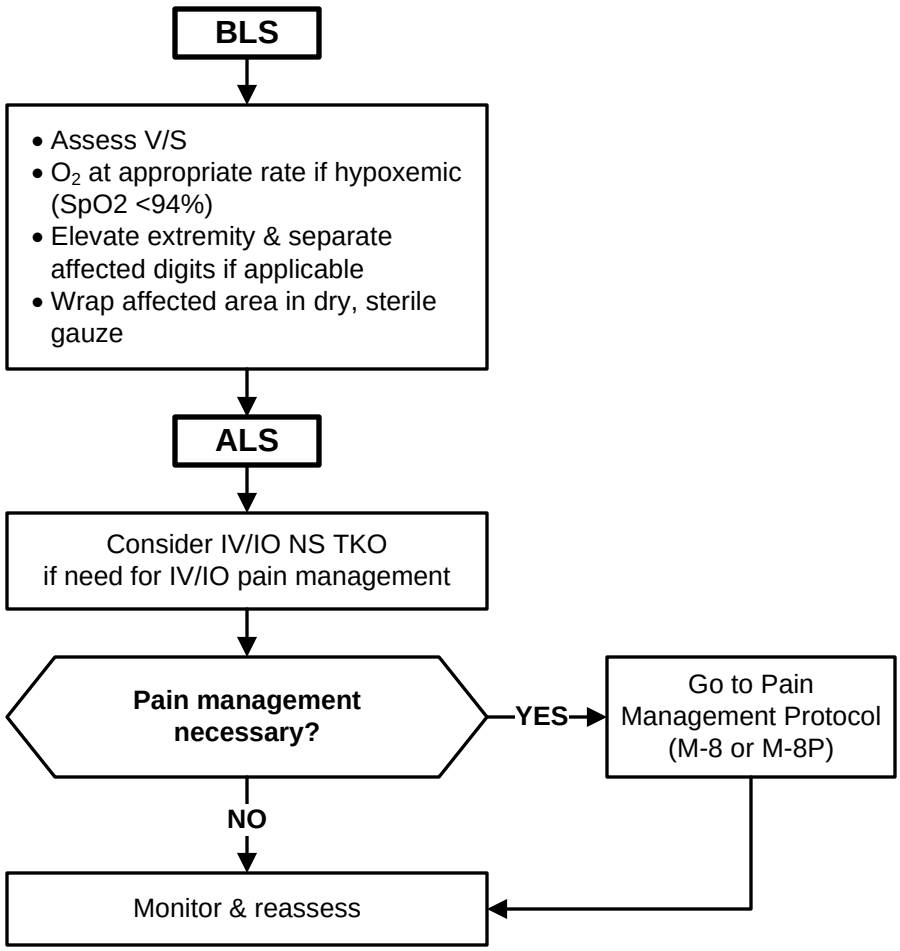
- **Medications & defibrillation may be ineffective in a hypothermic cardiac arrest pt. If the pt is in v-fib, one shock & one round of medications should be delivered. It is reasonable to delay further defibrillation attempts & further medications until the pt is rewarmed.**
- **Continuing CPR & safe expedited transport to the nearest facility is the pt's best chance at survival.**

BLS

Begin CPR & apply AED as soon as possible, deliver one AED shock if indicated

ALS

- If indicated according to Pulseless Arrest protocol (C-1, T-6 or C-1P), administer one manual defibrillation & one round of ALS medications
- Evacuate/transport as soon as possible - continue CPR until ROSC, rescuer exhaustion, hospital arrival, or base/modified base hospital order to terminate resuscitation efforts


BLS
• Assess V/S
• O_2 at appropriate rate if hypoxemic (SpO2 <94%)
• Elevate extremity & separate affected digits if applicable
• Wrap affected area in dry, sterile gauze
ALS
Consider IV/IO NS TKO if need for IV/IO pain management
Pain management necessary?
YES
Go to Pain Management Protocol (M-8 or M-8P)
NO
Monitor & reassess

Approval: Troy M. Falck, MD – Medical Director	Effective: 06/01/2024
Approval: John Poland – Executive Director	Next Review: 01/2027

Important Caveats

General

- Ensure the scene is safe. Attempt to identify what type of animal/reptile/insect the bite or sting is from (transport with the pt is not recommended). If safe to do so, a digital photograph is preferred for identification purposes (include the head, tail & any distinctive markings). Avoid the head & fangs of pit vipers as they are capable of envenomation even when dead.
- Venomous & mammal bites to the face, tongue, mouth & neck or direct stings to the tongue & mouth are imminent airway emergencies & will need to be addressed early.

Spider/Centipede Bites or Bee/Wasp/Scorpion/Ant Stings

- Bites from brown recluse, hobo & other spiders in the sicariidae family may cause a painless bite with tissue necrosis & clotting disorders developing over several days with little to no immediate symptoms. Brown recluse spiders are not native to California & are very rare. There is no current antivenom for this class of spider.
- Black widow spider bites cause diaphoresis, severe cramping & pain in the abdomen, groin, back & legs.
- Scorpion stings may cause pain & red welt at the sting site as well as uncontrolled muscle jerking, pain, eye twitching, hypotension & increased salivation.
- While very rare, severe reactions to black widow spider bites & some scorpion stings may require antivenom.
- Centipede bites may cause pain, minor bleeding & red welt at the sting site. First aid treatment is usually sufficient.
- Bee, wasp & ant stings may cause pain, minor bleeding & red welt at the sting site. First aid treatment is usually sufficient. Pts with history of reaction or who have multiple stings are at higher risk for anaphylaxis.

Snakebite - Venomous

- Bites from pit vipers & others in the crotalinae family are hemotoxic & cytotoxic & may cause pain, localized tissue destruction & edema. Oral paresthesia or metallic taste in the mouth may represent systemic toxicity. Hypotension may be due to fluid loss as a result of edema & usually resolves with antivenom. However, it may be due to the venom itself if no significant edema is noted.
- Bites from coral snakes & others in the elapid family, are neurotoxic & lack the impressive signs of envenomation of pit vipers, but may cause neuromuscular weakness & rapid respiratory depression/failure.
- If a snake bite was from an exotic pet or zoo animal (e.g. coral, cobra, krait, mojave), neurologic &/or respiratory depression may precede local reaction, observe closely for mental status change, respiratory depression, convulsions or paralysis.
- If bite/envenomation is from an exotic species, contact base/modified base hospital early as they may need to consult with poison control for specific antivenom.
- Pre-alert receiving hospital of probable need for antivenom if moderate to severe venomous snake bite is noted.

Dog/Cat/Other Mammals/Human Bites

- Human bites have higher infection rates than animal bites due to normal mouth bacteria.
- Consider risk for rabies, tetanus & other infections, especially in cat & other carnivore bites.
- Concern must be given for bleeding, infection & wound healing complications in patients with significant health history &/or extremes of age.

See page 2 for treatment of bites/envenomations

BLS

- Assess ABC's, manage airway & assist ventilations as necessary
- Assess V/S including SpO_2 (**DO NOT** apply BP cuff to snakebite extremity)
- O_2 at appropriate rate if hypoxemic (SpO_2 <94%)
- If bite/sting is in an extremity, consider **LOOSELY** immobilizing/splinting injury in a position of comfort at or slightly above heart level for pain control purposes
- Remove constrictive clothing/jewelry/bands
- Clean wound site & control bleeding
- Monitor for anaphylaxis - refer to Allergic Reaction/Anaphylaxis protocol (M-1 or P-18) if necessary
- Immediate rapid transport should occur for venomous snake bites &/or anaphylaxis related to bites/stings

Spider/Centipede Bites or Bee/Wasp/Scorpion/Ant Stings

- If necessary, remove stinger by scraping with a straight edge (like edge of a tongue blade) - do not squeeze or attempt to pick stinger from skin as this may express more venom from the venom sack
- Apply ice for pain if needed

Snakebite - Venomous

- **DO NOT** cut or slice wound or use suction on wound to remove venom
- **DO NOT** apply ice
- **DO NOT** apply tourniquets or lymphatic constriction wraps/banding
- Document time of bite
- Mark margin of swelling/ redness, including time

Dog/Cat/Other Mammals/ Human Bites

- Apply ice for pain if needed
- If uncontrolled hemorrhage, refer to Hemorrhage protocol (T-8)

ALS

- Cardiac monitor
- Advanced airway if necessary
- Consider IV/IO NS TKO (**DO NOT** establish IV/IO in snakebite extremity)
  - Adult: may bolus up to 1000 mL
  - Pediatric: may bolus 20 mL/kg

Pain management necessary?

YES → Go to Pain Management Protocol (M-8 or M-8P)

NO → Monitor & reassess

	Sierra – Sacramento Valley EMS Agency Treatment Protocol	E-7
	Hazardous Material Exposure	
Approval: Troy M. Falck, MD – Medical Director		Effective: 06/01/2023
Approval: John Poland – Executive Director		Next Review: 01/2026

Refer to S-SV EMS Hazardous Material Incidents Policy (836)

Important caveats for medical responders:

- EMS personnel shall not enter or provide treatment in the Contamination Reduction Zone (Warm Zone) or Exclusion Zone (Hot Zone) unless trained, equipped and authorized to do so.
- EMS personnel shall not use Haz Mat specific personal protective equipment (PPE), including self-contained breathing apparatus (SCBA), unless trained, fit tested and authorized to do so.
- Do not transport pts until they have been completely decontaminated. If transport personnel become contaminated, they shall immediately undergo decontamination.
- Do not delay treatment/transport of immediate pts contaminated with radioactive material.
- Early base/modified base hospital contact, and CHEMPACK activation when appropriate (S-SV EMS Nerve Agent Treatment Protocol E-8), will maximize assistance from necessary resources.
- Refer to Hazardous Materials Medical Management Reference as appropriate.

Information that must be obtained by EMS personnel on every hazardous materials incident:

- Number of pts.
- Material involved or DOT 4-digit placard #.
- Route(s) of exposure for each pt.
- Signs & symptoms for each pt.
- Decontamination procedure completed for each pt.
- Procedure utilized to determine effectiveness of decontamination procedure.
- Risk of secondary exposure to rescuers.
- PPE required to transport pt.

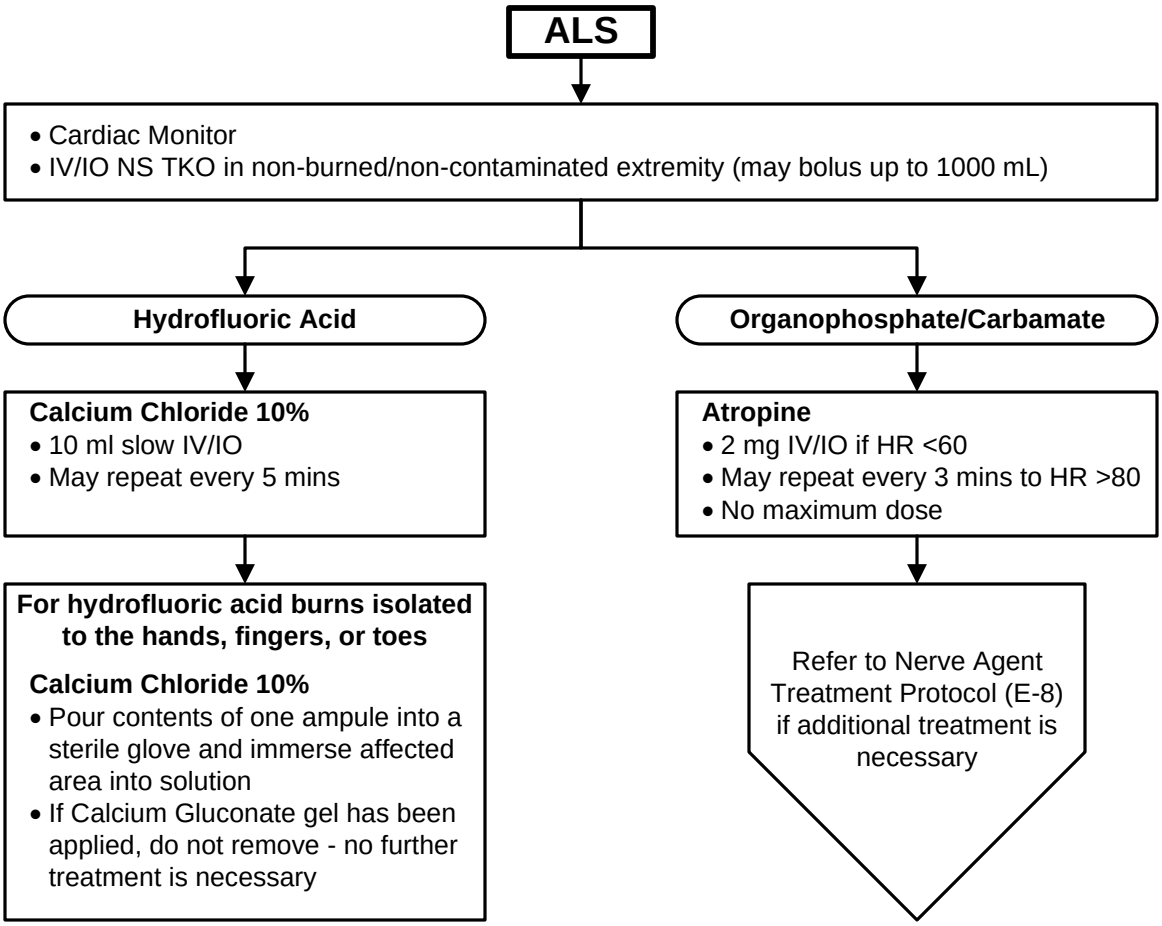
BLS

- Establish and secure airway as necessary
- O_2 at appropriate rate
- Contact base/modified base hospital for assistance in determining a decontamination/treatment plan
- After pt is fully decontaminated, cover with blankets and/or sheets as appropriate
- If eye exposure occurs, irrigate each exposed eye with NS – ensure contact lenses are removed

See pages 2 & 3 for additional treatment

Treatment Notes

- Skin exposure to hydrofluoric acid with a concentration >20% can cause fatal hypocalcemia and should be treated. Provide continuous EKG monitoring to look for QT-interval prolongation which is an early sign of hypocalcemia.
- Precautions must be taken to prevent direct contact with secretions of a pt who has ingested organophosphates or carbamate pesticides.



Radiation Emergencies

- Pt care takes priority over radiological concerns - addressing contamination issues should not delay treatment of life-threatening injuries.
- Viable pts are a high priority - rapidly extricate, treat and transport pts who are most critical and likely to survive.
- It is highly unlikely that the levels of radioactivity associated with a contaminated pt would pose a significant health risk to care providers.
- Body substance isolation clothing (gloves, gowns, N-95 masks, protective eyewear, shoe protectors, and head cap) are recommended, including 2-3 pair of disposable gloves.
- Due to fetal sensitivity to radiation, assign pregnant staff to other duties.

Ambulance Preparation

- Avoid using internal and external compartments - work out of mobile kits as much as possible.
- Close all internal compartments prior to loading pt.
- Cover radio communication microphones with a rubber glove.
- Cover floor of ambulance with disposable papers or pads.

Radiation Exposure Haz Mat Pt

- If O_2 is warranted, use a non re-breather mask (if tolerated) to provide protection from inadvertent respiratory contamination hazards - an N95 mask is appropriate to protect pt from inadvertent respiratory contamination hazards when O_2 is not indicated
- Frequent glove changes will reduce the spread of contamination and should be considered prior to handling the pt or pt care adjuncts
- All medical procedures should be utilized to save an immediate pt - if it is medically necessary to intubate a pt that is contaminated, then do so - change gloves prior to intubation, and maintain ET tube sterility if possible

Limited or no field decontamination

- Initiate ALS care as necessary
- Keep pt wrapped (cocoon style) to minimize potential for contamination spread - only expose areas to assess and treat
- If necessary, cut and remove the pts clothing away from the body, being careful to avoid contamination to the unexposed skin - contain all removed clothing by placing in a sealable bag
- Continue to reassess/monitor vitals while transporting pt to the appropriate receiving facility
- Contact with pt may result in transfer of contamination - change gloves as necessary

Field decontamination performed

- Pts with non life-threatening injuries should have field decontamination prior to removal from the Exclusion (Hot) Zone
- Pts condition permits a more thorough radiological survey prior to continued care
- Conduct head to toe assessment as appropriate
- Initiate ALS care as necessary
- If pts clothing has not been removed during decontamination, keep pt wrapped (cocoon style) to minimize potential for contamination spread - only expose areas to assess and treat
- Contact with pt may result in transfer of contamination - change gloves as necessary

	Sierra – Sacramento Valley EMS Agency Treatment Protocol	E-8
	Nerve Agent Treatment	
Approval: Troy M. Falck, MD – Medical Director		Effective: 06/01/2023
Approval: John Poland – Executive Director		Next Review: 01/2026

Refer to S-SV EMS Hazardous Material Incidents Policy (836)

Important caveats for medical responders:

- EMS personnel shall not enter or provide treatment in the Contamination Reduction Zone (Warm Zone) or Exclusion Zone (Hot Zone) unless trained, equipped and authorized to do so.
- EMS personnel shall not use Haz Mat specific personal protective equipment (PPE), including self-contained breathing apparatus (SCBA), unless trained, fit tested and authorized to do so.
- Do not transport pts until they have been completely decontaminated. If transport personnel become contaminated, they shall immediately undergo decontamination.

Treatment notes:

- A base/modified base hospital physician order must be obtained prior to utilizing this protocol for pt treatment. Once an order is obtained, the entire protocol becomes a standing order that applies to all authorized/trained EMS personnel operating at the incident.
- Atropine (2mg) and pralidoxime chloride (600mg) auto-injectors included in MARK I/DuoDote nerve agent antidote kits shall only be used by authorized/trained EMS personnel.
- Paramedics may administer atropine and/or pralidoxime chloride IM/IV in situations where auto-injector nerve agent antidote kits are not available.
- EMS personnel may self-administer nerve agent antidote kits when authorized/trained to do so.
- Adult auto-injectors are not to be used in children under 40 Kg.
- Nerve agent antidote medications are only given if the pt is showing signs & symptoms of nerve agent poisoning, they are not to be given prophylactically. A decrease in bronchospasm and respiratory secretions are the best indicators of a positive response to atropine and pralidoxime.

Signs/Symptoms of Nerve Agent Exposure (mild to severe)

1. Runny nose
2. Chest tightness
3. Difficulty breathing
4. Bronchospasm
5. Pinpoint pupils/blurred vision
6. Drooling
7. Excessive sweating
8. Nausea/vomiting
9. Abdominal cramps
10. Involuntary urination/defecation
11. Jerking/twitching/staggering
12. Headache
13. Drowsiness
14. Coma
15. Convulsions
16. Apnea

Nerve Agent Exposure Mnemonic (SLUDGEM)

Salivation
Lacrimation
Urination
Defecation
GI distress
Emesis
Miosis/muscle fasciculation

CHEMPACK

Description:

- The Centers for Disease Control and Prevention (CDC) established the CHEMPACK project resulting in the forward placement of sustainable caches of nerve agent antidotes.
- CHEMPACK caches have been placed at select sites throughout the S-SV EMS region and surrounding areas according to program requirements and effective transportation alternatives.
- EMS CHEMPACK caches contain enough antidote to treat approximately 454 patients. These caches contain primarily auto-injectors for rapid administration, but also contain some multi-dose vials for variable dosing (including pediatric patients) and prolonged treatment.
- Authorization to deploy CHEMPACK assets will be limited to an event that:

  1. Threatens the medical security of the community; and
  2. Places multiple lives at risk; and
  3. Is otherwise beyond local emergency response capabilities; and
  4. Will likely make the material medically necessary to save human life.

CHEMPACK requesting/deployment:

- A requestor is considered to be one of the following entities at the scene of a suspected nerve agent or organophosphate release with known, suspected, or potential contaminated, exposed, or affected patients:

  1. EMS prehospital personnel; or
  2. Incident Commander (IC); or
  3. Medical Group Supervisor (MGS).

- Potential requestors should be familiar with and follow their Operational Area (OA)/county specific CHEMPACK plans and procedures
- The S-SV EMS Duty Officer and applicable MHOAC Program(s) shall be notified as soon as possible in the event of a CHEMPACK request/deployment.

See page 3 for specific treatment

Nerve Agent Treatment

Treatment Notes

- Only treat pts located in the Exclusion Zone (Hot Zone) with IM auto-injectors

Nerve Agent Exposure Pt

- Remove all clothing
- Blot off the agent
- Flush area with large amounts of water
- Cover the affected area

Mild Signs/Symptoms

Atropine
- 2 mg IV/IO or IM

OR
- Administer one (1) atropine auto-injector IM
- May repeat every 3-5 mins until symptoms improve

Pralidoxime chloride
- If symptoms do not improve in 5 mins, administer one (1) Pralidoxime chloride auto injector (600 mg) IM, one (1) time only

Moderate Signs/Symptoms

Atropine
- 4 mg IV/IO or IM

OR
- Administer two (2) atropine auto-injectors IM
- May repeat every 3-5 mins until symptoms improve

Pralidoxime chloride
- If symptoms do not improve in 5 mins, administer two (2) Pralidoxime chloride auto injectors (1200 mg) IM, one (1) time only

Severe Signs/Symptoms

Atropine
- 6 mg IV/IO or IM

OR
- Administer three (3) atropine auto-injectors IM
- May repeat every 3-5 mins until symptoms improve

Pralidoxime (2-PAM)
- Administer three (3) Pralidoxime chloride auto-injectors (1800 mg) IM

- Establish vascular access (may administer up to 1000 ml NS if SBP <90)
- Cardiac Monitor (if possible)

If continued seizure activity, Go to Seizure Protocol N-2

Sierra – Sacramento Valley EMS Agency Treatment Protocol	T-1
General Trauma Management	
Approval: Troy M. Falck, MD – Medical Director	Effective: 06/01/2024
Approval: John Poland – Executive Director	Next Review: 01/2027

- **Limit on scene procedures for pts meeting Field Trauma Triage Criteria to:**
  - Pt assessment - Airway management - Hemorrhage control - Immobilization/splinting - SMR
- **Transport pts with known/apparent third trimester pregnancy in left-lateral position.**
- **Notify receiving hospital of a 'Trauma Alert' as soon as possible for pts meeting Field Trauma Triage Criteria.**

BLS

- Assess & support ABCs
- Assess V/S, including SpO_2
- O_2 at appropriate rate if hypoxemic (SpO_2 <94%) or short of breath
- Control hemorrhage & immobilize/splint injuries as needed
- Initiate spinal motion restriction (SMR) if indicated (see page 3)
- Maintain body temperature, keep warm

ALS

- Consider advanced airway if indicated
- Consider $EtCO_2$ monitoring if indicated (see protocol T-3 or P-28)
- Consider application of a pelvic binder if indicated (see page 2)
- Cardiac monitor
- Establish vascular access if indicated (see page 2)
- Consider pain management if indicated (see protocol M-8 or M-8P)

Field Trauma Triage Criteria (TTC) Pt Destination (see page 4 for TTC details)

Unmanageable Airway? — YES → **Transport to Closest Hospital**

NO ↓

Meets RED TTC? — YES →

Adult (>14yo)
- If level I or II trauma center is closest, transport to that facility
- If level III or IV trauma center is closest, contact that facility (prior to transport) for destination consultation

Pediatric (≤14yo)
- Transport to pediatric trauma center if transport time ≤45 min
- Follow adult criteria if transport time to pediatric trauma center >45 min
- Contact closest trauma center for destination consultation if needed

NO ↓

Meets YELLOW TTC? — YES →

- Contact closest trauma center for destination consultation if transport time to that facility is ≤45 min
- Contact base/modified base hospital for destination consultation if transport time to a trauma center is >45 min

Vascular Access

Need or anticipated need for fluid or medication administration?

NO → Vascular access not indicated

YES ↓

IV/IO – NS or LR

- Initiate vascular access on all pts meeting Field Trauma Triage Criteria
- Initiate second vascular access on adult pts presenting with hypotension (SBP <90 for pts <65 years of age, or SBP <100 for pts ≥65 years of age), or if thoracic/abdominal pain is present
- Fluid resuscitation guidelines:
  - Adult pts:
    - Administer 500 mL fluid boluses for signs of hypoperfusion/shock
    - Reassess hemodynamic parameters, respiratory status and lung sounds after each fluid bolus
    - Titrate fluid boluses to SBP of ≥90 for pts <65 years of age, or ≥100 for pts ≥65 years of age
  - Pediatric pts:
    - Administer 20 mL/kg fluid boluses for signs of hypoperfusion/shock
    - Reassess hemodynamic parameters, respiratory status and lung sounds after each bolus
    - Titrate fluid boluses to age appropriate SBP (max: 60 mL/kg)

Commercial Pelvic Binder

Approved Commercial Pelvic Binders: 1) T-POD Pelvic Stabilization Device, 2) SAM Pelvic Sling 2

- Utilization of a commercial pelvic binder is optional, and only approved for AEMT/paramedic personnel. ALS/LALS provider agencies must ensure that their personnel are appropriately trained on the application/use of the device, as misplacement of pelvic binders can significantly decrease the ability of the binder to reduce pelvic ring fractures.
- Physical exam findings which may indicate the presence of a pelvic ring fracture include, but are not limited to:
  - Crepitus when applying compression to the iliac crests
  - Perineal or genital swelling
  - Testicular/groin pain
  - Blood at the urethral meatus
  - Rectal, vaginal or perineal lacerations/bleeding
- When stabilizing a suspected pelvic ring fracture, care must be taken not to over-reduce the fracture. Over-reduction can be assessed by examining the position of the legs, greater trochanters and knees with the pt supine. The goal is to achieve normal anatomic position of the pelvis, so the lower legs should be symmetrical after stabilization.
- When clinically indicated and logistically feasible, the pelvic binder should be placed prior to extrication/movement.
- Pelvic binders should be placed directly to skin. Once applied, pelvic binders should not be removed.
- If possible, avoid log-rolling pts with a suspected pelvic fracture.

Mechanism of injury suggestive of a pelvic fracture?

NO → Pelvic binder not indicated

YES ↓

Does pt present with one or more of the following?

- Physical exam findings suggestive of a pelvic fracture
- Hemodynamic instability: HR >100 & SBP <90 (or SBP <100 in pts ≥65 years of age)
- GCS ≤13

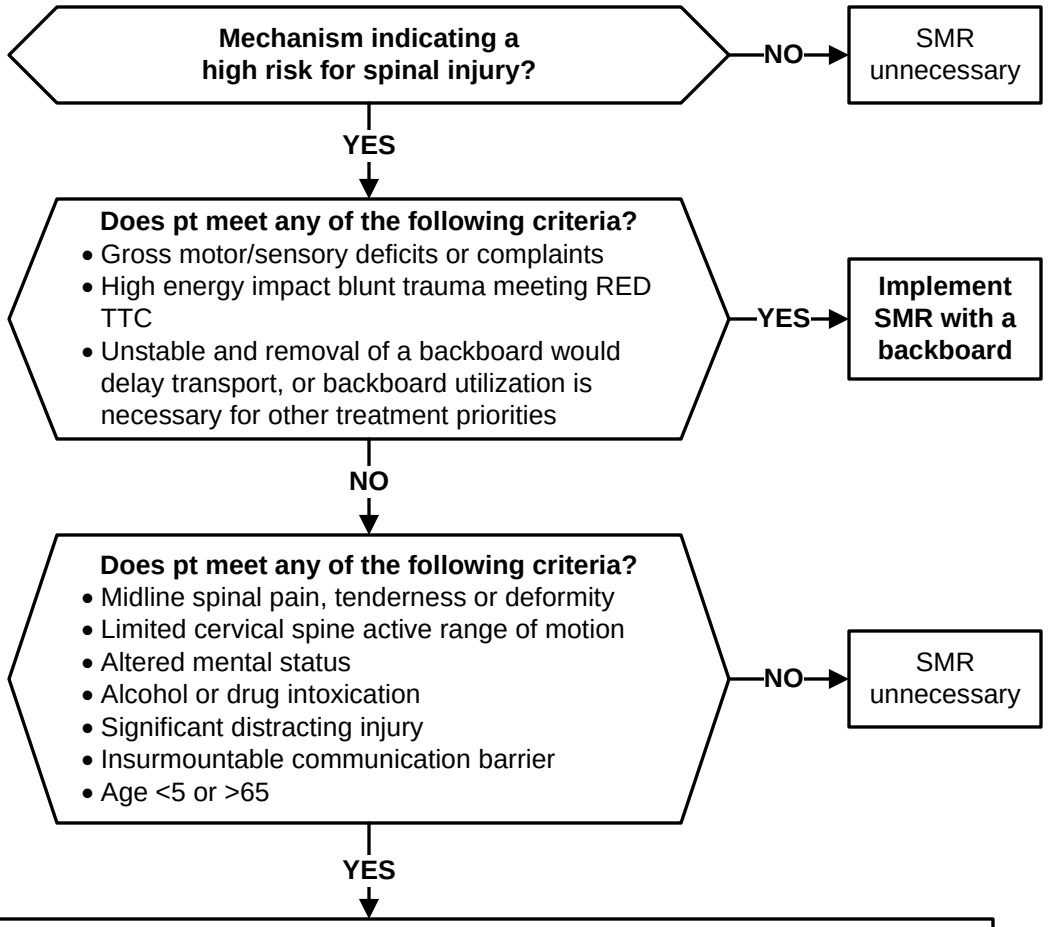
NO → Pelvic binder not indicated

YES ↓

Apply pelvic binder according to manufacturer instructions

Spinal Motion Restriction (SMR)

- A backboard shall not be utilized for pts with penetrating trauma to the head, neck or torso without evidence of spinal injury
- Helmet removal guidelines:
  - For pts who meet criteria for SMR with a backboard, football helmets should only be removed if they prevent adequate SMR or under the following circumstances:
    - If the helmet and chin strap fail to hold the head securely or prevent adequate airway control.
    - If the facemask cannot be removed.
  - Football helmets should be carefully removed to allow for appropriate SMR of pts who do not meet criteria for backboard utilization.
  - All other types of helmets (bicycle, motorcycle, etc.) should be carefully removed to allow for appropriate SMR.



Implement SMR without a backboard as follows:

- Apply a cervical collar
- Allow ambulatory pts to sit on the stretcher and then lie flat (no 'standing take-down")
- If necessary, move pt from the position found to the ambulance stretcher utilizing a device such as a KED, scoop stretcher, backboard, or if necessary, by having the pt stand and pivot to the stretcher – do not permit the pt to struggle to their feet from a seated or supine position
- Once on the ambulance stretcher, remove any hard backboard device & instruct the pt to lie still
- The head of the stretcher may be elevated 20-30^0 in a position of comfort
- Secure cross stretcher straps and over-the-shoulder belts firmly
- Pts with nausea &/or vomiting may by placed in the lateral recumbent position, maintaining the head in a neutral position using manual stabilization, padding, pillows, &/or the pt's arm

Field Trauma Triage Criteria (TTC)

RED TTC (High Risk for Serious Injury)	
Injury Patterns	**Mental Status/Vital Signs**
• Penetrating injuries to head, neck, torso, &/or proximal extremities • Skull deformity, suspected skull fracture • Suspected spinal injury with new motor/sensory loss • Chest wall instability, deformity, or suspected flail chest • Suspected pelvic fracture • Suspected fracture of two or more proximal long bones in a pt of any age, or one or more proximal long bone fracture in a pt ≤14 or ≥65 years of age • Suspected open proximal long bone fracture • Crushed, degloved, mangled, or pulseless extremity • Amputation proximal to wrist or ankle • Continued, uncontrolled bleeding despite EMS hemorrhage control measures	**MENTAL STATUS** • **<65 years of age:** ○ GCS ≤13 • **≥65 years of age:** ○ GCS <15 (or decreased from baseline) with evidence/suspicion of a head strike **RESPIRATORY STATUS** • **All pt ages:** ○ RR <10 or >29 breaths/min ○ Resp. distress or need for resp. support ○ Room-air SpO_2 <90% **CIRCULATORY STATUS** **0-9 years of age:** • SBP <70mm Hg + (2 x age years) **10-64 years of age:** • SBP <90 mmHg **OR** HR>SBP **≥65 years of age:** • SBP <100 mmHG **OR** HR>SBP

YELLOW TTC (Moderate Risk for Serious Injury)	
Mechanism of Injury	**EMS Judgement**
• High-Risk Auto Crash ○ Partial or complete ejection ○ Significant intrusion (including roof) - >12 inches occupant site; or - >18 inches any site; or - Need for extrication for entrapped pt ○ Death in passenger compartment ○ Child (0-9 years of age) unrestrained or in unsecured child safety seat ○ Vehicle telemetry data consistent with severe injury • Rider separated from transport vehicle with significant impact (motorcycle, ATV, horse, etc.) • Pedestrian/bicycle rider thrown, run over, or with significant impact • Fall from height >10 feet (all ages)	EMS personnel should consider the following risk factors, and contact the closest trauma center or base/modified base hospital for destination consultation (see page 1), if transport to a trauma center is believed to be in the pt's best interest: • Low-level falls in young children (≤5 years of age) or older adults (≥65 years of age) with significant head impact • Anticoagulant use • Suspicion of child abuse • Special, high-resource healthcare needs • Pregnancy >20 weeks • Burns in conjunction with trauma

Sierra – Sacramento Valley EMS Agency Treatment Protocol	T-2
Tension Pneumothorax	
Approval: Troy M. Falck, MD – Medical Director	Effective: 12/01/2021
Approval: Victoria Pinette – Executive Director	Next Review: 09/2024

BLS

- Assess respiratory status, manage airway and assist ventilations as appropriate
- High flow O_2

ALS

Suspected tension pneumothorax with absent or diminished breath sounds and at least one of the following:

- Combined hypotension (SBP <90) and SpO2 <94%
- Penetrating injury to the thorax

OR

Traumatic cardiac arrest with suspected tension pneumothorax

NO → Monitor & reassess

YES

Perform Needle Thoracostomy on the affected side(s) as follows:

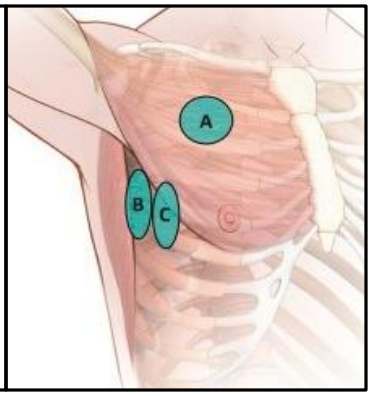
- Use a minimum 14g x 3.25" catheter specifically designed for needle decompression
- Attach an empty 10 mL syringe to the catheter prior to insertion to allow for better grip when puncturing the chest wall
- Insert needle with syringe attached at a 90^0 angle, just over the superior border of the rib, and advance until air is freely aspirated
- If using a 3.25" length catheter, advance catheter over the needle until catheter hub rests against the skin
- Remove syringe and needle from catheter, attach a stopcock or one-way valve and adequately secure
- Recheck breath sounds
- Two (2) attempts allowed on affected side(s) without base/modified base hospital contact
- Continuously monitor & reassess

Approved Needle Thoracostomy Sites

A Mid-clavicular line in the 2nd intercostal space
B Mid-axillary line in the 4th or 5th intercostal space*
C Anterior axillary line in the 5th intercostal space*

*Above the anatomic nipple line

Note: If an initial attempt at one approved site is unsuccessful, consider utilizing an alternate approved site



Sierra – Sacramento Valley EMS Agency Treatment Protocol	T-3
Suspected Moderate/Severe Traumatic Brain Injury (TBI)	
Approval: Troy M. Falck, MD – Medical Director	Effective: 06/01/2024
Approval: John Poland – Executive Director	Next Review: 01/2027

Prehospital Identification of Moderate/Severe TBI

- Any pt with a mechanism of injury consistent with a potential for a brain injury, and one or more of the following:
  - <65 years of age with a GCS ≤13, or ≥65years of age with a GCS <15 (or decrease from baseline)
  - Post-traumatic seizures
  - Multi-system trauma requiring advanced airway placement

For any patient with a suspected moderate/severe TBI, avoid/treat the three TBI "H-Bombs":
1) **H**yperventilation, 2) **H**ypoxia, 3) **H**ypotension

BLS

- Assess V/S, including continuous SpO_2 monitoring and pupil exam: Reassess V/S every 3-5 min if possible
- High-flow O_2 (regardless of SpO_2 reading)
- If continued hypoxia (SpO_2 <94%) or inadequate ventilatory effort, proceed through the following in a stepwise manner
  - Reposition airway
  - Initiate positive pressure ventilation with appropriate airway adjunct if necessary (use of a pressure-controlled BVM &/or ventilation rate timer is recommended if available)
- Avoid hyperventilation (ventilate at a rate of 10 breaths/min)
- Maintain normothermia
- Consider the concurrent need for appropriate immobilization/spinal motion restriction

ALS

- Continuous cardiac & $EtCO_2$ monitoring
- IV/IO NS TKO: For SBP <110 bolus 1000 mL N/S, then titrate additional fluids to maintain SBP ≥110
- Check blood glucose

Blood glucose ≤60 mg/dl?

YES

Dextrose 10%
- 5 ml/kg (0.5 gm/kg) IV/IO
- Max: 100 mL (10 gm)

OR

Glucagon
- <24 kg: 0.5 mg IM
- ≥24 kg: 1 mg IM

NO

For persistent hypoxia &/or inadequate ventilatory effort:
- Supraglottic airway or endotracheal intubation
- Target EtCO2: 35-39 mmHg

- Transport to appropriate destination & notify receiving facility of a "Trauma Alert" as soon as possible (if applicable)
- Monitor & reassess

Approval: Troy M. Falck, MD – Medical Director	Effective: 06/01/2024
Approval: John Poland – Executive Director	Next Review: 04/2027

Approved Commercial Tourniquet Devices:

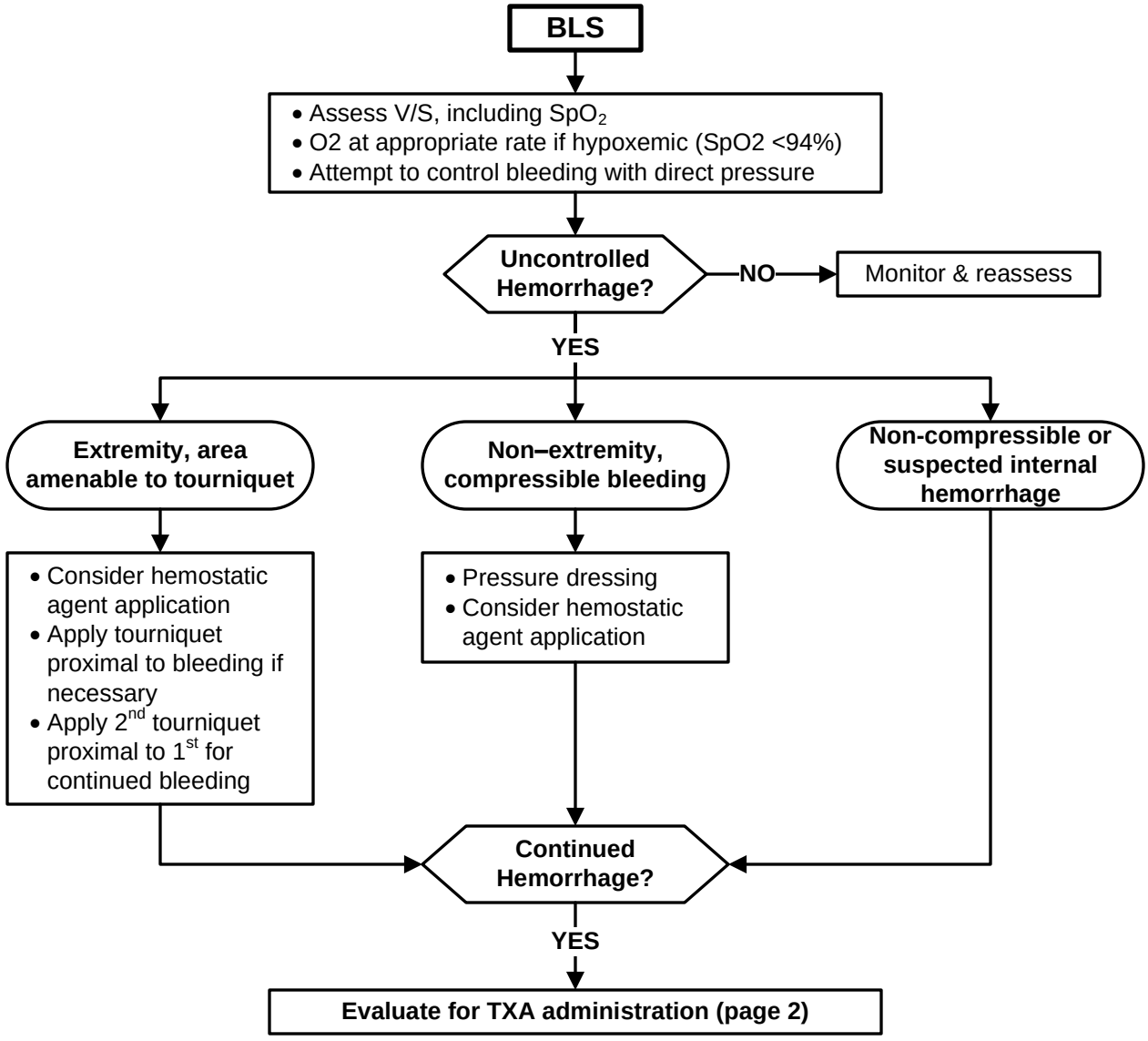
- Combat Application Tourniquet
- Emergency and Military Tourniquet
- Mechanical Advantage Tourniquet
- SAM XT Extremity Tourniquet
- Special Ops. Tactical Tourniquet
- RECON Medical Tourniquet

Tourniquet Utilization Notes:

- Tourniquets applied by lay rescuers or other responders shall be evaluated for appropriateness and may be adjusted or removed if necessary – improvised tourniquets should be removed by prehospital personnel.
- If application is indicated and appropriate, a commercial tourniquet should not be loosened or removed by prehospital personnel unless time to definitive care will be greatly delayed (>2 hrs).

Approved Hemostatic Agents:

- QuikClot EMS 4x4 & Combat Gauze
- HemCon ChitoGauze XR PRO
- HemCon ChitoGauze XR2 PRO
- HemCon ChitoGauze OTC
- HemCon Bandage PRO
- HemCon OneStop Bandage



Tranexamic Acid (TXA) Administration

TXA Administration Notes:

- Routes other than IV/IO (e.g., nebulized, topical) may be considered **(with base/modified base hospital order only)** for bleeding from epistaxis, lacerations, or oral trauma.

ALS

TXA INCLUSION CRITERIA

Does pt meet the following inclusion criteria?

- Blunt or penetrating traumatic injury with signs/symptoms of hemorrhagic shock: including SBP <90 or <100 in pts ≥65 yo

OR

- Significant hemorrhage (either of the following):
  - Significant blood loss with HR >120
  - Hemorrhage not controlled by direct pressure, hemostatic agents, or commercial tourniquet application

NO → Monitor & reassess

YES

TXA EXCLUSION CRITERIA

Does pt. meet any of the following exclusion criteria?

- <15 yo
- Time since injury >3 hrs
- Isolated traumatic brain injury
- Thromboembolic event (i.e., stroke, MI, PE) in past 24 hrs
- Traumatic arrest with >5 mins of CPR without ROSC
- Hypotension secondary to suspected cervical cord injury with motor deficit or spinal shock

YES → Monitor & reassess

NO

BASE/MODIFIED BASE HOSPITAL ORDER ONLY

Tranexamic Acid (TXA) IV/IO

- Mix 1gm TXA in 100mL D_5W or NS and infuse over 10 mins

Sierra – Sacramento Valley EMS Agency Treatment Protocol	T-5
Burns	
Approval: Troy M. Falck, MD – Medical Director	Effective: 06/01/2024
Approval: John Poland – Executive Director	Next Review: 01/2027

Information Needed

- Type/source of burn: chemical, electrical, thermal, steam
- Complicating factors: concomitant trauma, exposure in enclosed space, total time of exposure, drug or alcohol use, smoke or toxic fumes, delayed resuscitation, compartment syndrome of extremities, chest, or abdomen.

Objective Findings

- Evidence of inhalation injury or toxic exposure (i.e., carbonaceous sputum, hoarseness/stridor, or singed nasal hairs).
- Extent of burn: full or partial thickness and body surface area (BSA) affected.
- Entrance or exit wounds for electrical or lightning strike or trauma from an explosion, electrical shock or fall.

Transport Notes

- All pts suffering from an electrical burn shall be transported for evaluation.
- Contact the closest base/modified base hospital for destination consultation on pts with any of the following:
  - Full thickness (3^o) burns of the hands, feet, face, perineum, or >2% of any BSA
  - Partial thickness (2^o) burns >9% of BSA
  - Significant electrical or chemical burns

BLS

- O_2 at appropriate rate, consider BVM early for altered LOC or respiratory distress
- Assess V/S, including SpO_2
- Remove wet dressings and cover with dry, clean dressings

ALS

- Cardiac monitor
- Consider $EtCO_2$ monitoring/trending
- Consider early advanced airway if evidence of inhalation injury or compromised respiratory effort
  - ⓘ The likelihood of airway compromise is increased in burn pts receiving IV/IO fluid administration
  - ⓘ Airway compromise/occlusion is likely for pts with burns >25-30% BSA, regardless of location of burns

IV/IO – NS/LR TKO (in non-burned extremity)

- For 2^o & 3^o burns >9% BSA, facial burns, or if IV/IO pain management is necessary
- Administer 1000 mL fluid bolus for adult pts or 20 mL/kg fluid bolus for pediatric pts with 2^o or 3^o burns >9% BSA or signs of hypovolemia (note increased airway compromise warning above & closely monitor)

Albuterol (if wheezes are present)

- 5 mg in 6 mL NS via HHN, mask or BVM

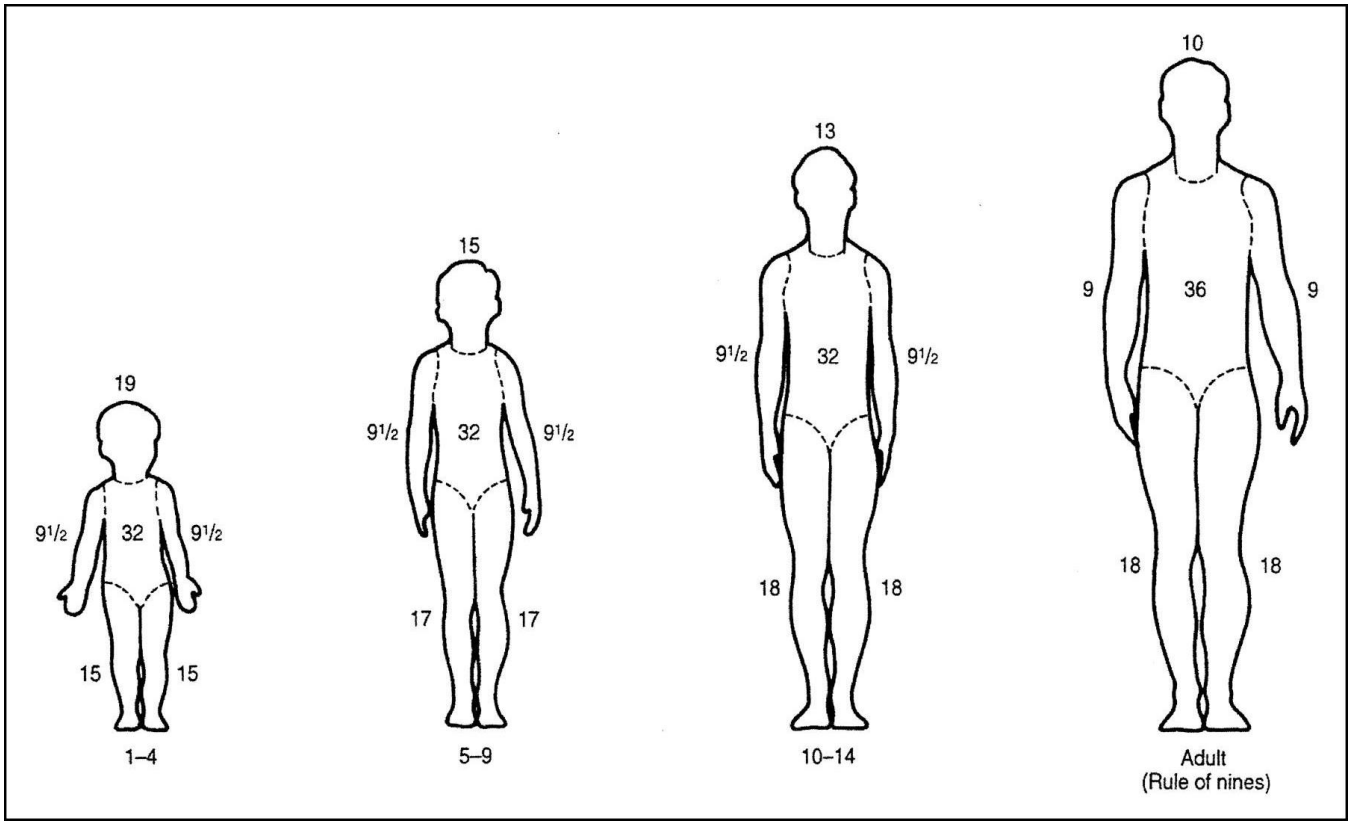
Does pt meet trauma triage criteria?

YES → Destination Per General Trauma Management Protocol (T-1)

Pain management necessary?

YES → Go to Pain Management Protocol (M-8/M-8P)

Burn Chart


19
9½
32
9½
15
15
1–4
15
9½
32
9½
17
17
5–9
13
9½
32
9½
18
18
10–14
10
9
36
9
18
18
Adult
(Rule of nines)

Approval: Troy M. Falck, MD – Medical Director	Effective: 06/01/2024
Approval: John Poland – Executive Director	Next Review: 01/2027

- Assess etiology – if there is suspicion that a medical event caused the traumatic arrest, treat per the applicable Non-Traumatic Pulseless Arrest Protocol (C-1 or C-1P).
- Epinephrine is likely not beneficial and may be harmful in traumatic pulseless arrest.
- Utilize mechanical chest compression devices in accordance with manufacturer indications/contraindications. If a mechanical chest compression device is used, transport shall not be significantly delayed for application of the device.
- Biphasic manual defibrillation detail: follow manufacturer's recommendations, if unknown, start at 200 J (subsequent doses should be equivalent or higher).
- CPR need not be initiated, and may be discontinued, for patients who meet S-SV EMS Obvious Death or Probable Death Criteria (Refer to Policy 820).

BLS

- High-Quality CPR (with BVM &100% O_2) – apply AED as soon as possible
- Deliver ⚡ **AED SHOCK** ⚡, if indicated by AED, & immediately resume high-quality CPR
- Hemorrhage control as appropriate
- Consider Spinal Motion Restriction (SMR) with a backboard for the following:
  - CPR
  - Blunt mechanism indicating a high risk for spinal injury

ALS

- Initiate rapid transport – ALS treatment/monitoring should be performed during transport
- Bilateral needle thoracostomy if chest or multi-system trauma is suspected
- Cardiac monitor
- Continue CPR followed by ⚡ **DEFIBRILLATION** ⚡ every 2 mins for continued/relapsed shockable rhythm (VF/VT)
- IV/IO NS:
  - **Adult pts:** Administer 1 L fluid bolus
  - **Pediatric pts:** Administer 20 mL/kg fluid bolus

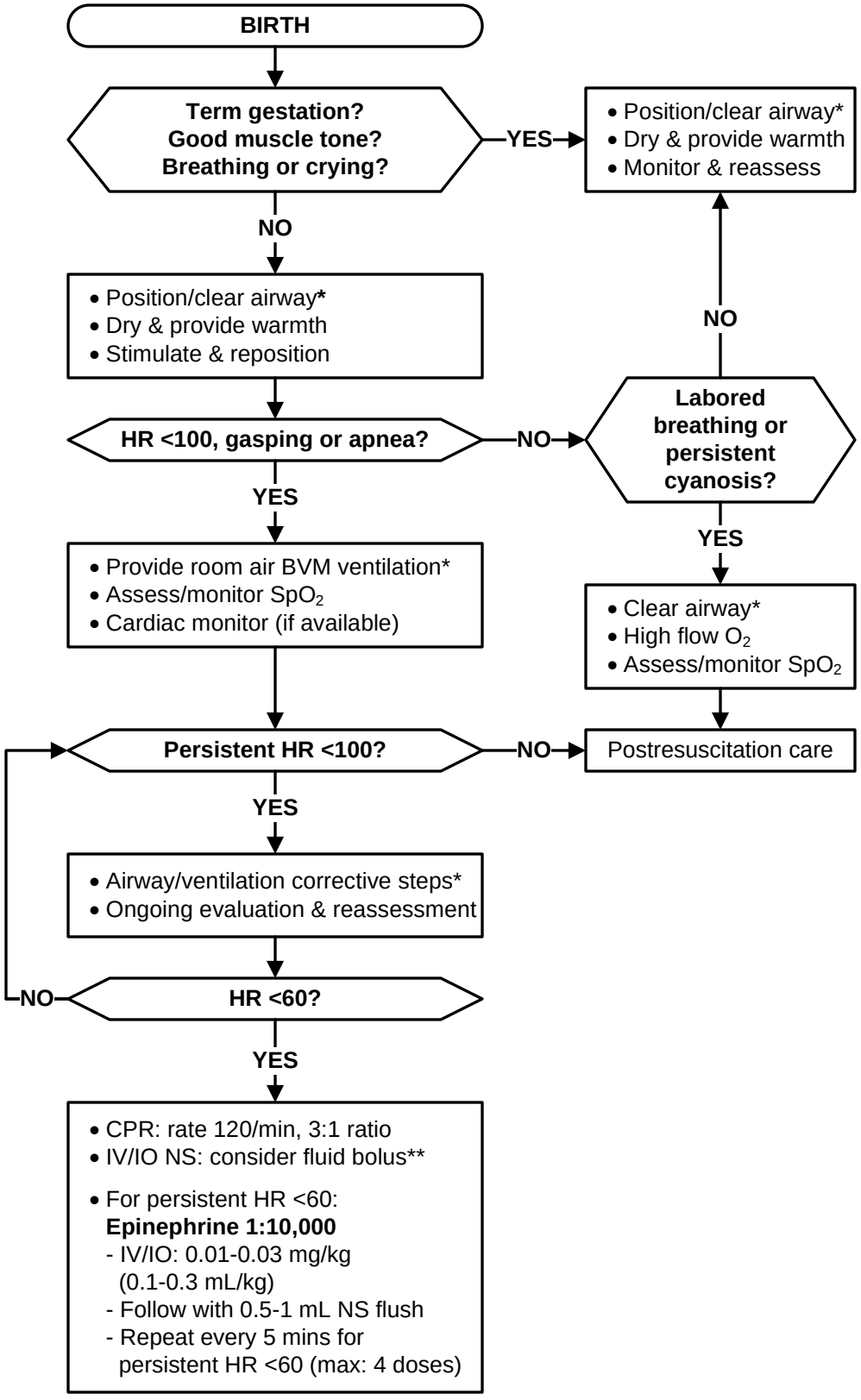
Return of Spontaneous Circulation (ROSC)

- Manage airway as needed, optimize ventilation & oxygenation
  - O_2 at appropriate rate to maintain SpO_2 ≥94% (do not hyperventilate)
- Assess V/S, including SpO_2 – reassess V/S every 3-5 mins if possible
- Continuous $ETCO_2$ monitoring – goal 35-45 mmHg
- Titrate fluid boluses:
  - **Adult pts:** Titrate to SBP of ≥90 for pts <65 years of age, or ≥100 for pts ≥65 years of age
  - **Pediatric pts:** Titrate to age appropriate SBP (max: 60 mL/kg)
- Monitor for reoccurrence of pulseless arrest

S-SV EMS Pediatric Treatment Protocols

- **Definitions:**
  - Neonate: An infant during the first 28 days of life.
  - Pediatric: All patients >28 days old up to and including 14 years of age.
- **Principles:**
  - Pediatric protocols shall be utilized for any patient up to and including 14 years of age. Applicable adult protocols (General Trauma Management, Burns, etc.) may be utilized when there is not a pediatric protocol applicable to the patient's complaint/condition.
  - A length-based pediatric resuscitation tape shall be utilized for determining sizes of equipment, defibrillation/cardioversion doses and medication doses in the prehospital setting.
- **Normal Vital Signs and Definition of Hypotension**

Age	Normal Pulse Rate	Normal Resp. Rate	Normal SBP	Hypotension Definition
Neonate	100-160	30-50	60-80	SBP <60
Infant (1-12 months)	80-160	30-50	70-100	SBP <70
Toddler (1-2 years)	80-130	24-40	80-110	SBP <70 + (age in years x 2)
Preschooler (3-5 years)	80-120	20-30	90-110	
School-age child (6-9 years)	75-115	20-30	100-120	
Preadolescent (10-12 years)	70-110	20-24	100-120	SBP <90
Adolescent (13-14 years)	65-110	16-22	110-130	SBP <90



***Airway/Ventilation**

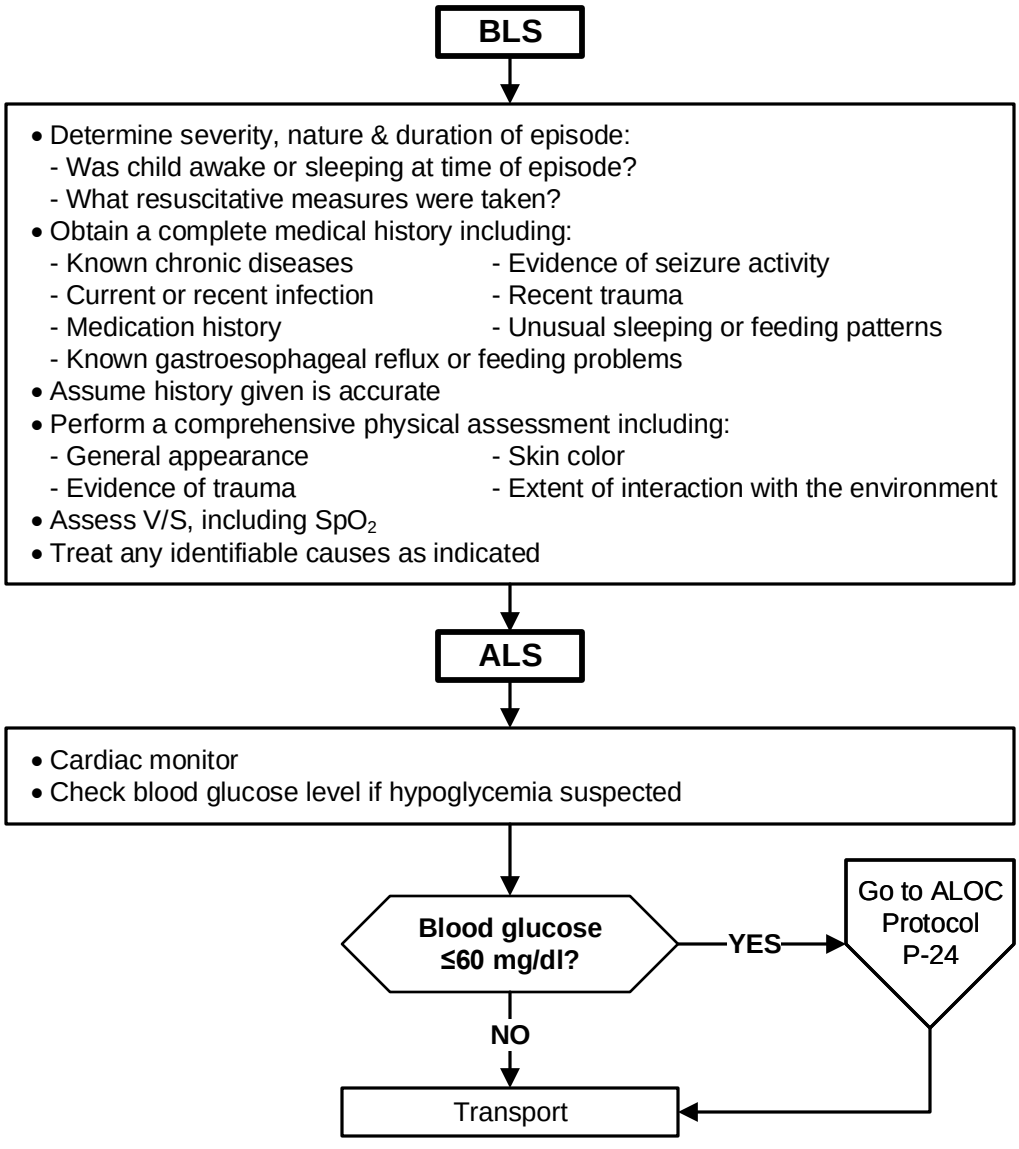
- Position in a "sniffing" position to open the airway & clear secretions with a bulb syringe if necessary.
- If no improvement, & chest is not moving with BVM ventilation, the trachea may be obstructed by thick secretions/meconium. Use a bulb syringe, or suction catheter if necessary, to clear the nose, mouth & oropharynx. A laryngoscope may be used to assist in visualization of the oropharynx.
- Convert from room air to high flow O_2 for persistent bradycardia &/or cyanosis.
- If HR persistently <60, consider hypovolemia &/or pneumothorax.
- Target SpO_2 after birth:
  - 1 min: 60% - 65%
  - 2 min: 65% - 70%
  - 3 min: 70% - 75%
  - 4 min: 75% - 80%
  - 5 min: 80% - 85%
  - 10 min: 85% - 95%

****Fluid Bolus**

- Contact the base/ modified base hospital for specific fluid bolus volume direction.

Sierra – Sacramento Valley EMS Agency Treatment Protocol	P-3
Brief Resolved Unexplained Event (BRUE)	
Approval: Troy M. Falck, MD – Medical Director	Effective: 12/01/2020
Approval: Victoria Pinette – Executive Director	Next Review: 11/2023

- Brief resolved unexplained event (BRUE) is an event occurring in an infant younger than one (1) year of age when the observer reports a sudden, brief (lasting <1 min, but typically <20-30 secs), and now resolved episode of any of the following:
  - Cyanosis or pallor
  - Marked change in tone (hyper- or hypotonia)
  - Absent, decreased, or irregular breathing
  - Altered level of responsiveness
- BRUE should be suspected when there is no explanation for a qualifying event after conducting an appropriate history & physical examination.
- All infants ≤1 year of age with possible BRUE should be transported by EMS for further medical evaluation. If the parent/guardian refuses EMS transport, base/modified base hospital consultation is required prior to release.
- EMS personnel shall make every effort to obtain the contact information of the person who witnessed the event, & provide this information to the receiving hospital upon pt delivery.



Sierra – Sacramento Valley EMS Agency Treatment Protocol	C-1P
Pediatric Pulseless Arrest	
Approval: Troy M. Falck, MD – Medical Director	Effective: 06/01/2024
Approval: John Poland – Executive Director	Next Review: 04/2027

INFANT CPR

- Perform chest compressions with minimal interruptions (≤10 secs)
  - 1 rescuer: 2 finger compressions
  - 2 rescuer: 2 thumbs with hands encircling chest
- Rate: 100-120/min
- Depth: 1/3 diameter of the chest (approx. 1 ½")
- Compression/ventilation ratio:
  - 1 rescuer: 30:2
  - 2 rescuer: 15:2
- Perform CPR during AED/defibrillator charging & resume CPR immediately after shock

CHILD CPR

- Perform chest compressions with minimal interruptions (≤10 secs)
  - 1 or 2 hand compressions
- Rate: 100-120/min
- Depth: 1/3 diameter of the chest (approx. 2")
- Compression/ventilation ratio:
  - 1 rescuer: 30:2
  - 2 rescuer: 15:2
- Perform CPR during AED/defibrillator charging & resume CPR immediately after shock

DEFIBRILLATION & OVERALL MANAGEMENT

- Analyze rhythm & check pulse after every 2 min CPR cycle
- AED detail:
  - Use child pads, if available, for infants & children <8 years old
  - If child pads not available, use adult pads, make sure pads do not touch each other or overlap
  - Adult pads deliver a higher shock dose, but a higher shock dose is preferred to no shock
- Manual defibrillation detail:
  - Initial dose: 2 J/kg, subsequent doses: 4 J/kg
- Movement of pt may interrupt CPR or prevent adequate depth and rate of compressions
- Consider resuscitation on scene up to 20 mins

ADVANCED AIRWAY MANAGEMENT

- Consider/establish advanced airway (ALS only) at appropriate time during resuscitation
- Do not interrupt chest compressions to establish an advanced airway
- Waveform capnography shall be used on all pts with an advanced airway in place
  - An abrupt increase in $PETCO_2$ is indicative of ROSC
  - Persistently low $PETCO_2$ levels (<10 mmHG) suggest ROSC is unlikely

TREAT REVERSIBLE CAUSES

- **H**ypovolemia
- **H**ypoxia
- **H**ydrogen Ion (acidosis)
- **H**ypo-/hyperkalemia
- **H**ypothermia
- **T**amponade, cardiac
- **T**ension pneumothorax
- **T**hrombosis, pulmonary
- **T**hrombosis, cardiac
- **T**oxins

ⓘ Refer to Hypothermia & Avalanche/Snow Immersion Suffocation Resuscitation Protocol (E-2) or Traumatic Pulseless Arrest Protocol (T-6) as appropriate

ⓘ Contact the base/modified base hospital for consultation & orders as appropriate

ⓘ Consider early transport of pts who have reversible causes that cannot be adequately treated in the prehospital setting

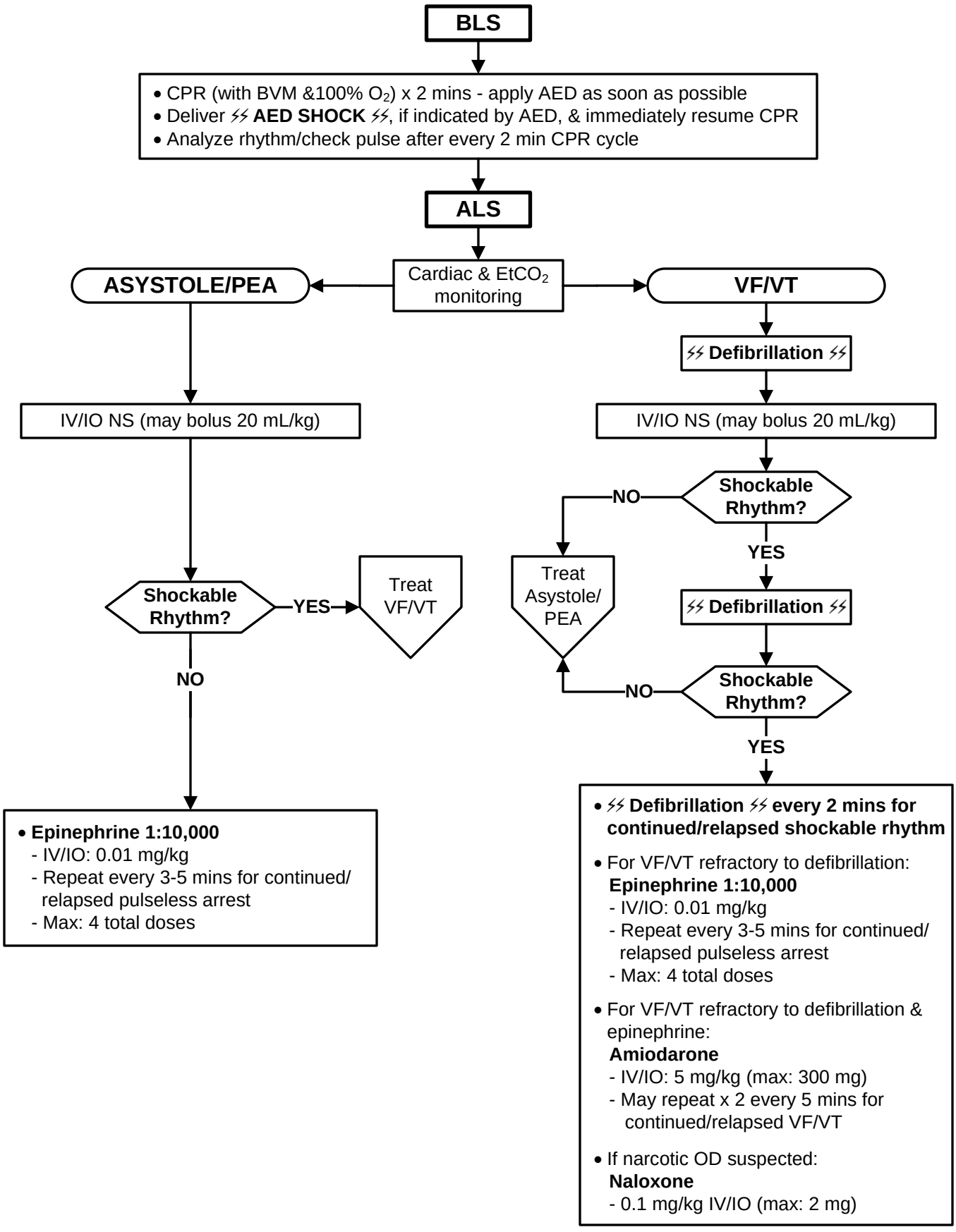
TERMINATION OF RESUSCITATION

Base/Modified Base Hospital Physician Order Only

- If non-shockable rhythm persists, despite appropriate, aggressive ALS interventions for 30 mins (or if $EtCO_2$ is <10 mm Hg after 20 mins in a pt with an advanced airway), consider discontinuation of CPR

SEE PAGE 2 FOR TREATMENT ALGORITHM

Pediatric Pulseless Arrest



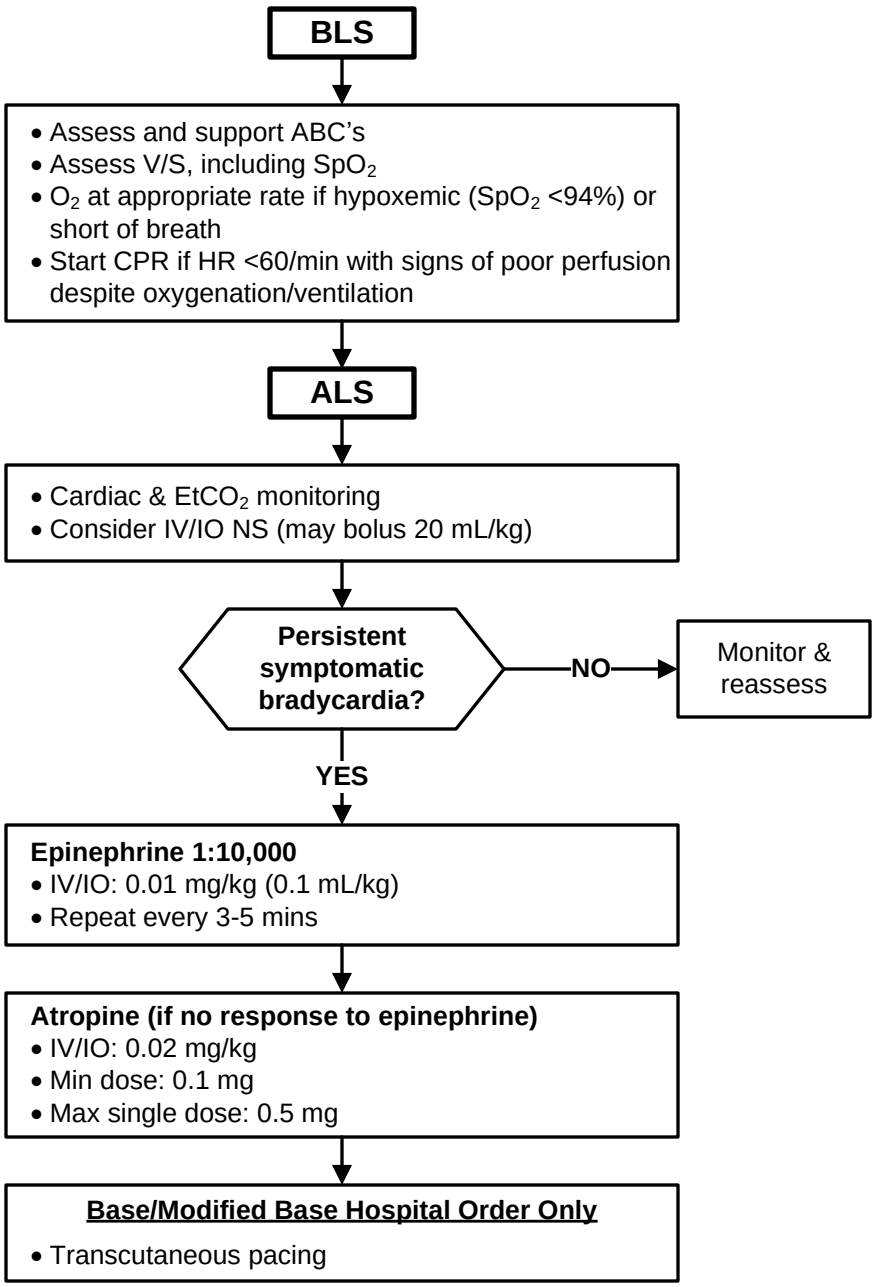
Sierra – Sacramento Valley EMS Agency Treatment Protocol	C-3P
Pediatric Bradycardia With Pulses	
Approval: Troy M. Falck, MD – Medical Director	Effective: 06/01/2024
Approval: John Poland – Executive Director	Next Review: 04/2027

Search For Possible Contributing Factors

- **H**ypovolemia
- **H**ypoxia
- **H**ydrogen Ion (Acidosis)
- **H**ypo-/hyperkalemia
- **H**ypothermia
- **T**amponade, cardiac
- **T**ension pneumo
- **T**hrombosis, pulmonary
- **T**hrombosis, cardiac
- **T**oxins

Signs of Cardiopulmonary Compromise

- Acutely altered mental status
- Hypotension
- Signs of shock



Signs of Cardiopulmonary Compromise

- Acutely altered mental status
- Hypotension
- Signs of shock

BLS

- Assess & support ABC's
- Assess V/S, including SpO_2
- O_2 at appropriate rate if hypoxemic (SpO_2 <94%) or short of breath

ALS

- Cardiac & $EtCO_2$ monitoring, 12-lead ECG at appropriate time
- Consider IV/IO NS (may bolus 20 mL/kg)

Probable Sinus Tachycardia
- P waves present & normal
- Variable R-R & constant P-R
- Infants: rate usually <220
- Children: rate usually <180

Treat underlying cause

Monitor & reassess

Probable SVT
- P waves absent or abnormal
- HR not variable
- Infants: rate usually ≥220
- Children: rate usually ≥180

Cardiopulmonary compromise?

YES → **Synchronized Cardioversion**
Base/Modified Base Hospital Order Only
- Initial dose: 0.5-1 J/kg
- Subsequent doses: 2 J/kg
- Consider sedation

NO → Vagal Maneuver

Vagal Maneuver successful?

YES → Consult with base/modified base hospital as needed

NO → **Adenosine (Base/Modified Base Hospital Order Only)**
- 1st dose: 0.1 mg/kg rapid IV/IO (max 6 mg), followed with 20 mL IV/IO NS flush

If rhythm does not convert within 1-2 min:
- 2nd dose: 0.2 mg/kg rapid IV/IO (max 12 mg), followed with 20 mL IV/IO NS flush

Probable VT

Cardiopulmonary compromise?

YES → **Synchronized Cardioversion**
Base/Modified Base Hospital Order Only
- Initial dose: 0.5-1 J/kg
- Subsequent doses: 2 J/kg
- Consider sedation

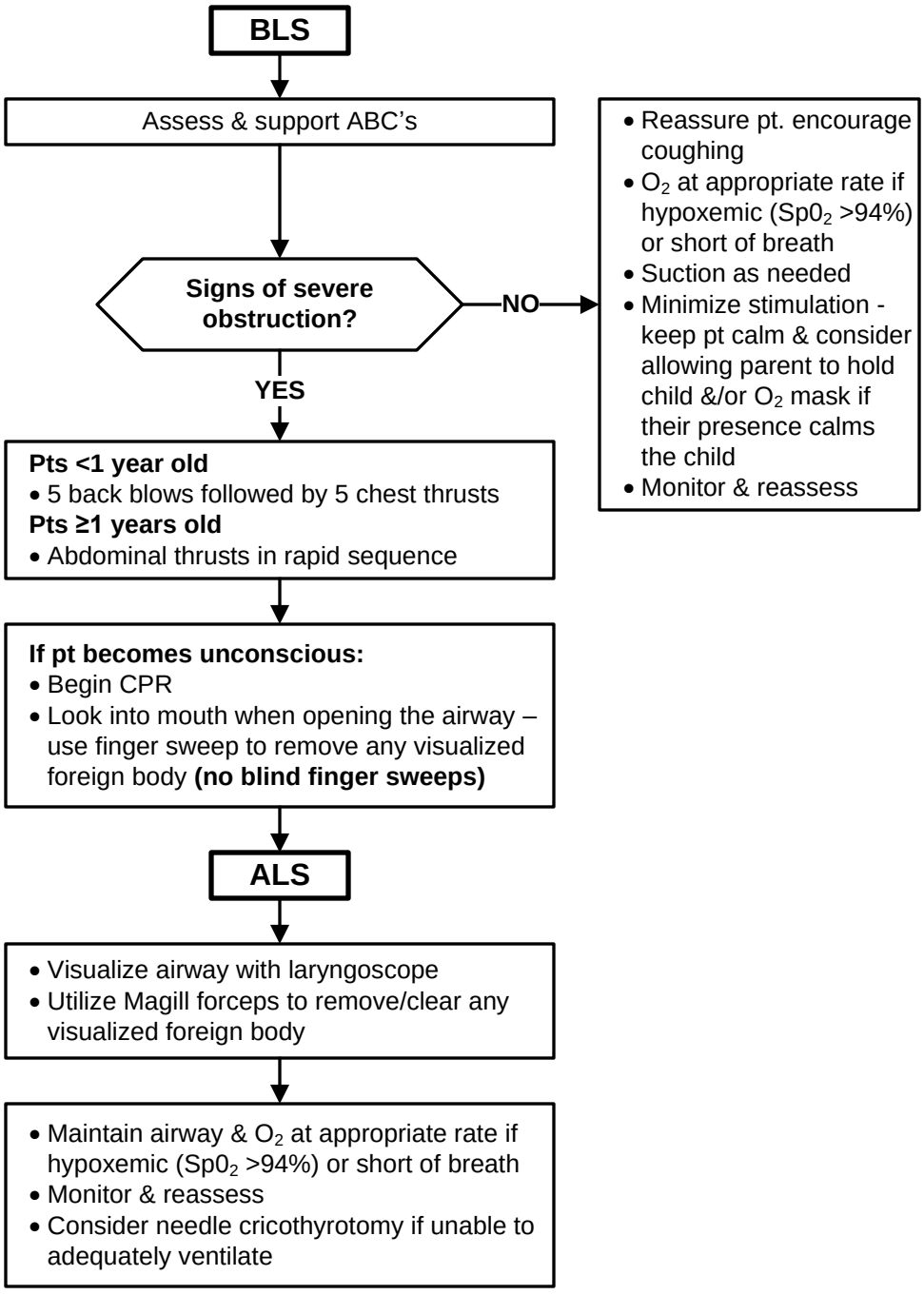
NO → Consult with base/modified base hospital as needed

Sierra – Sacramento Valley EMS Agency Treatment Protocol	R-1P
Pediatric Foreign Body Airway Obstruction (FBAO)	
Approval: Troy M. Falck, MD – Medical Director	Effective: 06/01/2024
Approval: John Poland – Executive Director	Next Review: 04/2027

- Signs/symptoms of FBAO: sudden onset of respiratory distress with coughing, gagging, stridor, or wheezing.
- Do not use tongue/jaw lift or perform blind finger sweep.
- Do not perform deep suctioning. Oropharyngeal suctioning should be performed while visualizing the FBAO.

Signs of severe obstruction:

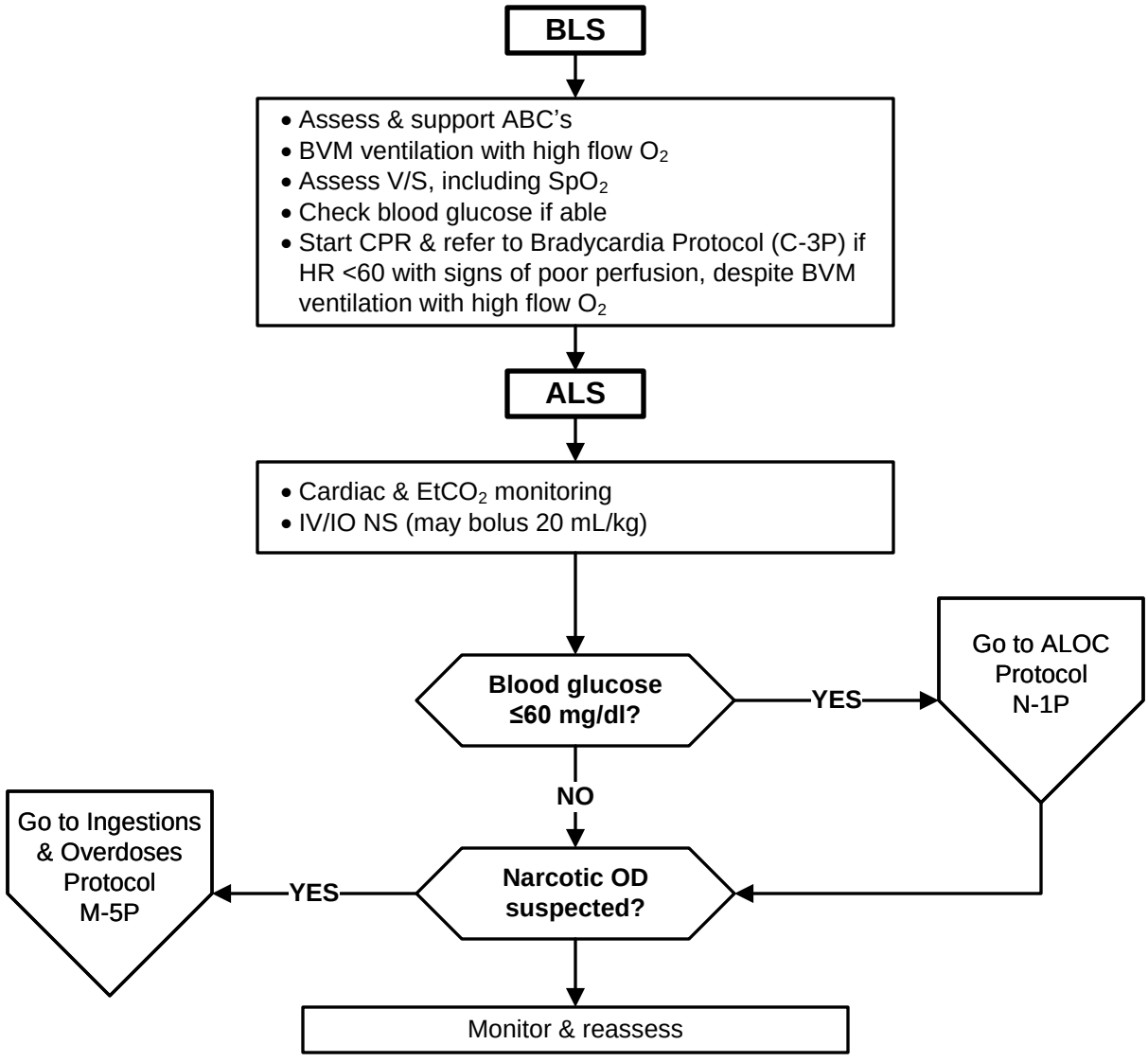
- Poor air exchange - Silent cough - Increased breathing difficulty - Inability to speak or breathe - Cyanosis



Sierra – Sacramento Valley EMS Agency Treatment Protocol	R-2P
Pediatric Respiratory Arrest	
Approval: Troy M. Falck, MD – Medical Director	Effective: 06/01/2024
Approval: John Poland – Executive Director	Next Review: 04/2027

Anticipate respiratory failure & possible respiratory arrest if any of the following are present:

- Increased respiratory rate, with signs of distress (e.g. increased effort, nasal flaring, retractions, or grunting).
- Inadequate respiratory rate, effort, or chest excursion (e.g. diminished breath sounds, gasping, and cyanosis), especially if mental status is depressed.



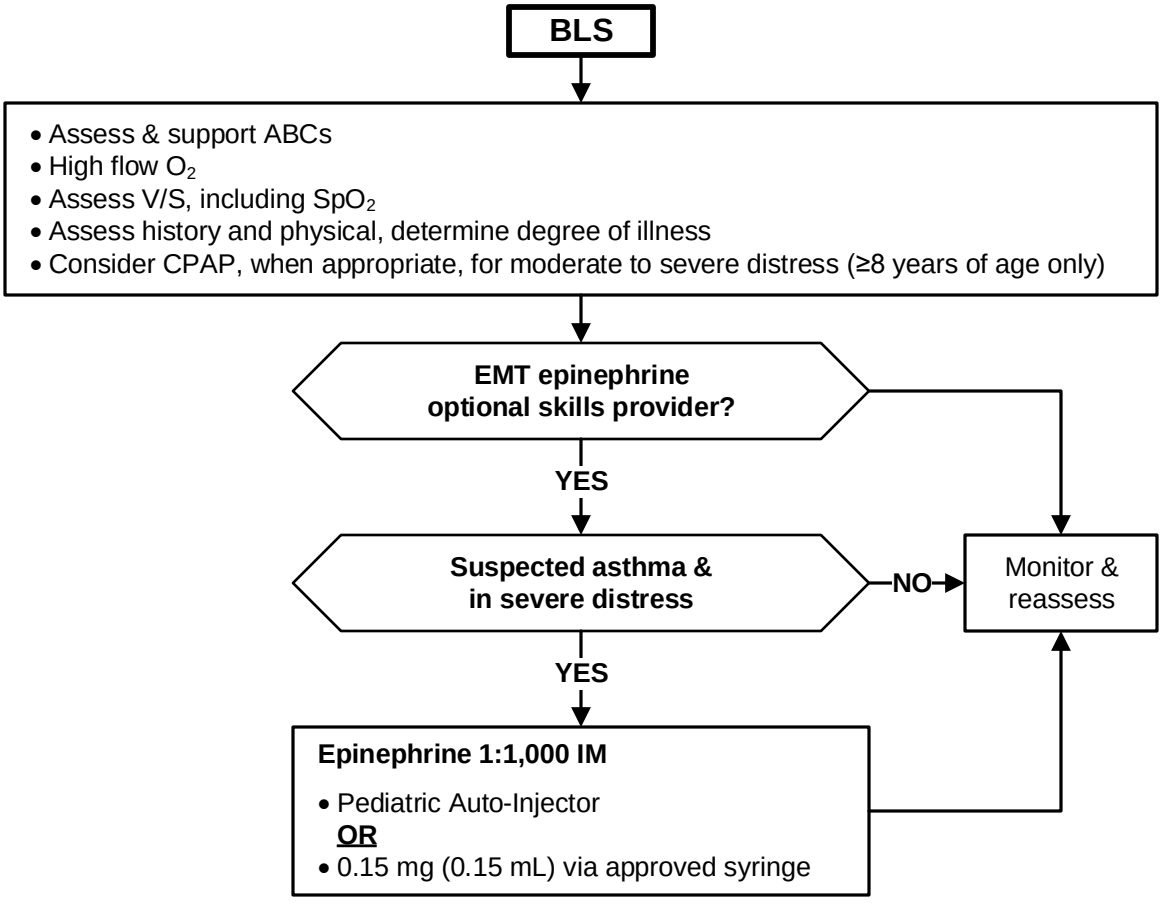
- Consider respiratory failure for pts with a history of increased work of breathing & presenting with ALOC & a slow or normal respiratory rate without retractions.
- Do not attempt to visualize the throat or insert anything into the mouth if epiglottitis suspected.

Continuous Positive Airway Pressure (CPAP) Utilization

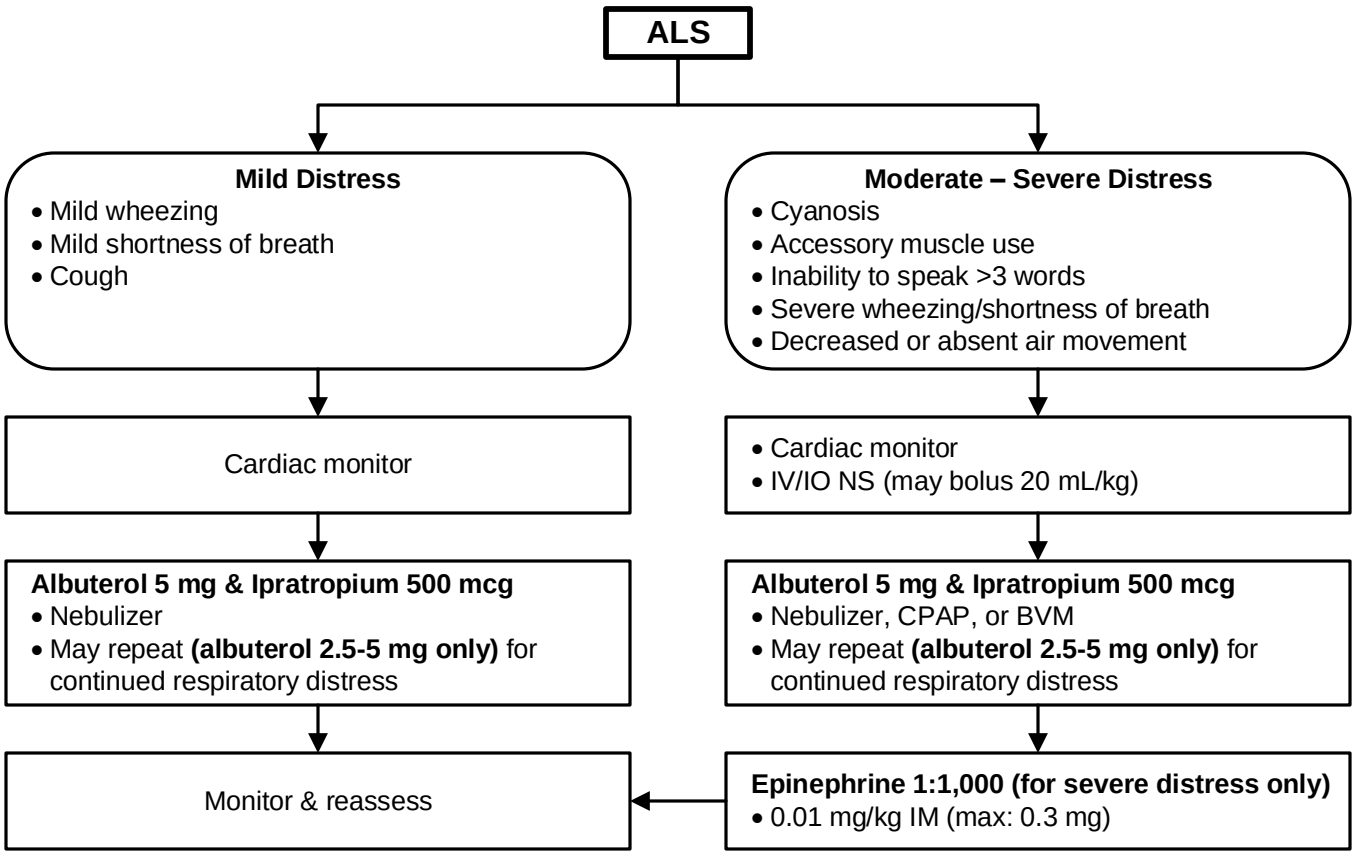
- **Indications:**
  - CHF with pulmonary edema
  - Moderate to severe respiratory distress
  - Near drowning
- **Contraindications:**
  - <8 years of age
  - Respiratory or cardiac arrest
  - Severe decreased LOC
  - Agonal respirations
  - Inability to maintain airway
  - Suspected pneumothorax
  - SBP <90
  - Major trauma, especially head injury or significant chest trauma
- **Complications:**
  - Hypotension
  - Pneumothorax
  - Corneal drying

Epinephrine Administration

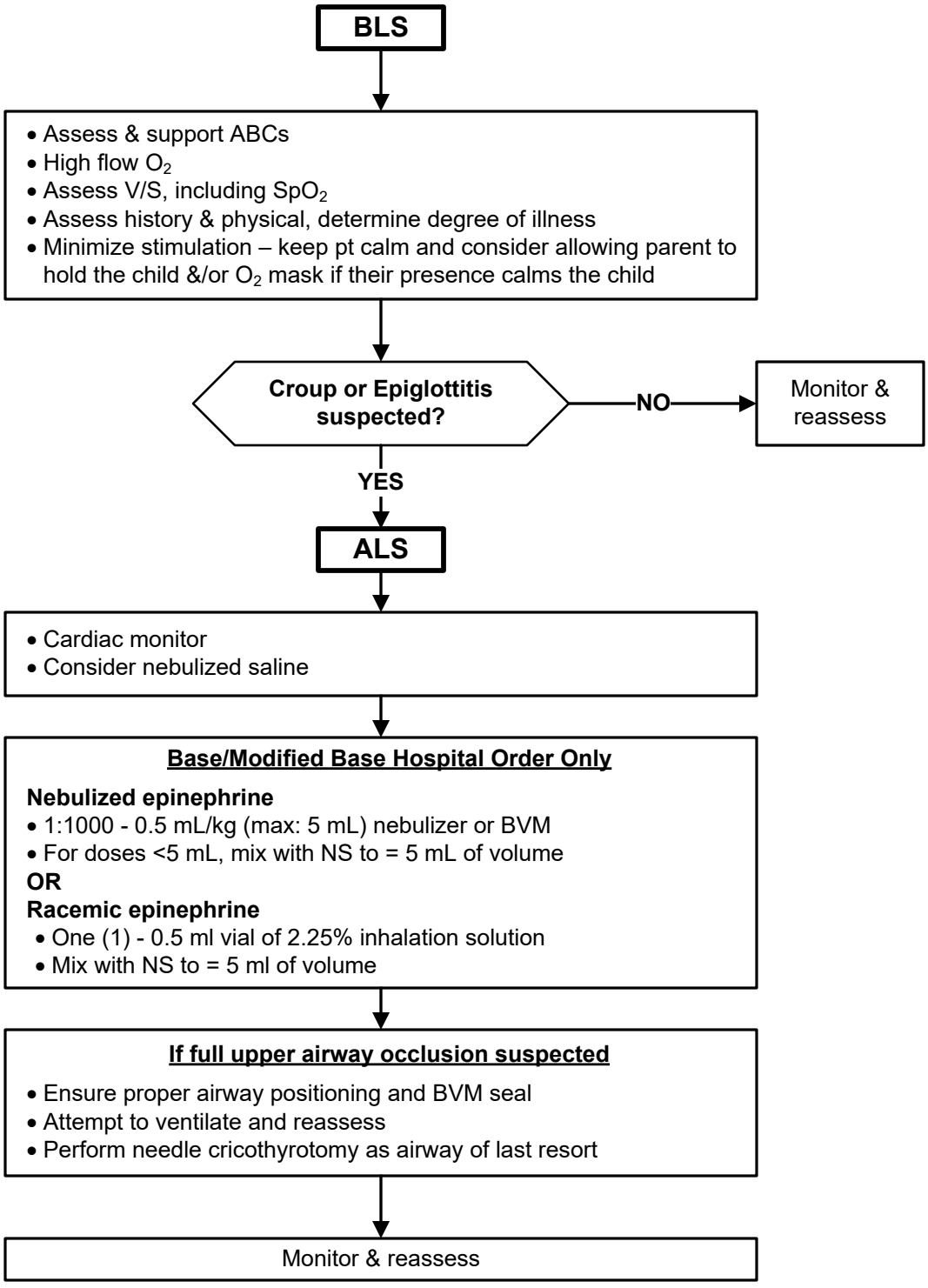
- Epinephrine is only indicated for pts with suspected asthma who are in severe distress.
- Administer Auto-Injector/IM epinephrine into the lateral thigh, midway between waist & knee.



SEE PAGE 2 FOR ALS TREATMENT

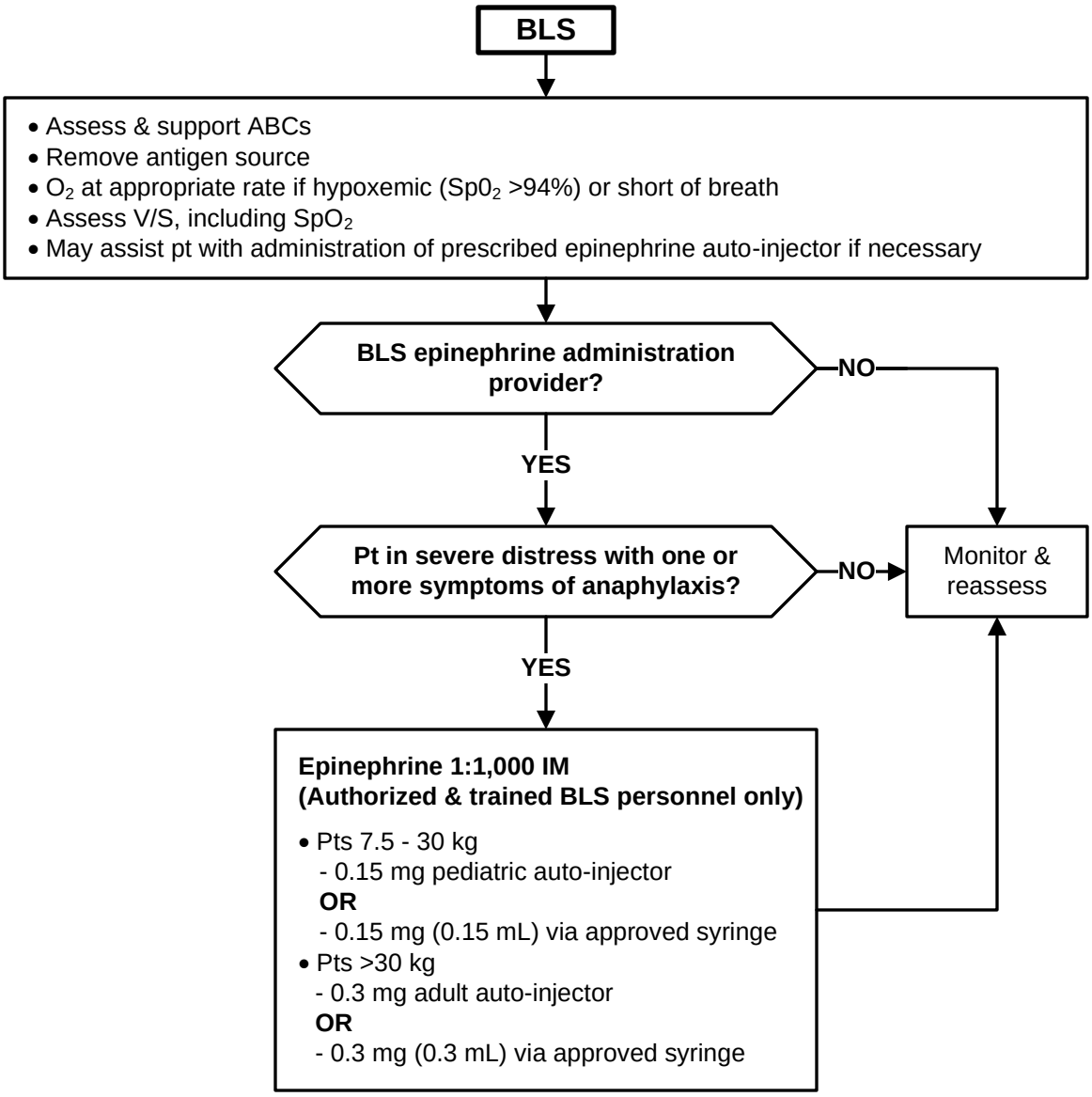

ALS
Mild Distress
• Mild wheezing
• Mild shortness of breath
• Cough
Moderate – Severe Distress
• Cyanosis
• Accessory muscle use
• Inability to speak >3 words
• Severe wheezing/shortness of breath
• Decreased or absent air movement
Cardiac monitor
• Cardiac monitor
• IV/IO NS (may bolus 20 mL/kg)
Albuterol 5 mg & Ipratropium 500 mcg
• Nebulizer
• May repeat (albuterol 2.5-5 mg only) for continued respiratory distress
Albuterol 5 mg & Ipratropium 500 mcg
• Nebulizer, CPAP, or BVM
• May repeat (albuterol 2.5-5 mg only) for continued respiratory distress
Epinephrine 1:1,000 (for severe distress only)
• 0.01 mg/kg IM (max: 0.3 mg)
Monitor & reassess

- The hallmark of upper airway obstruction (croup, epiglottitis, foreign body airway obstruction) is inspiratory stridor.
- Do not attempt to visualize the throat or insert anything into the mouth if epiglottitis is suspected.

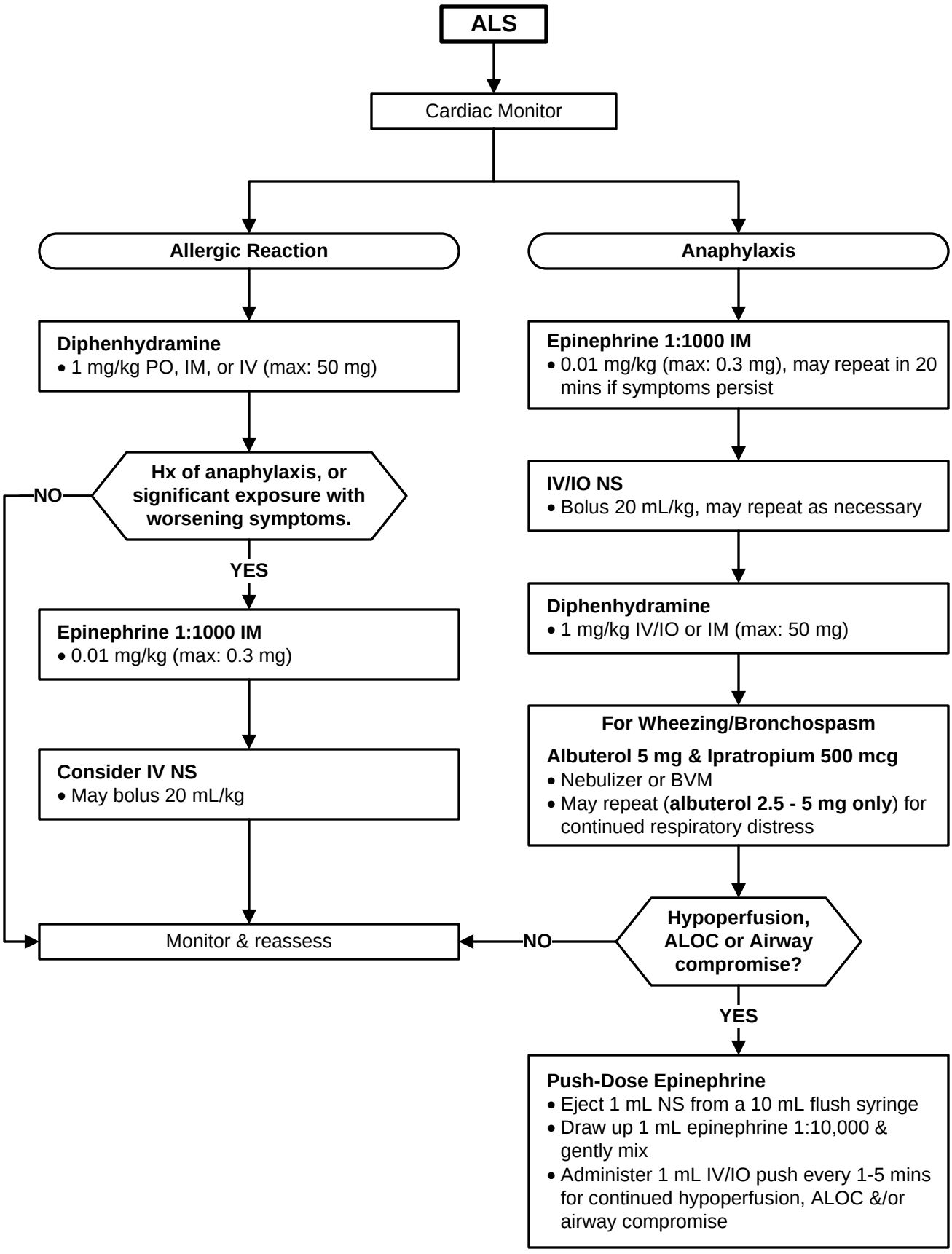


Sierra – Sacramento Valley EMS Agency Treatment Protocol	M-1P
Pediatric Allergic Reaction/Anaphylaxis	
Approval: Troy M. Falck, MD – Medical Director	Effective: 06/01/2024
Approval: John Poland – Executive Director	Next Review: 04/2027

- **Allergic reaction:** Sensitivity to an allergen causing hives, pruritus, flushing, rash, nasal congestion, watery eyes, and/or angioedema not involving the airway, and/or vomiting, diarrhea.
- **Anaphylaxis:** Severe allergic reaction with one or more of the following symptoms: abnormal appearance (agitation, restlessness, somnolence), respiratory distress, bronchospasm/wheezes/diminished breath sounds, hoarseness, stridor, edema involving the airway, diminished perfusion, loss of consciousness.
- Administer Auto-Injector/IM epinephrine into the lateral thigh, midway between waist & knee.



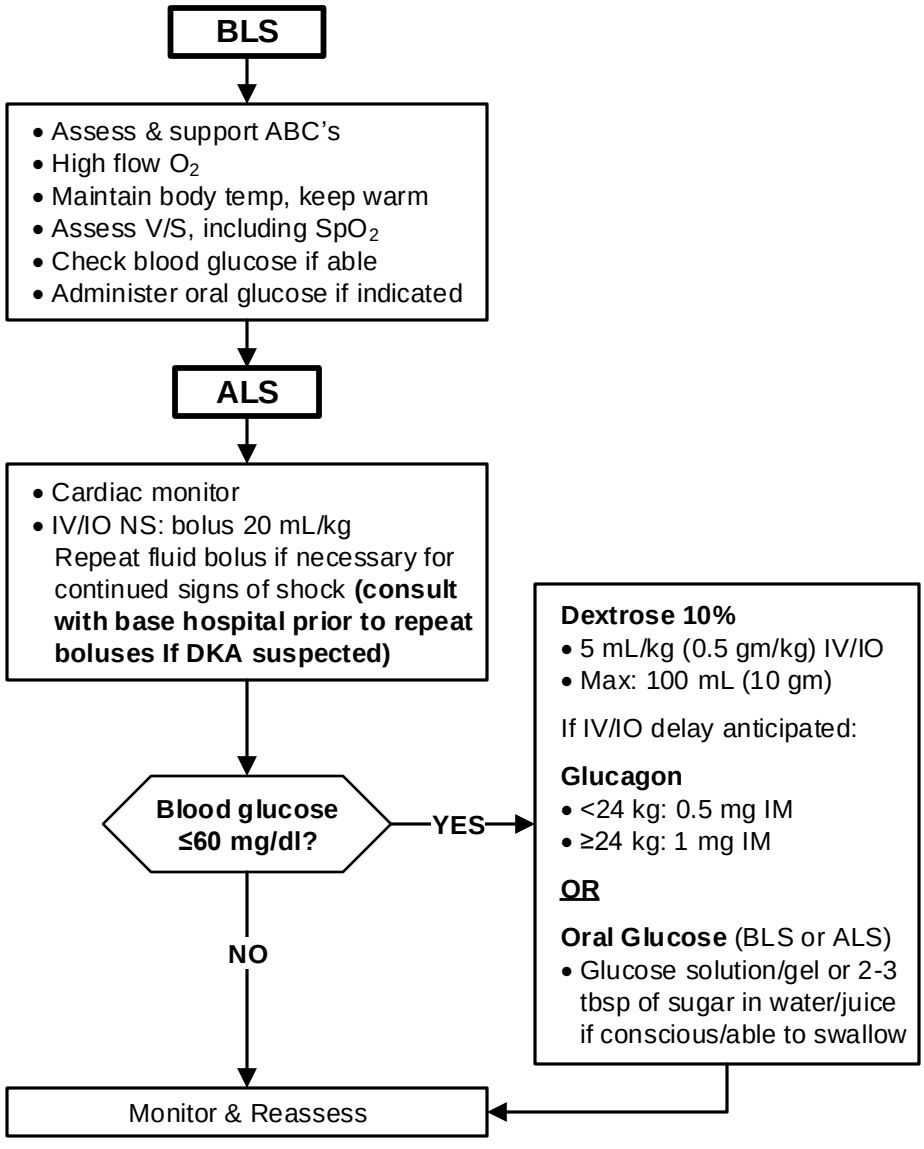
SEE PAGE 2 FOR ALS TREATMENT

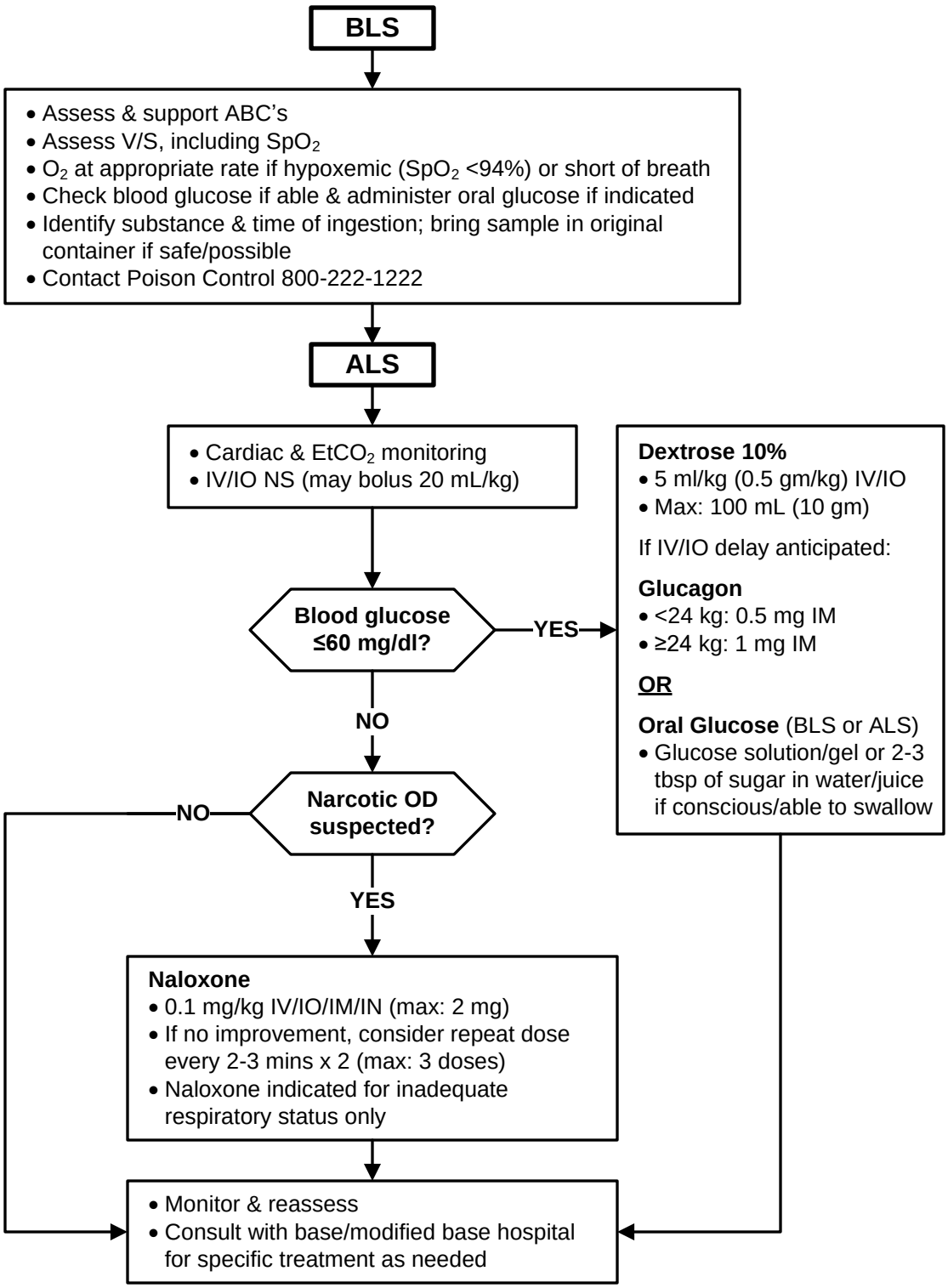

ALS
Cardiac Monitor
Allergic Reaction
Anaphylaxis
Diphenhydramine
• 1 mg/kg PO, IM, or IV (max: 50 mg)
Hx of anaphylaxis, or significant exposure with worsening symptoms.
NO
YES
Epinephrine 1:1000 IM
• 0.01 mg/kg (max: 0.3 mg)
Consider IV NS
• May bolus 20 mL/kg
Monitor & reassess
Epinephrine 1:1000 IM
• 0.01 mg/kg (max: 0.3 mg), may repeat in 20 mins if symptoms persist
IV/IO NS
• Bolus 20 mL/kg, may repeat as necessary
Diphenhydramine
• 1 mg/kg IV/IO or IM (max: 50 mg)
For Wheezing/Bronchospasm
Albuterol 5 mg & Ipratropium 500 mcg
• Nebulizer or BVM
• May repeat (albuterol 2.5 - 5 mg only) for continued respiratory distress
Hypoperfusion, ALOC or Airway compromise?
NO
YES
Push-Dose Epinephrine
• Eject 1 mL NS from a 10 mL flush syringe
• Draw up 1 mL epinephrine 1:10,000 & gently mix
• Administer 1 mL IV/IO push every 1-5 mins for continued hypoperfusion, ALOC &/or airway compromise

Sierra – Sacramento Valley EMS Agency Treatment Protocol	P-20
Pediatric Shock	
Approval: Troy M. Falck, MD – Medical Director	Effective: 06/01/2021
Approval: Victoria Pinette – Executive Director	Next Review: 01/2024

- Shock in children may be subtle and difficult to recognize, tachycardia may be the only sign noted.
- Hypotension is a late sign of shock, BP may be difficult to obtain or inaccurate in children <3 years of age.
- Obtain history Including:
  - Onset and duration of symptoms - Fluid Loss (vomiting, diarrhea) - Fever, infection, trauma or ingestion
  - History of: allergic reaction, cardiac disease or rhythm disturbances
- Important signs to watch for:

COMPENSATED SHOCK	DECOMPENSATED SHOCK
• Tachycardia • Cool extremities • Capillary refill time >2 seconds • Weak peripheral pulses compared with central pulses • Normal blood pressure	• Hypotension and/or bradycardia (late findings) • Decreased mental status • Decreased urine output • Tachypnea • Non-detectable distal pulses with weak central pulses

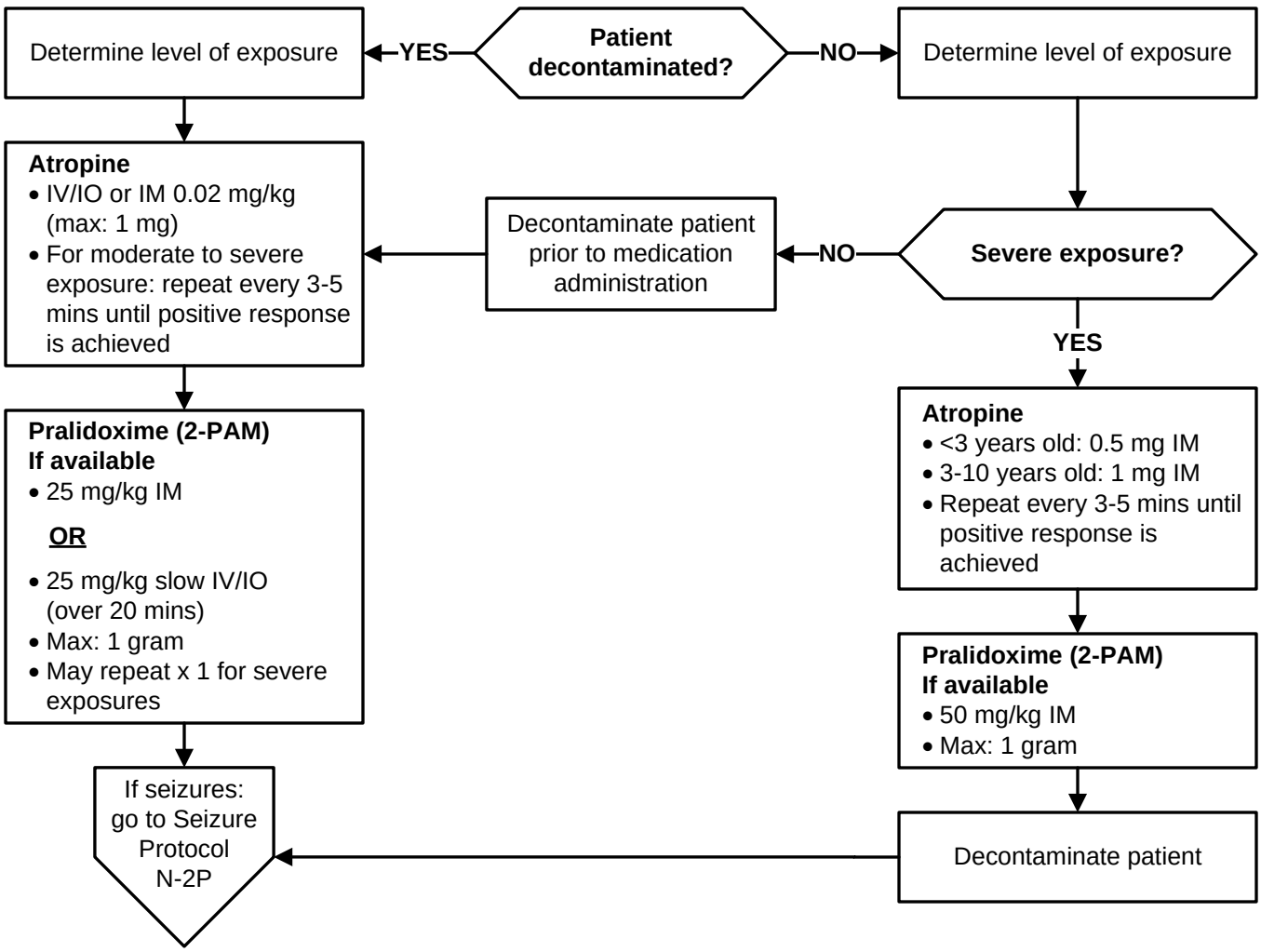




SEE PAGE 2 FOR NERVE AGENT/ORGANOPHOSPHATE TREATMENT

PEDIATRIC NERVE AGENT/ORGANOPHOSPHATE TREATMENT

- EMS personnel shall not enter or provide treatment in the Contamination Reduction Zone (Warm Zone) or Exclusion Zone (Hot Zone) unless specifically trained, equipped and authorized to do so
- EMS personnel shall not use Haz Mat specific personal protective equipment (PPE), including self-contained breathing apparatus (SCBA), unless specifically trained, fit tested and authorized to do so
- Do not transport patients until they have been completely decontaminated; if transport personnel become contaminated, they shall immediately undergo decontamination
- Only patients with severe exposure will be treated within the Contamination Reduction Zone (Warm Zone) or Exclusion Zone (Hot Zone) by personnel who have specific training to allow them to function in that area
- Patients in the Exclusion Zone (Hot Zone) with severe exposure shall be treated with IM medication only
- Early base hospital contact, and CHEMPACK activation when appropriate (S-SV EMS Nerve Agent Treatment Protocol E-8), will maximize assistance from necessary resources
- Adult auto-injectors are NOT to be used in children <40 kg



Sierra – Sacramento Valley EMS Agency Treatment Protocol	M-8P
Pediatric Pain Management	
Approval: Troy M. Falck, MD – Medical Director	Effective: 06/01/2024
Approval: John Poland – Executive Director	Next Review: 04/2027

- All pts with a report of pain shall be appropriately assessed and treatment decisions/interventions shall be adequately documented on the PCR.
- A variety of pharmacological and non-pharmacological interventions may be utilized to treat pain. Consider the pt's hemodynamic status, age, and previous medical history/medications when choosing analgesic interventions.
- Treatment goals should be directed at reducing pain to a tolerable level; pts may not experience complete pain relief.

BLS

- Assess V/S including pain scale & SpO_2, every 15 mins or as indicated by pt's clinical condition
- Assess/document pain score using standard 1-10 pain scale before and after each pain management intervention and at a minimum of every 15 mins
- O_2 at appropriate rate if hypoxemic (SpO_2 <94%) or short of breath
- Utilize non-pharmacological pain management techniques as appropriate, including:
  - Place in position of comfort and provide distraction/verbal reassurance to minimize anxiety
  - Apply ice packs &/or splints for pain secondary to trauma

Pain not effectively managed with non-pharmaceutical pain management techniques

Review/consider 'Medication Contraindications & Administration Notes' below & proceed to page 2

Medication Contraindications & Administration Notes

ⓘ **All slow IVP medications contained in this protocol shall be administered over 60 seconds**

Acetaminophen
- ⓘ Do not administer to pts with any of the following:
  - Severe hepatic impairment
  - Active liver disease
- ⓘ Discontinue infusion if patient becomes hypotensive (see table on page 2)

Ketamine
- ⓘ Do not administer to pts with any of the following:
  - Pregnancy
  - Multi-system trauma
  - Suspected internal bleeding
  - Active external bleeding

Ketorolac
- ⓘ Do not administer to pts with any of the following:
  - Pregnancy
  - NSAID allergy
  - Active bleeding
  - Multi-system trauma
  - ALOC or suspected moderate/severe TBI
  - Current use of anticoagulants or steroids
  - Hx of asthma, GI bleeding, ulcers
  - Hx of renal disease/insufficiency/transplant

Fentanyl/Midazolam
- ⓘ Do not administer to pts with any of the following:
  - Hypotension (Pediatric Hypotension Table – page 2)
  - SpO2 <94% or RR <12
  - ALOC or suspected moderate/severe TBI
- ⓘ There is an increased risk of deeper level of sedation & airway/respiratory compromise when administering midazolam to pts receiving fentanyl

ALS

- Continuous cardiac monitoring
- IV/IO NS TKO – if indicated by pt's clinical condition or necessary for medication administration
  - May bolus up to 20 mL/kg if indicated by pt's clinical condition
- Administer analgesic intervention as indicated below when appropriate

Non-Trauma Related/Chronic Pain

Acetaminophen: 15 mg/kg IV/IO infusion over 15 mins (max: 1000 mg) – single dose only; **OR**
Ketorolac: 0.5 mg/kg IV/IO or IM (max: 15 mg) – single dose only

If pain not effectively managed:

- Contact base/modified base hospital for additional pain management consultation

Pain Related to Acute Injury/Burns/Frostbite

ⓘ **For pts ≤ 4 yo, consult with base/modified base hospital prior to administration of fentanyl, ketamine, or midazolam**

Moderate Pain

Acetaminophen: 15 mg/kg IV/IO infusion over 15 mins (max: 1000 mg) – single dose
OR
Ketorolac: 0.5 mg/kg IV/IO or IM (max: 15 mg) – single dose

If pain not effectively managed:

- Continuous $EtCO_2$ monitoring

Fentanyl: 1 mcg/kg slow IV/IO or IM/IN (max single dose: 50 mcg) – may repeat every 5 mins to max 4 doses

Pediatric Normal SBP & Hypotension Table

Age	Normal SBP	Hypotension
1-12 mos	70-100	SBP <70
1-2 yrs	80-110	SBP <70 + age (yrs) x 2
3-5 yrs	90-110	
6-9 yrs	100-120	
10-14 yrs	100-120	SBP <90

Severe Pain

- Continuous $EtCO_2$ monitoring

Fentanyl: 1 mcg/kg slow IV/IO or IM/IN (max single dose: 50 mcg)
OR
Ketamine: 0.3 mg/kg slow IV/IO (max single dose: 30 mg)

Acetaminophen: 15 mg/kg IV/IO infusion over 15 mins (max: 1000 mg) – single dose

If pain not effectively managed:

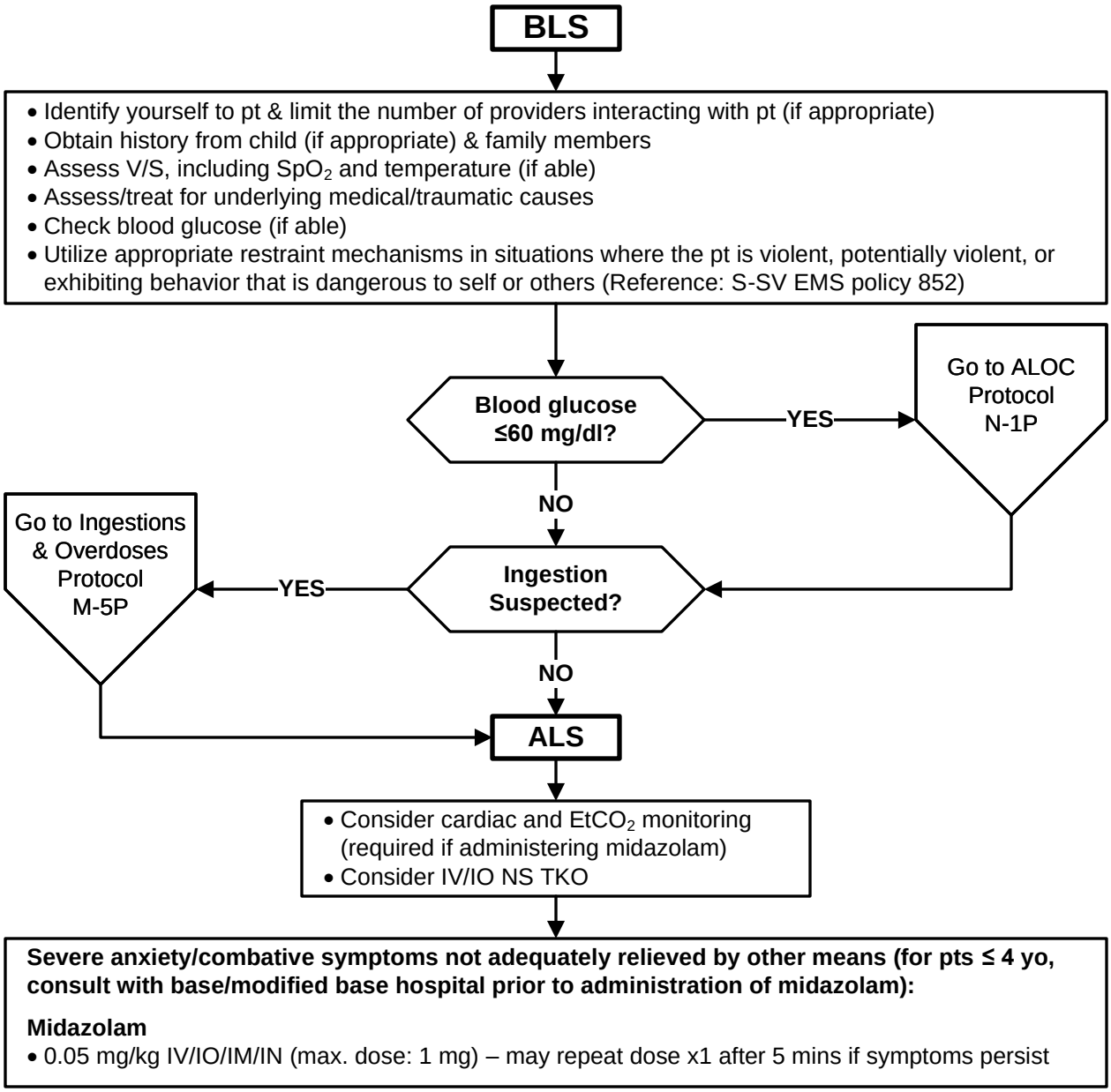
- If fentanyl previously administered, may repeat fentanyl every 5 mins to max 4 doses
- If ketamine previously administered, may repeat once after 10 - 15 mins to max 2 doses

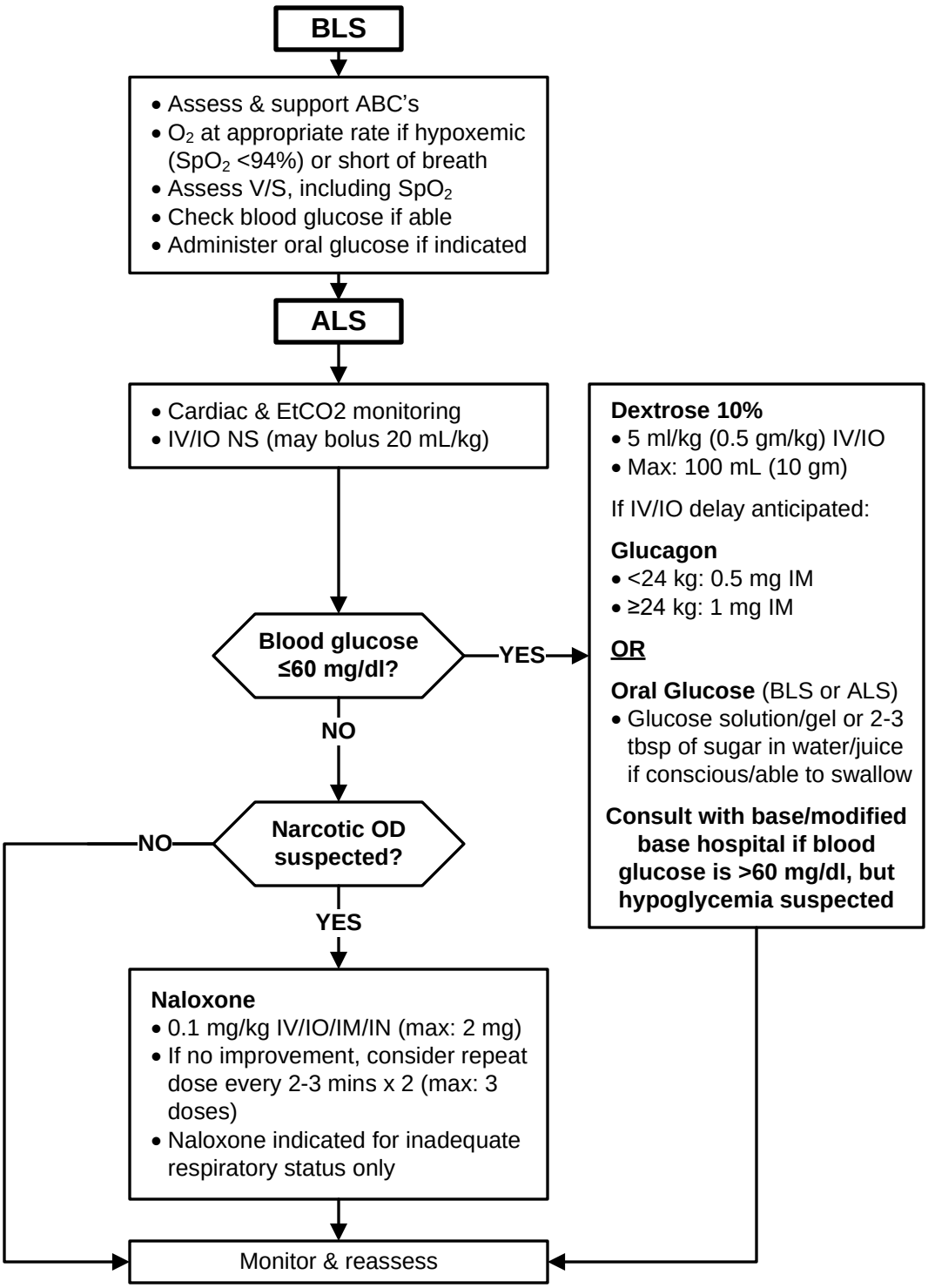
&/OR
Midazolam: 0.05 mg/kg slow IV/IO (max single dose: 1 mg)

- May repeat once after 5 mins to max 2 doses
- Wait 5 mins after fentanyl/ketamine administration before administering midazolam

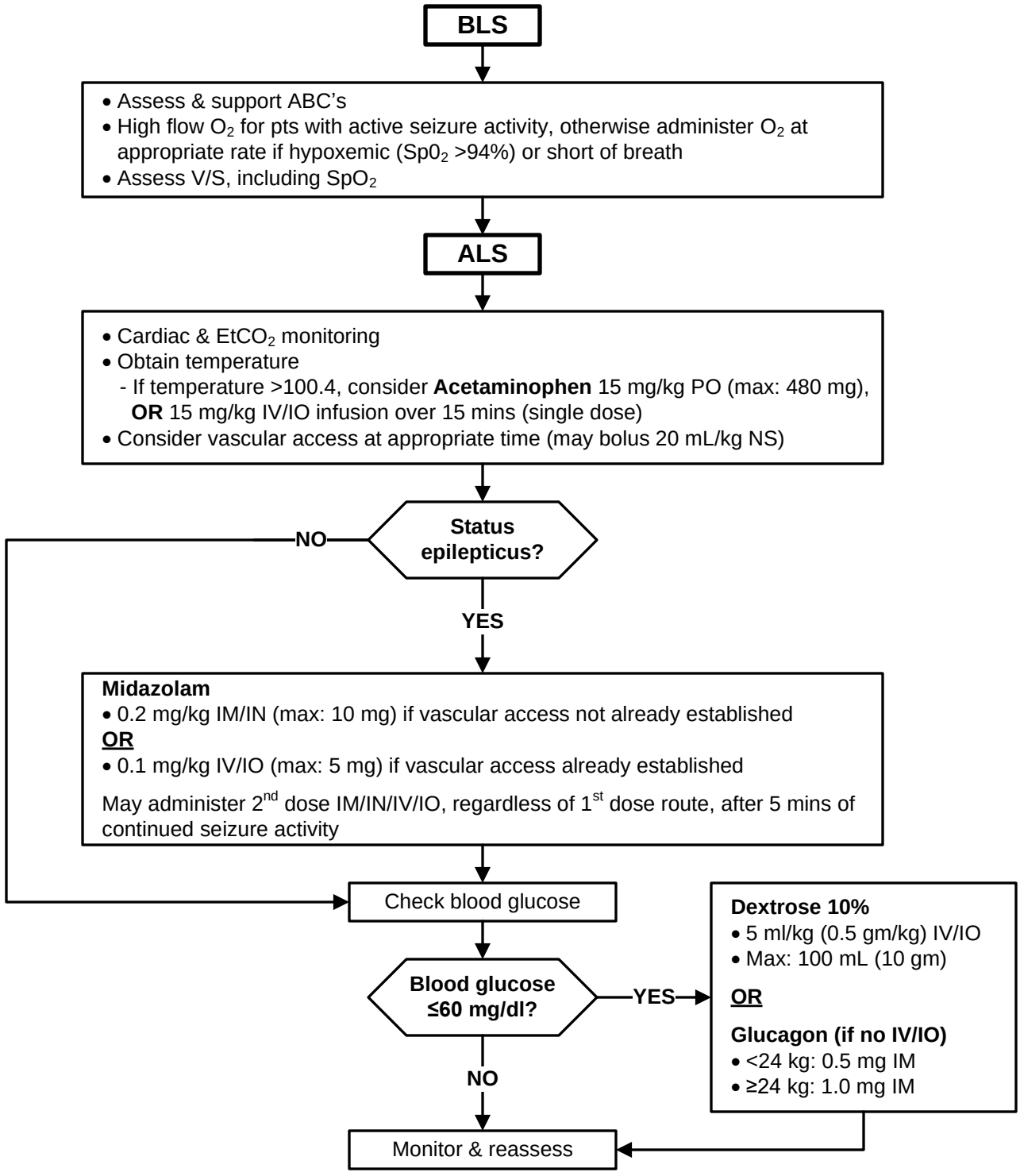
Sierra – Sacramento Valley EMS Agency Treatment Protocol	M-11P
Pediatric Behavioral Emergencies	
Approval: Troy M. Falck, MD – Medical Director	Effective: 06/01/2024
Approval: John Poland – Executive Director	Next Review: 04/2027

- Pediatric behavioral emergencies occur when the presenting problem includes some disorder of thought or behavior that is disturbing or dangerous to the pt or others. Psychiatric emergencies are a subset of behavioral emergencies.
- Crisis in pediatrics may be precipitated by social factors and/or instability in the home or community.
- Avoid judgmental statements and encourage pt to help with their own care.
- Consider dimming the lights and removing non-essential adults when appropriate.
- Assess for the presence of other conditions that may mimic behavioral emergencies, for example:
  - Diabetes/hypoglycemia - Trauma/TBI - Seizure disorders - Hypoxia - Ingestion/Overdose
- Major psychiatric disorders that may predispose to behavioral emergencies in children include:
  - Mood disorders (Depression, Bipolar Disorder) - Thought disorders (Schizophrenia)
  - Developmental disorders (Autism) - Anxiety disorders (PTSD)
  - Other disorders (ADD, ADHD, Oppositional Defiant Disorder, Reactive Attachment Disorder, etc.)




BLS
• Assess & support ABC's
• O_2 at appropriate rate if hypoxemic (SpO_2 <94%) or short of breath
• Assess V/S, including SpO_2
• Check blood glucose if able
• Administer oral glucose if indicated
ALS
• Cardiac & EtCO2 monitoring
• IV/IO NS (may bolus 20 mL/kg)
Blood glucose ≤60 mg/dl?
YES
NO
Dextrose 10%
• 5 ml/kg (0.5 gm/kg) IV/IO
• Max: 100 mL (10 gm)
If IV/IO delay anticipated:
Glucagon
• <24 kg: 0.5 mg IM
• ≥24 kg: 1 mg IM
OR
Oral Glucose (BLS or ALS)
• Glucose solution/gel or 2-3 tbsp of sugar in water/juice if conscious/able to swallow
Consult with base/modified base hospital if blood glucose is >60 mg/dl, but hypoglycemia suspected
Narcotic OD suspected?
NO
YES
Naloxone
• 0.1 mg/kg IV/IO/IM/IN (max: 2 mg)
• If no improvement, consider repeat dose every 2-3 mins x 2 (max: 3 doses)
• Naloxone indicated for inadequate respiratory status only
Monitor & reassess

- **Febrile:** Cooling measures: loosen clothing and/or remove outer clothing/blankets.
- **Status Epilepticus:** 2 or more seizures without periods of consciousness, or a single seizure lasting >5 mins.
- Only continuous or repetitive seizure activity requires ALS intervention.

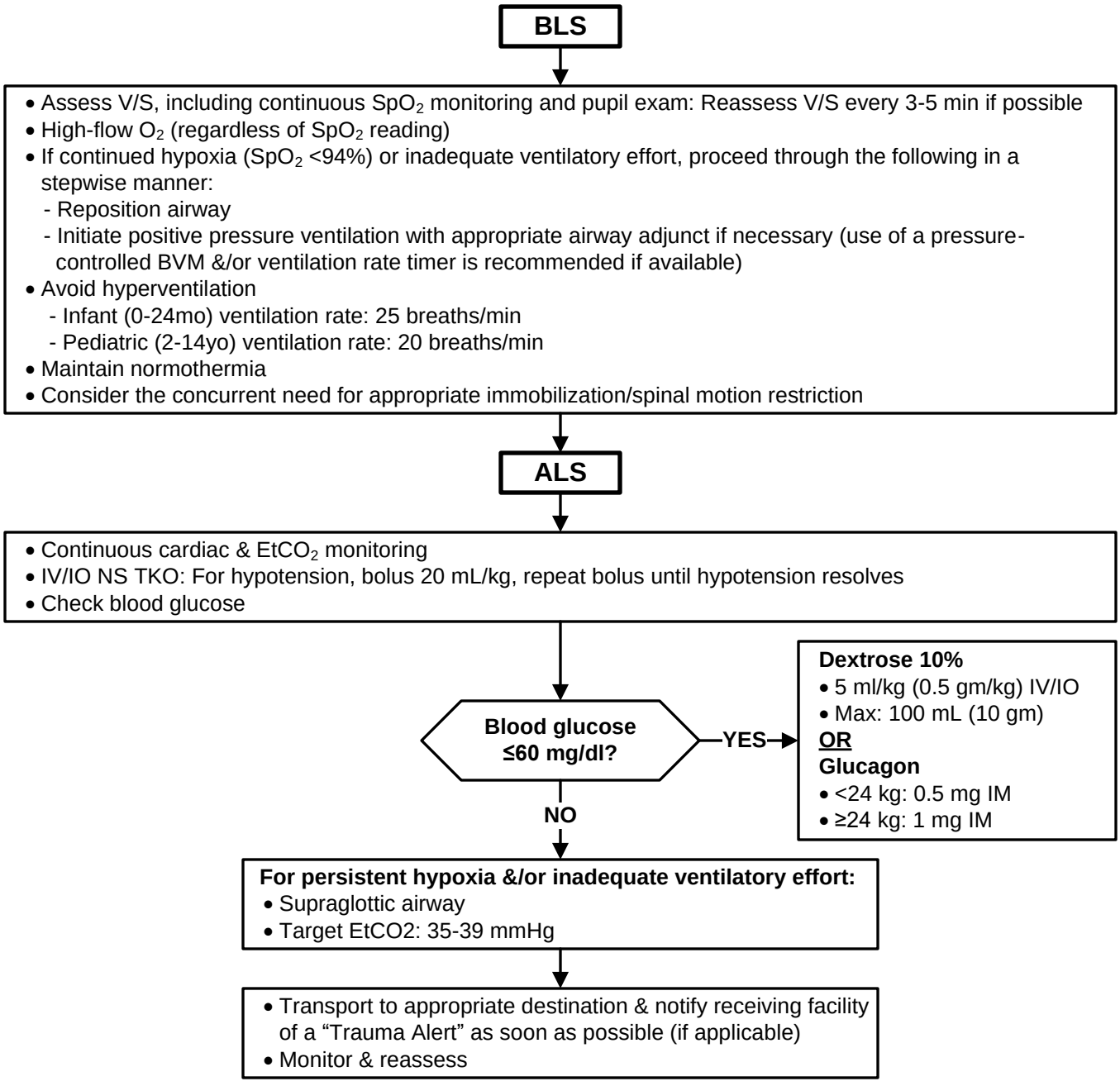


Sierra – Sacramento Valley EMS Agency Treatment Protocol	T-3P
Pediatric Suspected Moderate/Severe Traumatic Brain Injury (TBI)	
Approval: Troy M. Falck, MD – Medical Director	Effective: 06/01/2024
Approval: John Poland – Executive Director	Next Review: 04/2027

Prehospital Identification of Moderate/Severe TBI

- Any pt with a mechanism of injury consistent with a potential for a brain injury, and one or more of the following:
  - GCS <13 (in infants: any decreased responsiveness, deterioration of mental status, irritation or agitation)
  - Post-trauma seizures, whether continuing or not
  - Multi-system trauma requiring advanced airway placement

For any patient with a suspected moderate/severe TBI, avoid/treat the three TBI "H-Bombs":
1) **H**yperventilation, 2) **H**ypoxia, 3) **H**ypotension



S-SV EMS General Policies & Information Section

Sierra – Sacramento Valley EMS Agency Program Policy			
Vascular Access			
	Effective: 06/01/2024	Next Review: 01/2027	**1101**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE:

To establish vascular access and fluid administration guidelines for prehospital personnel.

AUTHORITY:

A. HSC, Division 2.5, § 1797.220 and 1798.

B. CCR, Title 22, Division 9, Chapters 3 & 4.

POLICY:

A. Vascular Access Guidelines

1. Over-the-needle catheters may be inserted into peripheral veins and external jugular veins for administration of intravenous medications/fluid boluses, or the anticipated need to administer intravenous medications/fluid boluses.

2. Avoid more than three (3) vascular access attempts per patient, unless necessary for emergent treatment.

3. Do not establish vascular access in an extremity that has a functioning dialysis shunt, unless the patient is in extremis and no other vascular access is available or appropriate.

4. Do not connect the primary IV tubing directly to the IV catheter. IV extension/saline lock tubing shall be utilized between the primary IV tubing and the IV catheter.

5. Saline locks are encouraged when fluid boluses or numerous medication administrations are not expected to be necessary.

6. When large volumes of fluid may be required, large bore catheters (14-18 gauge) should be used, and placed in proximal veins when available. This includes, but is not limited to, patients requiring adenosine, STEMI patients, stroke patients, trauma patients, and patients in cardiac arrest.

7. Consider establishing two (2) IV's in patients who have, or are at risk for decompensation (e.g. hypovolemic shock). Do not delay patient transport to establish additional vascular access.

8. To keep open (TKO) shall be the default rate unless otherwise specified in the applicable treatment protocol. TKO indicates a rate of 25-30 mL per hour (25-30 micro drops per minute, or 5 macro drops per minute).

9. A 'fluid bolus' in an adult patient consists of up to 1000 mL (unless otherwise specified in the applicable treatment protocol) of crystalloid solution delivered as rapidly as possible, with reassessment of hemodynamic parameters, respiratory status and lung sounds before and after administration.

10. A 'fluid bolus' in a pediatric patient consists of 20 mL/kg of crystalloid solution delivered as rapidly as possible, with reassessment of hemodynamic parameters, respiratory status and lung sounds before and after administration.

B. External Jugular (EJ) Vein Cannulation

1. EJ vein cannulation may be utilized in any situation where an IO would be acceptable.

2. Contraindications (Relative):

- Suspected coagulopathy (e.g. advanced liver disease or taking coumadin).
- Suspected cervical spine injury.
- Inability to tolerate supine position.
- Stable patient.

3. Procedure:

- Place patient in Trendelenburg or supine position and elevate shoulders.
- Turn head 45 to 60 degrees to side opposite of intended venipuncture site.
- Palpate to assure no pulsatile quality to vessel.
- Prep site with a recognized antiseptic agent, wipe dry with a sterile gauze pad.
- "Tourniquet" vein by placing finger just above clavicle near midclavicular line.
- Stabilize skin over vein with thumb.
- Point needle toward shoulder in direction of vein, and puncture vein midway between jaw and clavicle over belly of sternocleidomastoid muscle.
- Maintain compression of vein at clavicle area until needle is withdrawn and IV tubing has been connected in order to prevent air from entering vein.
- Secure IV site.

4. Possible Complications:

    - Air embolism.
    - Hematoma requiring compression of neck.
    - Extravasation of fluid or medication, infection, thrombosis.

C. Intraosseous Infusion

1. Indications:

    - Emergency situations, when lifesaving fluids or drugs should be administered and attempts at placing a peripheral IV would likely be unsuccessful or too time consuming.
    - Adult (paramedics) and pediatric (paramedic or AEMT) patients, weighing ≥ 3 kg, who present with one (1) or more of the following clinical conditions:
        - Cardiac arrest.
        - Hemodynamic instability (B/P < 90 mmHg & clinical signs of shock).
        - Imminent respiratory failure.
        - Status epilepticus with prolonged seizure activity greater than 10 minutes, and refractory to IN/IM anticonvulsants.
        - Toxic conditions requiring immediate IV access for antidote.

2. Contraindications:

    - Fracture or suspected vascular compromise in targeted bone.
    - Excessive tissue or absence of adequate anatomical landmarks.
    - Infection at area of insertion site.
    - Previous significant orthopedic procedure at site (e.g. prosthetic limb/joint).
    - IO access in targeted bone within past 48 hours.

3. Site Selection:

    - Site selection depends on patient age/size/anatomy, presenting condition, ability to locate anatomical landmarks, provider training/experience, and clinical judgment. Site selection is also dependent on the absence of contraindications, accessibility of the site and the ability to monitor and secure the site. Humeral site may be preferred for high volume fluid administration and/or lower extremity trauma (see 'IO Insertion Site Instructions' at the end of this policy).
    - No more than one (1) attempt allowed in each bone.

4. Insertion Procedure:

    - Prep site with a recognized antiseptic agent, wipe dry with a sterile gauze pad.
    - Insert the device according to manufacturer specific directions.

- Attach primed extension set to needle and secure needle per manufacturer instructions.
- For patients unresponsive to pain:
  - Rapid flush with 10 mL of normal saline.
- For patients responsive to pain:
  - Prime extension set with 2% lidocaine.
  - Slowly administer 2% lidocaine over 120 seconds.
    - Adult – 40 mg.
    - Pediatric – 0.5 mg/kg (maximum 40 mg).
  - Allow lidocaine to dwell in IO space 60 seconds.
  - Rapid flush with 10 mL of normal saline.
  - Slowly administer a subsequent ½ dose of 2% lidocaine over 60 seconds.
    - Adult – 20 mg.
    - Pediatric – ½ the initial dose (maximum 20 mg).
- Connect fluids to extension set using IV tubing – infusion may need to be pressurized to achieve desired rate.
- Dress site and secure tubing.

5. Possible Complications:

   - Infiltration of fluids/drugs into the subcutaneous tissue due to improper placement.
   - Cessation of the infusion due to clotting in the needle, or the bevel of the needle being lodged against the posterior cortex.
   - Osteomyelitis or sepsis.
   - Fluid overload.
   - Fat or bone emboli.
   - Fracture.

6. S-SV EMS Approved IO Devices:

   - Manual IO device – bone marrow type needles, 15 and 18 gauge size.
   - BD Intraosseous Vascular Access System.
   - EZ-IO.
   - NIO.
   - SAM IO.

D. Preexisting Vascular Access Device (PVAD)

1. Paramedic personnel may access the following types of PVADs on any patient who is in extremis and when no other vascular access is available or appropriate:

   - Indwelling catheter/device, exiting externally, inserted into the superior vena cava or right atrium (Broviac, Hickman, PICC and others).

  - Note: subcutaneous access, requiring special equipment and entry through the skin, is not approved for use by prehospital personnel.
- Hemodialysis shunt (fistulas/grafts).

2. Indications:

   In the absence of any other observable vascular access, when the patient has one or more of the following:

   - Cardiopulmonary arrest.
   - Extremis due to circulatory shock.
   - Critical need for pharmacological intervention.

3. Complications:

   - Infection: Due to the location of the catheter, strict adherence to aseptic technique is crucial when handling a PVAD.
     - Use of sterile gloves is recommended.
     - Prep injectable port and surrounding skin with chlorhexidine prior to attaching I.V. tubing.
     - Use new supplies if equipment becomes contaminated.
     - Re-cover port with sterile dressing and securely tape.
   - Air Embolism: The PVAD provides a direct line into the central circulation; introduction of air into these devices can be hazardous.

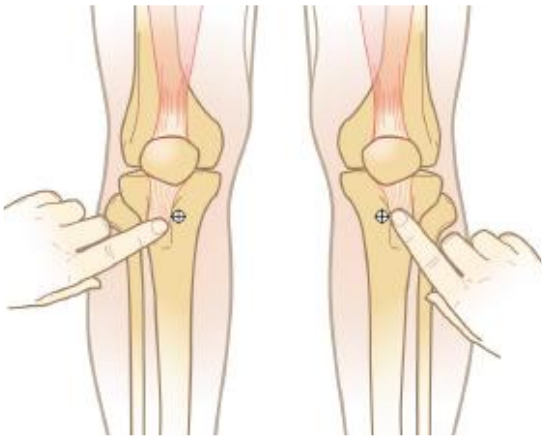
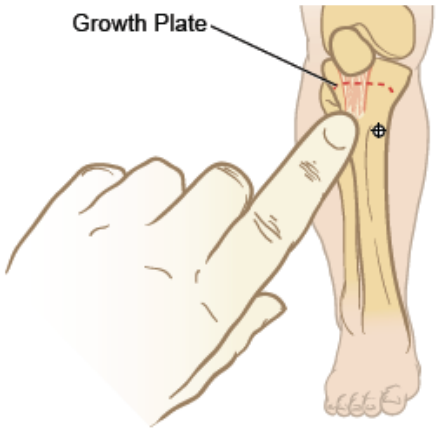
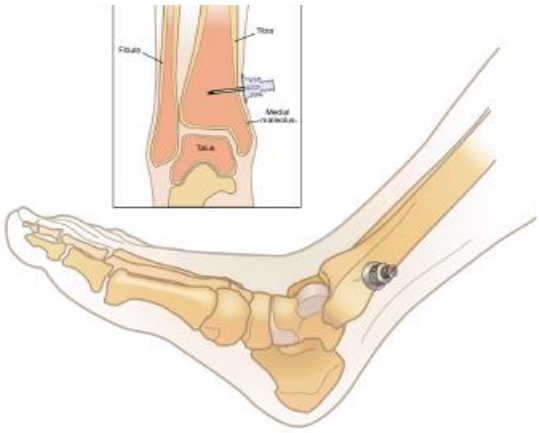
4. Approved Infusions:

   - Intravenous solutions.
   - All medications except diazepam (Valium), as it interacts with silicone causing crystallization of the medications and deterioration of the silicone.

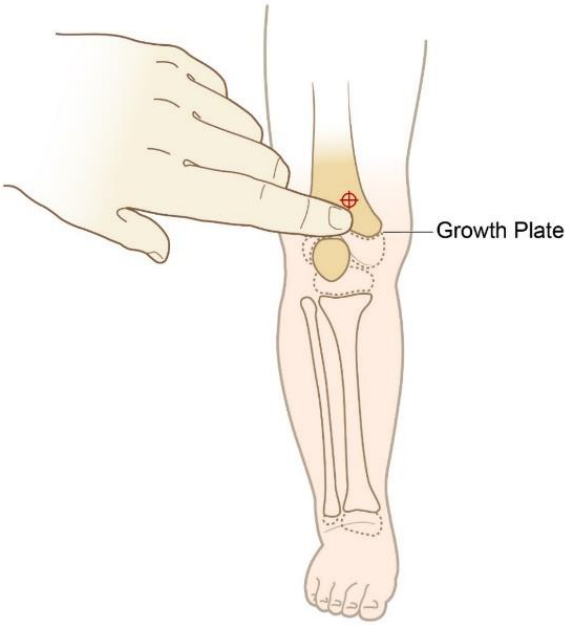
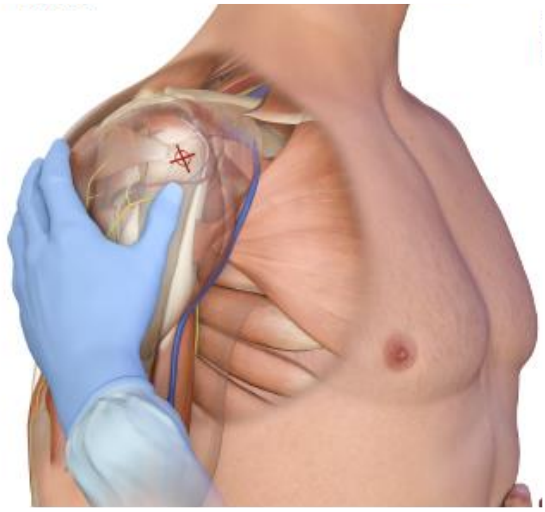
5. Procedure:

   - Do not remove injection cap from catheter.
   - Do not use a syringe smaller than 10 ml to prevent catheter damage from excess infusion pressure.
   - Always expel air from syringe prior to administration.
   - Follow all medications with 5 ml of saline to avoid clots.
   - Do not inject medications or fluids if resistance is met when establishing patency.
   - Do not allow I.V. fluids to run dry.
   - Do not manipulate or remove an indwelling catheter under any circumstances.
   - Should damage occur to the external catheter, clamp immediately between the skin exit site and the damaged area to prevent air embolism or blood loss.

IO Insertion Site Instructions

Proximal Tibia – Adults	Proximal Tibia – Infants & Small Children
Extend the leg - insertion site is approx. 3 cm (2 finger widths) below the patella and approx. 2 cm (1 finger width) medial, along the flat aspect of the tibia. 	Extend the leg - insertion site is just below the patella, approx. 1 cm (1 finger width) and slightly medial, approx. 1 cm (1 finger width) along the flat aspect of the tibia. Pinch the tibia between your fingers to identify the center of the medial and lateral borders. 
Distal Tibia – Adults	**Distal Tibia – Infants & Small Children**
Approx. 3 cm (2 finger widths) proximal to the most prominent aspect of the medial malleolus. Palpate the anterior and posterior borders of the tibia to assure that your insertion site is on the flat center aspect of the bone. 	Approx. 1-2 cm (1 finger width) proximal to the most prominent aspect of the medial malleolus. Palpate the anterior and posterior borders of the tibia to assure that your insertion site is on the flat center aspect of the bone. 

Distal Femur – Infants & Small Children	Humerus – Adult Only

Secure the leg out-stretched to ensure the knee does not bend. Identify the patella by palpation. The insertion site is just proximal to the patella (maximum 1 cm) and approximately 1-2 cm medial to midline.
 	
 
 	
	• Place pts hand over the abdomen (elbow adducted and humerus internally rotated).
	• Place your palm on the pts shoulder anteriorly.
	  ○ The area that feels like a “ball” under your palm is the general target area.
	  ○ You should be able to feel this ball, even on obese pts, by pushing deeply.
	• Place the ulnar aspect of one hand vertically over the axilla.
	• Place the ulnar aspect of the opposite hand along the midline of the upper arm laterally.
	• Place your thumbs together over the arm - this identifies the vertical line of insertion on the proximal humerus
	• Palpate deeply as you climb up the humerus to the surgical neck.
	  ○ It will feel like a golf ball on a tee – the spot where the “ball” meets the “tee” is the surgical neck.
	  ○ The insertion site is on the most prominent aspect of the greater tubercle, 1 to 2 cm above the surgical neck.
	
	 

Sierra – Sacramento Valley EMS Agency Program Policy			
Airway & Ventilation Management			
	Effective: 06/01/2022	Next Review: 01/2025	**1102**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: Victoria Pinette – Executive Director		SIGNATURE ON FILE

PURPOSE:

To establish standards for airway and ventilation management by EMS personnel.

AUTHORITY:

A. California Health and Safety Code § 1797.220 and 1798.

B. California Code of Regulations, Title 22, Division 9.

POLICY:

A. A patent upper airway is a critical component of effective ventilation. The more open an airway is, the lower the ventilation pressure and volume required for effective ventilation. Airway occlusion is worsened by flexion of the head and opening of the mouth. Thus, any maneuver used to open the airway should correct these issues.

B. BLS airway adjuncts (NPA/OPA) should be utilized on every patient receiving bag valve mask (BVM) ventilation, unless contraindications for their use are present.

C. Excessive ventilation of patients may result in adverse hemodynamic effects and/or decreased cerebral blood flow, and should be avoided.

D. EMS personnel must weigh the benefits of an advanced airway against the adverse effects of interrupting chest compressions to place the device in cardiac arrest patients. If BVM ventilation is adequate, EMS personnel may defer placement of an advanced airway device until the patient fails to respond to initial CPR and defibrillation or until return of spontaneous circulation is achieved. King or i-gel airway devices are preferred for cardiac arrest patients when attempts at orotracheal intubation are likely to interrupt continuous chest compressions.

E. Correct placement of an advanced airway device must be confirmed with physical assessment in addition to end-tidal CO_2 ($EtCO_2$) monitoring using waveform capnography ($PetCO_2$) or a colorimetric CO_2 detector. $PetCO_2$ is the preferred method of $EtCO_2$ monitoring, and shall be utilized on all patients with an advanced airway when available. Colorimetric CO_2 detectors initially utilized by BLS providers shall be replaced by $PetCO_2$ as soon as possible after arrival of ALS personnel.

F. ALS/LALS personnel must confirm patency of an advanced airway device placed by an EMT, and assume responsibility for the airway once they establish patient care.

G. Advanced airway device location and patency must be immediately verified any time there is an airway concern, when there is a movement of the patient, or when patient care is transferred to other prehospital or hospital personnel.

H. If the advanced airway device is determined to no longer be patent, appropriate measures must be immediately taken to establish a patent airway. This may include removal of the advanced airway device and utilization of BLS airway measures until an advanced airway can be re-established.

PROCEDURE:

A. Ventilation Management:

1. BVM ventilation should be performed by two rescuers whenever possible, one to hold the mask seal with two hands and the other to squeeze the BVM device at the appropriate rate. In addition to using an OPA or NPA, a jaw-thrust maneuver should be used while holding the mask seal.

2. Deliver ventilations slowly, over 1 - 2 seconds. Use as low of a tidal volume as needed to achieve normal chest rise and fall.

3. An appropriate ventilation rate is the fewest ventilations per minute that maintain SpO2 and $EtCO_2$ within normal ranges.

4. A Positive End Expiratory Pressure (PEEP) valve may be utilized in combination with a bag-valve ventilation device under the following conditions:

   - The patient does not have any of the following contraindications:
     - Suspected pneumothorax.
     - Suspected head injury or increased intracranial pressure.
     - Hypovolemic shock.
   - If an advanced airway device is not in place, BVM ventilations must be performed by two rescuers to maintain PEEP effectiveness.
   - PEEP shall be maintained at 5 cmH2O.

5. An Impedance Threshold Device (ITD) may be utilized in combination with a bag-valve ventilation device for patients under the following conditions:

   - Adult non-traumatic cardiac arrest.
   - If an advanced airway device is not in place, BVM ventilations must be performed by two rescuers to maintain ITD effectiveness.

B. Advanced Airway Device Utilization/Management:

1. The following procedures should be utilized when placing an advanced airway device, as patient condition and circumstances permit:

   - If possible, pre-oxygenate with high flow oxygen via non-rebreather mask (NRM) or BVM as appropriate for three minutes.
   - Apply high flow oxygen (10 - 15 L/min) via nasal cannula (NC) in addition to NRM or BVM to augment pre-oxygenation.
   - Position patient in a semi-recumbent or reverse trendelenburg position if possible.
   - Continue utilizing passive oxygenation via NC during intubation attempts.
   - Perform jaw thrust to maintain pharyngeal patency and apply airway device.

2. Orotracheal Intubation Criteria:

   - Indication: Adult patients in need of advanced airway protection and/or unable to be adequately ventilated with a BVM.
   - No more than two total intubation attempts are allowed per patient. Each attempt should last no longer than 30 seconds. Ventilate with 100% oxygen for a minimum of one minute prior to each attempt. An intubation attempt is defined as the introduction of the endotracheal (ET) tube past the teeth.
   - Consider utilizing an ET tube introducer for patients with a difficult airway (e.g., suspected spinal injuries, supraglottic or laryngeal edema present, epiglottis can be visualized but vocal cords cannot, etc.).
   - If orotracheal intubation is unsuccessful, a supraglottic (i-gel) airway device shall be utilized if an advanced airway remains necessary.

3. Supraglottic (i-gel) Airway Device Criteria:

   - Indications:
     - Adult patients in need of advanced airway protection and/or unable to be adequately ventilated with a BVM, when orotracheal intubation is unavailable or unsuccessful.
     - Adult patients in need of rapid advanced airway control when orotracheal intubation is anticipated to be difficult or likely to interrupt continuous chest compressions.
     - Paramedic/AEMT personnel only:
       - Pediatric patients (≤14 years old) in need of airway protection or unable to be adequately ventilated with a BVM.
   - Contraindications:
     - Intact gag reflex.
     - Caustic ingestion.
     - Unresolved complete airway obstruction.

- Trismus or limited ability to open the mouth and insert the device (relative).
- Oral trauma (relative).
- Distorted anatomy that prohibits proper device placement (relative).

4. Advanced Airway Device Placement Confirmation:

   - While ventilating, auscultate both lung fields for breath sounds and confirm chest rise. Listen over the left upper quadrant of the abdomen for absence of air in the stomach.
   - Attach an $EtCO_2$ monitoring device, which must remain in place until arrival at the hospital or cessation of resuscitation efforts.
   - All methods and devices used to confirm advanced airway device placement must be documented on the patient care report.

5. If a patient with an advanced airway in place regains consciousness, do not remove the advanced airway. Use restraints as necessary and consider sedation with Midazolam 5 mg IV/IO OR 10 mg IM/IN for adult patients. Contact the base hospital for midazolam dosing consultation on pediatric patients if necessary.

Sierra – Sacramento Valley EMS Agency Program Policy			
Needle Cricothyrotomy			
	Effective: 12/01/2021	Next Review: 09/2024	**1103**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: Victoria Pinette – Executive Director		SIGNATURE ON FILE

PURPOSE:

To establish needle cricothyrotomy criteria for S-SV EMS accredited paramedics.

AUTHORITY:

A. HSC § 1797.220 and 1798.

B. CCR, Title 22, Division 9, Chapter 4.

POLICY:

A. Needle cricothyrotomy may be performed by paramedic personnel, when there is an inability to maintain the airway utilizing less invasive airway procedures. This situation typically involves patients with pathologic processes that cause distortion of the upper airway anatomy, including one or more of the following:

1. Airway obstruction by uncontrolled bleeding into the oral cavity and/or vomiting.
2. Severe maxillofacial trauma - blunt, penetrating, or associated with mandibular FX.
3. Laryngeal foreign body that cannot be removed expeditiously.
4. Swelling of upper airway structures.
5. Infection (e.g., epiglottitis, Ludwig's angina).
6. Allergic reaction or hereditary angioedema.
7. Chemical or thermal burns to the epiglottis and upper airway.

B. Needle cricothyrotomy is contraindicated in the following circumstances:

1. Patient age <3 years or estimated weight <15 kg.
2. Ability to maintain airway utilizing less invasive procedures.
3. Conscious patient.
4. Moving ambulance.
5. Patient has a midline neck hematoma or massive subcutaneous emphysema.

Sierra – Sacramento Valley EMS Agency Program Policy			
Mechanical Chest Compression Devices			
	Effective: 12/01/2023	Next Review: 07/2026	**1106**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE:

To define the approval process for utilization of mechanical chest compression devices, identify the mechanical chest compression devices approved for use, and establish criteria for EMS personnel training and utilization of approved mechanical chest compression devices in the S-SV EMS region.

AUTHORITY:

A. HSC, Division 2.5.

B. CCR, Title 22, Division 9.

POLICY:

A. EMS provider agencies shall obtain S-SV EMS approval prior to utilizing a mechanical chest compression device in the S-SV EMS region. The request for approval shall include the following minimum information:

1. A letter of request for approval to utilize the device(s) from a chief officer.

2. The proposed number and type of devices to be utilized, and the device(s) funding source.

3. The geographical location(s) where the device(s) will be utilized.

4. The anticipated annual number of incidents when the device(s) will be utilized.

5. A description of the proposed initial/ongoing training program, including the anticipated number of personnel to be trained on the use of the device(s).

6. A plan for notifying allied agencies and hospitals of the device(s) use prior to implementation.

7. A description of the provider's QA/QI monitoring of the use of the mechanical chest compression device(s).

B. S-SV EMS shall have sole discretion on device(s) approval. Approval considerations will be based on the following criteria:

   1. Geographical location, including EMS response and transport times.

   2. Manpower.

   3. Anticipated utilization.

   4. Device funding source.

   5. Personnel maintenance of skills and QI.

C. The following mechanical chest compression devices have been approved for use in the S-SV EMS region:

   1. Defibtech Lifeline ARM

   2. Physio Control LUCAS Chest Compression System.

   3. Zoll AutoPulse.

D. EMS personnel may utilize an approved mechanical chest compression device under the following conditions:

   1. They are employed/on-duty with an EMS provider agency approved by S-SV EMS to utilize the device, and have received appropriate training on device use.

   2. They follow the indications, contraindications and device application procedure indicated in applicable S-SV EMS treatment protocols.

   3. They accompany any patient who the device is utilized on to the hospital (if transported), even if they are not the primary patient care provider.

E. Mechanical chest compression device maintenance:

   1. All mechanical chest compression device approved providers shall have a maintenance program for the device.

   2. The periodic preventative maintenance of all devices shall meet or exceed the criteria recommended by the manufacturer.

   3. Individuals performing scheduled maintenance or repair shall possess the necessary credentials recommended by the manufacturer.

4. Providers shall immediately remove from service any device suspected of malfunctioning, and manual CPR shall be resumed if necessary. Any malfunctioning device shall not be placed back into service until properly serviced or repaired by the manufacturer or manufacturer's authorized service program.

5. Any device suspected of malfunctioning, that may have adversely affected patient care shall:

   - Be immediately reported to an on-duty provider agency supervisor.
   - Be immediately reported to the RN or physician staff at the receiving facility if the malfunctioning device impacted or has a potential to impact patient health and well-being.
   - Be reported to S-SV EMS by the end of the next business day. The report shall include the provider's name, date of incident, device type/model/serial number, patient's name, incident number, description of the incident, effect on patient care, all actions taken at the time of reporting, and current location of device.
   - Be reported to the manufacturer by the end of the next business day.

6. Maintenance records are subject to review/inspection by S-SV EMS upon request.

F. Allied agency/hospital notification:

   Prior to implementation of the device, approved providers shall notify appropriate allied agencies and local receiving hospitals of the use of the device.

G. Records/Data Collection:

   1. A patient care report, which includes all of the standard cardiac arrest patient details, shall be completed for each patient on whom the device is applied. The following additional details shall be documented in the patient care report:

      - Total time of manual CPR prior to device application.
      - Time of device application and total time of device use.

   2. Documentation and data related to the use of the mechanical chest compression device(s) shall be made available to S-SV EMS upon request.

H. Quality Assurance/Quality Improvement:

   1. All patient contacts involving the use of the mechanical chest compression device shall be reviewed by provider QI personnel. This review shall include evaluation for appropriate use, and adherence to S-SV EMS policies/protocols.

   2. Any concerns/issues involving the use of the mechanical chest compression device shall be reported to S-SV EMS as soon as possible.

Sierra – Sacramento Valley EMS Agency Program Policy			
12-Lead EKG Procedure			
	Effective: 06/01/2021	Next Review: 05/2024	**1107**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: Victoria Pinette – Executive Director		SIGNATURE ON FILE

PURPOSE

To establish indications and requirements for performing 12-lead electrocardiogram (EKG) procedures in the prehospital setting.

AUTHORITY

A. HSC, Division 2.5, § 1791.220.

B. CCR, Title 22, Division 9, Chapters 3 & 4.

POLICY

12-lead EKG procedures shall be performed on patients who present with one or more of the following:

A. Signs/symptoms suggestive of acute coronary syndrome (ACS) such as:

1. Non-traumatic chest or upper abdominal discomfort.

2. Syncope or near-syncope.

3. Acute generalized weakness.

4. Dyspnea.

B. Cardiac dysrhythmias on 4-lead EKG.

C. ROSC following cardiac arrest.

PROCEDURE

A. Packaged electrodes designed for single patient use (not bulk) shall be utilized for 12-lead EKG procedures.

B. The patient's skin shall be adequately prepared (wiped utilizing a 4x4 gauze pad and shaved if required) prior to electrode placement.

C. A minimum of the patient's age, gender, last name and first initial shall be entered into the cardiac monitor prior to 12-lead EKG acquisition.

D. Obtain an initial 12-lead EKG as soon as possible/practical, and prior to EMS nitroglycerin administration.

E. 12-lead EKG criteria for ST Elevation Myocardial Infarction (STEMI) includes either of the following:

5. Machine read out indicating ***Meets ST Elevation MI Criteria***, ***Acute MI***, ***STEMI*** (or equivalent).

6. EMS personnel interpretation consistent with a STEMI (e.g. ST segment elevation in two or more contiguous leads).

F. Bundle branch blocks, atrial fibrillation, artifact, poor lead placement and/or poor skin preparation can result in STEMI false positive 12-lead EKGs. Consider 12-lead re-acquisition if significant artifact is observed or 12-lead EKG machine read out indicates "poor data quality" (or equivalent).

G. Any 12-lead EKG meeting STEMI criteria shall be transmitted to the appropriate facility (closest hospital or STEMI Receiving Center depending on incident specific circumstances) as soon as possible if transmission capabilities are available.

H. For patients with suspected acute coronary syndromes (ACS), serial 12-lead EKGs should be obtained if the patient's clinical status changes or if EKG changes are noted on the cardiac monitor, and every 15 minutes if transport times are long.

I. Copies of prehospital 12-lead EKGs shall be provided to the receiving hospital physician upon EMS arrival, left at the receiving hospital at time of patient delivery and attached to the EMS patient care report.

Sierra – Sacramento Valley EMS Agency Program Policy			
Prehospital Blood Draws			
	Effective: 9/21/2021	Next Review: 09/2024	**1108**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: Victoria Pinette – Executive Director		SIGNATURE ON FILE

PURPOSE:

To allow AEMT and paramedic personnel to perform venous blood draws on patients for medical reasons or chemical testing.

AUTHORITY:

A. HSC, Division 2.5, § 1797.220 and 1798.

B. CCR, Title 22, Division 9, Chapter 3 & 4.

C. CVC § 23158.

POLICY:

A. Venous blood draws may be performed by AEMT or paramedic personnel on patients with a medical complaint, when there is an agreement to do so in place between the EMS provider agency and the receiving hospital.

B. At the direction of law enforcement, venous blood draws for chemical testing may be performed by paramedic personnel under the following parameters:

1. Per CVC § 23158 (k), paramedic employees of a fire department are not approved to perform venous blood draws for the purpose of chemical testing.

2. Paramedic personnel shall not perform chemical testing blood draws unless authorized to do so by their employer.

3. An emergency call for EMS services takes precedence over a law enforcement officer's request for a paramedic to perform a chemical testing blood draw.

4. At no time will a law enforcement officer's request for a chemical testing blood draw take precedence over the medical treatment of a patient.

PROCEDURE:

A. Select and utilize appropriate blood-drawing devices.

B. If drawing blood from an IV, attach blood draw adapter to the IV catheter hub and draw blood sample immediately after establishing access (prior to IV fluid administration).

C. If drawing blood without an IV, prep site with an appropriate disinfectant agent.

D. Allow tubes to fill under their own vacuum.

E. Blood tubes for medical reasons shall be drawn/filled in the following order:

1. Blue.

2. Red.

3. Green.

4. Purple.

F. Samples shall be labeled with the following minimum information:

5. Patient name and date of birth.

6. Date and time drawn.

7. EMS unit number.

G. Place filled/labeled tubes used for medical blood draws in an appropriate specimen collection bag and turn them over to appropriate receiving hospital staff.

H. Special procedures for chemical testing blood draws:

1. Suspects shall be in law enforcement custody, and shall consent to the blood draw. If the suspect refuses, or is unable to consent to the blood draw for any reason, the paramedic shall stop the procedure immediately. Paramedics shall not draw blood on a struggling or restrained suspect. The suspect must be cooperative.

2. Blood draw kits shall be supplied by the requesting law enforcement agency.

3. Alcohol or other volatile organic disinfectant shall not be used to clean the skin where a specimen is to be collected. Aqueous Benzalkonium Chloride (Zephiran), Aqueous Merthiolate, or other suitable aqueous disinfectant (normally included in the blood draw kit supplied by law enforcement) shall be used.

4. The arresting officer must be present when the blood draw is performed.

5. The blood sample will be the property of the arresting officer.

I. Documentation:

1. Blood draws performed on patients for medical reasons will be documented appropriately on the patient care report.

2. The following minimum information shall be documented on the patient care report for all chemical testing blood draws:

    - Incident number.
    - Date and time of incident.
    - Incident location or where the blood draw procedure is being performed.
    - Suspect or patient name, age and gender.
    - Brief narrative including the requesting law enforcement officer's name and badge number, suspect's or patient's consent for the procedure, kit number, skin preparation used, and site of blood draw(s).

Sierra – Sacramento Valley EMS Agency Program Policy			
ALS/LALS Annual Infrequently Used Skills Verification & Regional Training Module			
	Effective: 06/01/2024	Next Review: 01/2027	**1110**
	Approval: Troy M. Falck, MD – Medical Director		SIGNATURE ON FILE
	Approval: John Poland – Executive Director		SIGNATURE ON FILE

PURPOSE:

A. To identify medical procedures (skills) utilized infrequently by ALS/LALS personnel in the prehospital setting, and provide a standardized method for annual evaluation of all S-SV EMS certified AEMT's and accredited paramedic's ability to safely, efficiently and adequately perform them.

B. To establish a standardized method of ensuring that appropriate education and training is provided to all ALS/LALS prehospital personnel in the S-SV EMS region on a regularly scheduled basis.

AUTHORITY:

A. HSC, Division 2.5, § 1797.214.

B. CCR, Title 22, Division 9, § 100107, 100128, 100147, 100165, 100169, & Chapter 12

DEFINITIONS

A. **Infrequently Used Skills –** Medical procedures that are performed rarely by ALS/LALS personnel in the prehospital setting and/or that may result in serious complications when performed incorrectly.

B. **Regional Training Module –** A standardized training module developed by S-SV EMS in conjunction with the S-SV EMS Regional Quality Improvement Committee.

POLICY:

A. Prehospital service provider agencies shall verify that every S-SV EMS certified AEMT and accredited paramedic affiliated with their organization has successfully performed all of the skills listed in the applicable Infrequently Used Skills Annual Verification Tracking Sheet (1110-A or 1110-B) a minimum of once during every 12-month period. Under special circumstances, an extension to the 12-month requirement may be approved by S-SV EMS upon request.

B. All infrequently used skills shall be verified by successful performance in a structured training environment, utilizing the S-SV EMS approved infrequently used skills verification checklists (1110-C through 1110-L). A copy of the completed applicable Infrequently Used Skills Annual Verification Tracking Sheet (1110-A or 1110-B) shall be maintained in the employee's file for a period of not less than four (4) years, and shall be made available for review by S-SV EMS representatives upon request.

C. Skills competency verification shall be conducted by one of the following:

   1. Service provider's CQI coordinator or their designee.

   2. Service provider's medical director.

   3. Base/modified base hospital prehospital coordinator or their designee.

D. Regional training modules will be developed and distributed by S-SV EMS on an annual basis. All ALS/LALS service provider agencies are required to deliver these training modules and ensure that their affiliated AEMT and paramedic personnel complete this training no later than the end of the current calendar year. BLS personnel are encouraged to complete this training as appropriate, but it is not a mandatory requirement.

E. Any AEMT or paramedic who is determined to not have current skills verification and/or regional training module completion documentation on file shall not be allowed to function as an AEMT or paramedic in the S-SV EMS region until they complete the required skills verification and/or regional training module.

S-SV EMS AGENCY

Regional EMS Aircraft Resource Guide

(Last Revised March 2019)

Contact your primary dispatch center to request an EMS aircraft

This EMS Aircraft Resource Guide was developed by the S-SV EMS Regional EMS Aircraft Advisory Committee

SIERRA – SACRAMENTO VALLEY EMS REGION

- Butte County
- Colusa County
- Glenn County
- Nevada County
- Placer County
- Shasta County
- Siskiyou County
- Sutter County
- Tehama County
- Yuba County

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PURPOSE

The purpose of this resource guide is to provide EMS ground providers standardized guidelines for requesting and utilizing EMS aircraft, within the S-SV EMS region. The primary goal is to minimize loss of life, disability, pain and suffering by ensuring the timely availability of air medical resources in the S-SV EMS region.

UTILIZATION

A. EMS AIRCRAFT CLASSIFICATIONS:

- **Air Ambulance:** Minimum of (2) ALS licensed attendants (normally Paramedic/RN configuration). Generally have an expanded scope of practice.
- **ALS Rescue Aircraft:** Primary function is not prehospital emergency medical transport. Minimum of (1) ALS licensed attendant (Paramedic).
- **BLS Rescue Aircraft:** Primary function is not prehospital emergency medical transport. Minimum of (1) BLS attendant (EMT).
- **Auxiliary Aircraft:** Primary function is not prehospital emergency medical transport. Attendant may or may not have a medical license/certification.

B. AIR AMBULANCE:

AirLink: CCRN/Paramedic or RRT, Night Vision, VFR

AirLink 3 (Klamath Falls), skids, 1 patient capability, side load.

Calstar: RN/RN, Night Vision, VFR, IFR

Calstar 3 (Auburn), skids, 2 patient capability, rear load.
Calstar 6 (South Lake Tahoe), skids, 2 patient capability, rear load.
Calstar 1 (Concord), skids, 2 patient capability, rear load.
Calstar 12 (Modesto), skids, 2 patient capability, rear load.

Care Flight: CFRN/CCP, Night Vision, VFR, TAWS

Care Flight 1 (Fallon), skids, 1 patient capability, L side load.
Care Flight 2 (Gardnerville), skids, 1 patient capability, L side load.
Care Flight 3 (Truckee), skids, 1 patient capability, L side load.
Care Flight 4 (Beckwourth), skids, 1 patient capability, L side load.

Enloe Flightcare: CFRN/FP-C, Night Vision, VFR

(Chico), skids (with skis for snow landing), 1 patient capability, R side load (primary aircraft), L side load (back-up aircraft).

Mercy Flights: CFRN/FP-C, Night Vision, VFR

Mercy 105 (Medford, OR), skids, 1 patient capability, L side load.

PHI Air Medical: CFRN/FP-C, Night Vision, VFR, IFR

Med 4-5 (Susanville), skids, 1 patient capability, VFR, L side load.
Med 4-3 (Redding), skids, 1 patient capability, VFR, IFR, rear load.
Med 4-2 (Sonora), skids, 1 patient capability, VFR, L side load.
Med 4-1 (Modesto), skids, 1 patient capability, IFR, rear load.

REACH: CFRN/Paramedic, Night Vision

REACH 7 (Marysville), skids, 1 patient capability, IFR, rear load.
REACH 5 (Redding), skids, 1 patient capability, VFR, R side load.
REACH 80 (Williams) skids, 1 patient capability, VFR.
REACH 6 (Lakeport), skids, 1 patient capability, VFR, L side load.
REACH 17 (Sacramento), skids, 1 patient capability, IFR, rear load.
REACH 2 (Stockton), skids, 1 patient capability, VFR, L side load.
REACH 19 (Brookings, OR) skids, 1 patient capability, VFR.

SEMSA: CFRN/FP-C, Night Vision, VFR

Air 1 (Susanville), skids, 1 patient capability, L side load.
Air 2 (Adin) skids, 1 patient capability, L side load

C. AIR RESCUE:

CHP: Paramedic, Night Vision, VFR, FLIR, Search, Live Load (1660 Lbs.), External Hoist (500 Lbs. & 165' cable length) and technical rescue capable

H-20/24 (Auburn), skids, can reconfigure for 1 patient capability, L side load.
H-14/16 (Redding), skids, can reconfigure for 1 patient capability, L side load.
H-30/32 (Napa), skids, can reconfigure for 1 patient capability, L side load.

Sacramento Metro Fire Department: SAR, external hoist (600 lb.)

Fire Copter 1 (Sacramento), 1 patient capability.

D. AUXILIARY RESCUE AIRCRAFT:

Butte County SO: regularly staffed May – October, otherwise on call 24/7

H-1 and Bravo-1: Short haul, NVG, day & night rescue, 1 patient capability.

CAL FIRE: available during fire season only

Vina and Columbia: Short haul, 1 patient capability.

ACTIVATION

A. EMS aircraft can be requested by the Incident Commander (IC), or designee. The request for EMS aircraft shall be made through the IC or designee's primary dispatch.

B. An S-SV EMS designated air ambulance coordination center shall be utilized as the coordination center for emergency 911 incidents within the S-SV EMS region.

C. If more than one (1) patient is identified as needing EMS aircraft transport, multiple EMS aircraft may be requested.

D. If needed, request EMS aircraft early or anticipate need for additional EMS aircraft resources to allow sufficient time for response. Requests for EMS aircraft resources may be canceled at any time.

E. If public agencies are not available for Search and Rescue (SAR), consider requesting/utilizing an air ambulance. Air ambulances will maintain availability for other EMS calls and their SAR time is limited.

F. Based upon the best available evidence, the Greater Sacramento Area Trauma Quality Improvement Committee recommends that patients undergoing active CPR should not be transported by air ambulance to a receiving facility.

G. Patients with partial or complete amputation requiring re-implantation, or patients requiring hyperbaric treatment must be evaluated at the local hospital prior to being transported to a specialty center.

SAFETY

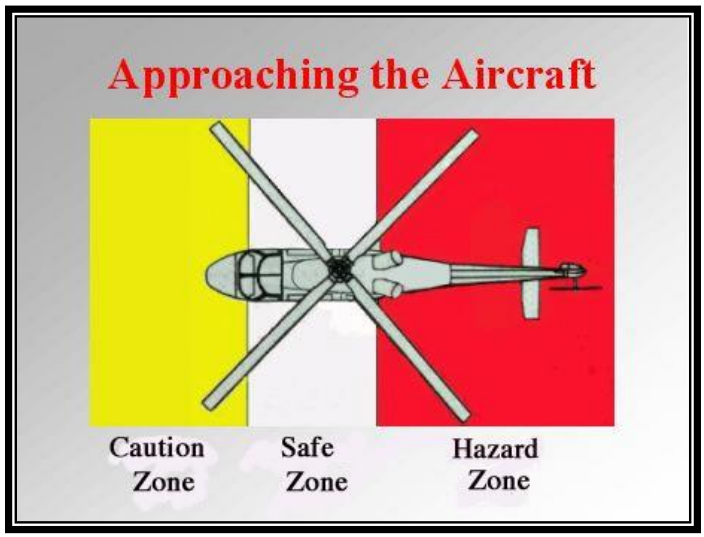
NEVER APPROACH THE AIRCRAFT WITHOUT THE SIGNAL FROM THE PILOT OR FLIGHT CREW TO COME FORWARD.

A. SAFETY ZONES:

Safe Zone – The two areas at each side of the helicopter's main body – **the area in full view of the pilot and flight crew.**

Caution Zone – The area that extends from the pilot forward.

Hazard Zone – The area extending rearward from the main body to the tail rotor. This area should always be avoided and be clear of people, obstacles, and debris.



B. EMERGENCY LANDING ZONE (ELZ) REQUIREMENTS:

Setting up a **SAFE** landing zone will insure the safety of the critical care crew as well as all individuals on the ground.

1. Emergency Landing Zone (ELZ) Day & Night: 100 ft x 100 ft or 100 ft in diameter.
2. ELZ area should be a firm, flat landing surface free of obstacles, hazards, and debris. Be prepared for 60-80 mph winds from rotor wash that would cause debris to be blown around. Consider FIRE POTENTIAL! Always coordinate landing efforts with pilot.
3. If watering a site is required, attempt to use as little as possible to achieve the task. If the ELZ is too slippery to walk in comfortably, it is too slippery to operate in safely.
4. If sloped, the site should NEVER exceed ten (10) degrees.
5. When choosing an ELZ, remember that the aircraft will typically land and take-off **INTO** the wind. These flight paths should be clear of wires, trees, towers, poles, and signs.
6. All vehicle lights will be used by the pilot to locate the ELZ. Be prepared to shut off

lights as requested by the pilot. Some areas may use ELZ kits.

7. Never direct lights toward the aircraft, unless requested specifically by the pilot through the Designated ELZ Officer.

8. Consideration should be given to ingress/egress by ground resources.

9. **The pilot remains the final authority on the acceptance of the ELZ.**

C. OBSERVE AND REPORT TO THE HELICOPTER CREW:

1. Wires, poles, trees, towers, antennae and their relation to the ELZ. When identifying the hazard, use the "clock position" in reference to the aircraft. ("Fence line to your nine o'clock").

2. Terrain features.

3. Surface conditions with the slope angle.

4. Wind speed and direction, including gusts.

5. Hazards such as wellheads, ditches, fence posts, snow stakes, rocks, etc.

6. Animals or livestock

7. Flight path hazards

8. Consider utilizing the pneumonic: **HOTSAW:** (**H**azards, **O**bstructions, **T**errain, **S**urface, **A**nimals, **W**ind/**W**eather)

D. APPROACHING THE AIRCRAFT:

DO

1. Approach the aircraft as directed by the flight crew or upon receiving the "Come Forward" signal from the pilot or crew.

2. Maintain eye contact with the pilot upon approach to the aircraft.

3. Be prepared for 60-80 mph winds. Secure and protect. Protect yourself, other personnel, and your patient from blowing debris.

4. Be mindful of fire danger when using smoke or flares.

5. Communicate freely any hazards you think may be a threat to safe operation. Remain vigilant to hazards during all phases of scene operation.

6. Use the command **"STOP-STOP-STOP"** or **"ABORT-ABORT-ABORT"** when communicating an unsafe condition to the pilot. Once you have his attention, inform him of your concern or observation.

7. Think WIRES! WIRES! WIRES!

8. Follow all directions from the flight crew and pilot.

9. Stay out of the **Hazard Zone** and away from the tail rotor.
10. Use head, eye, and hearing protection. Make sure chin straps are buckled.
11. Always be mindful of the main rotor and the tail rotor.
12. Allow *only* the flight crew to secure all doors and latches in preparation for take-off.
13. Stay clear of the entire ELZ perimeter when aircraft is landing and departing.

NEVER

1. Approach the aircraft without the signal from the pilot or flight crew to come forward.
2. Run in the landing zone, or behave erratically.
3. Chase items that may be blown by the rotor wash.
4. Approach the tail rotor. Contact with a spinning tail rotor is FATAL.
5. Carry items such as IV poles, skis, poles, etc. over your head. All items should be at waist level or below, or secured to the patient stretcher. No items should be above waist level.
6. Allow loose blankets, ball caps, or clothes to be a hazard when the aircraft is running.
7. Approach the aircraft during start-up or shut-down. The blades may dip down, reducing ground clearance and creating a strike hazard.
8. Walk under the tail boom, unless directed by the crew to assist with rear patient loading.
9. Remain within the ELZ perimeter during aircraft landing and departure.

E. EMERGENCY LANDING ZONE (ELZ) REQUIREMENTS:

DESIGNATED ELZ COORDINATOR ROLES AND RESPONSIBILITIES

1. Is responsible for all ground-to-air communications with helicopter.
2. Communicates other frequency when CALCORD is unavailable. Standard frequency is CALCORD (156.0750 MHz). **Line of sight frequency**. CTCSS Tone 156.7
3. Selects landing zone site and is responsible for all hazard identification to aircraft.
4. Communicates ELZ latitude and longitude coordinates to incoming aircraft.
5. Identifies visual references seen from the air to assist the pilot in locating the ELZ.
6. Walks a "Z" or "N" pattern through entire zone, covering all corners, middle, and perimeter to identify slope and possible hazards.
7. Considers the use of water to "settle" snow or dust or help distinguish ELZ.

8. Understands using the "STOP-STOP-STOP" or "ABORT-ABORT-ABORT" command to identify hazards to the pilot during approach or departure.

9. Maintains "radio silence" on final approach and take-off unless a safety issue arises.

10. Directs the use of emergency lighting to mark obstacles such as wires or identify ELZ location **day or night.**

11. Considers the use of additional lighting at night as directed by the pilot. Prepares to have lights turned off including strobes if requested by pilot during NVG operations.

12. Prepares for communication with other members of the ground staff by radio before arrival of the helicopter.

13. Reports having visual contact or hearing the helicopter. Use clock directions as seen by the pilot when identifying your position. "We are at **your** 2 o'clock position next to the grey house in the driveway".

14. Ensures that the entire ELZ is secure from traffic, pedestrians, and livestock. No scene personnel should get closer than 50 feet to the perimeter of the ELZ unless approved and directed by a flight crew member. Bystanders need to be kept at least 100 – 200 feet from the ELZ perimeter.

15. Maintains the security of the ELZ until the pilot clears the aircraft of the ELZ (in the event the departing helicopter must emergently return due to mechanical or other safety issues).

16. Always expects the unexpected.

17. **ALWAYS RELAYS THE PRESENCE OF ADDITIONAL AIRCRAFT IN THE AREA – EITHER REQUESTED OR ON THE GROUND.**

18. **ASSIGNS ADDITIONAL PERSONNEL AS NEEDED TO SECURE ELZ PERIMETER AND MAINTAIN ELZ SECURITY UNTIL INCIDENT IS COMPLETE AND AIRCRAFT HAS DEPARTED SCENE.**

If a "hard landing" or crash occurs during operations, NEVER approach the aircraft until all machinery movement has stopped.

If a fire ensues, use standard methods of extinguishment utilizing foam whenever possible.

LOOK AT LEAST 300 FEET BEYOND ELZ PERIMETER WHEN IDENTIFYING HAZARDS WHENEVER POSSIBLE. COMMUNICATE ALL OBSERVATIONS THAT YOU THINK MAY AFFECT SAFE HELICOPTER OPERATIONS TO THE PILOT DURING YOUR ELZ REPORT.

MULTIPLE CASUALTY INCIDENT (MCI)

A. Consider early request of multiple aircraft if incident scope indicates need.

   1. Aircraft will only take one critical patient at a time.

   2. Additional responders from adjoining regions may be available.

B. Consider need for specialized aircraft: Water rescue, high angle rescue (hoist or short haul capable).

C. Consider staging at closest appropriate airport or pre-designated large ELZ.

D. Follow NIMS and ICS procedures:

   1. Establish ELZ Coordinator.

   2. Consider establishing Air Operations Branch if size of incident warrants.

E. Establish air-to-ground communication frequency early on.

   1. Normally Cal-Cord (156.0750 MHz Simplex). CTCSS Tone 156.7

F. Ensure safety coordination if landing/loading multiple aircraft.

G. Ensure loading safety practices are adhered to – **Don't rush loading – Safety First!**

H. Consider use of available aircraft to transport patients, regardless of injuries, if ground resources are exhausted, overtaxed or if access to scene by ground is limited or difficult.

HAZARDOUS MATERIALS (HAZMAT) INCIDENT

A. The use of EMS aircraft for the transport of potentially contaminated Haz Mat patient(s), or WMD, is generally NOT APPROPRIATE. Patient transport by EMS aircraft shall occur only by direction of the IC or designee. EMS aircraft may be utilized at the discretion of the IC, or designee, to transport immediate radiation contaminated patients under the same criteria as ground based transportation units.

B. Ensure decontamination prior to transporting by EMS aircraft.

C. If an EMS aircraft is requested, recognize that rotor wash of the aircraft may introduce an element into the HAZMAT incident, which is not in the best interest of scene safety. Always strongly consider a rendezvous landing strip 3 – 5 miles away and up wind from the incident site.

EMS AIRCRAFT CONTACT NUMBERS

AIR AMBULANCE PROVIDERS

Airlink	1-800-621-5433
CALSTAR	1-800-252-5050 or 916-565-7720
Care Flight	1-800-648-4888 or 776-858-5700
Enloe Flightcare	1-800-344-1863
Mercy Flights	1-800-786-3729 or 541-858-2600
PHI	1-800-576-7828
REACH	1-800-338-4045
SEMSA	1-775-236-2905

ALS AIR RESCUE PROVIDERS

CHP: Sacramento Comm. Center (Auburn)	916-861-1300
CHP: Redding Comm. Center (Redding)	530-242-3210
CHP: Golden Gate Comm. Center (Napa)	510-286-6923
H-20 (Auburn)	916-261-3633
H-24 (Auburn)	916-539-5062
H-14 & H-16 (Redding)	530-225-2040
H-30 & H-32 (Napa)	707-257-0103
Sacramento Metropolitan FD	1-800-660-0290

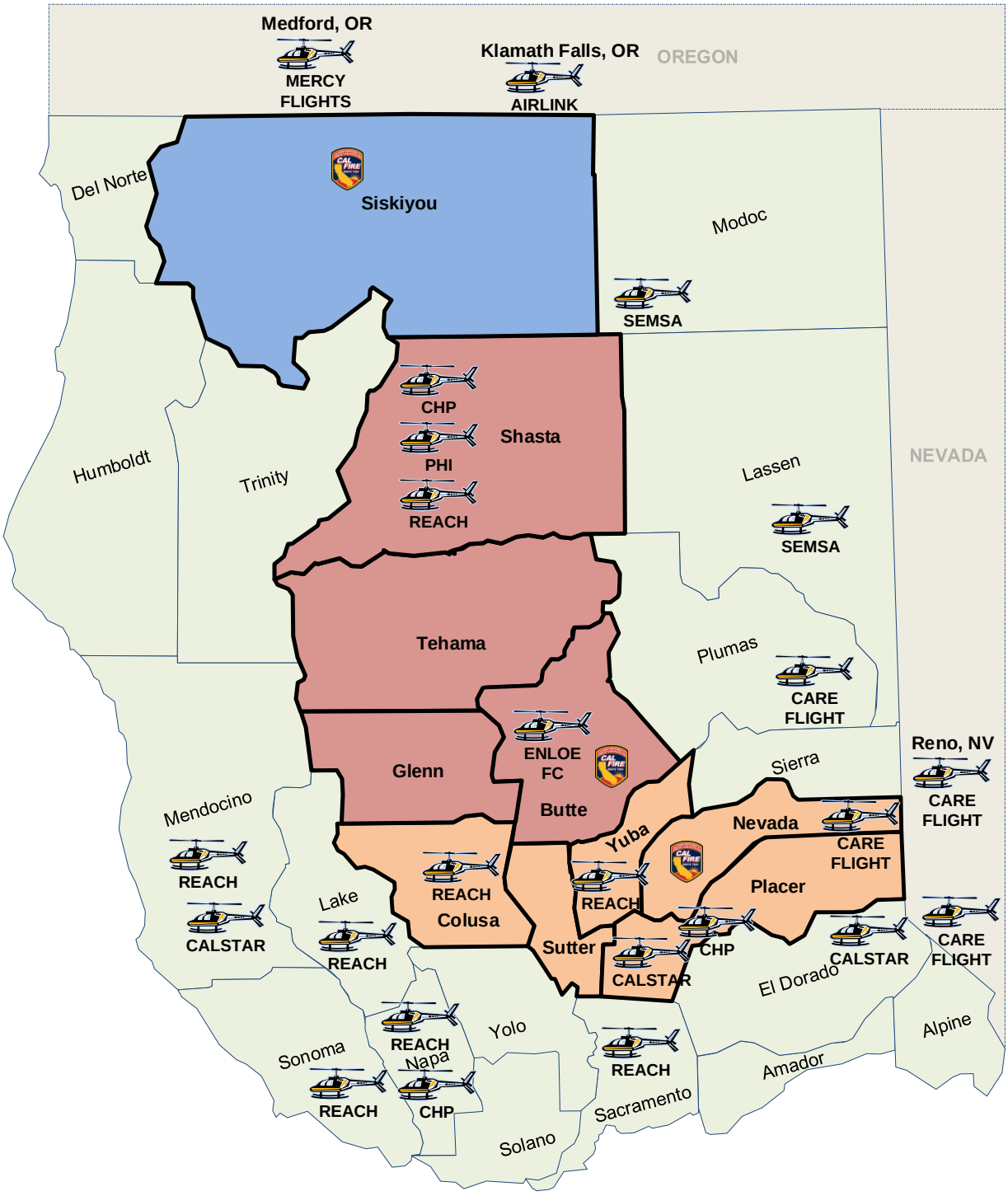
AUXILIARY RESCUE AIRCRAFT

Butte County Sheriff's Office	530-538-7322
CAL FIRE Grass Valley ECC	530-477-0641

S-SV EMS DESIGNATED AIR AMBULANCE COORDINATION CENTERS

CAL FIRE Grass Valley ECC (Colusa, Nevada, Placer, Sutter and Yuba)	530-477-0641
Oroville ECC (Glenn, Butte, Shasta and Tehama)	530-538-6840
CAL FIRE Yreka ECC (Siskiyou)	530-842-7066

Northern California EMS Aircraft Locations (Updated 07/2022)



S-SV EMS Designated Air Ambulance Coordination Centers

- Cal Fire Grass Valley ECC (Nevada County): Colusa, Nevada, Placer, Sutter and Yuba Counties
- Cal Fire Oroville ECC (Butte County): Butte, Glenn, Shasta and Tehama Counties
- Cal Fire Yreka Interagency Command Center (Siskiyou County): Siskiyou County