~~Monterey County~~County of Monterey EMS System Policy

Policy Number: 3050
Effective Date: ~~7/1/202~~63
Review Date: ~~6/30/202~~96

MPDS RESPONSE PRIORITIES AND RESOURCE ASSIGNMENTS TO EMS CALLS

I. PURPOSE

To establish clinically-indicated response priorities and response planning for all emergency medical calls using the Medical Priority Dispatch System™ (MPDS). The MPDS determinants will drive response plans and priorities to reduce the unnecessary use of lights and siren and will provide crucial data for EMS system review and Quality Improvement.

II. BACKGROUND

A. Response determinant methodology is defined by the International Academy of Emergency Dispatch (IAED) in non-linear response levels based on Capability (BLS vs ALS), single vs multiple resources, and Response Priorities based on the general acuity of the patient and resources needed.

B. Response Levels (ECHO, DELTA, CHARLIE, BRAVO, ALPHA, and OMEGA) are designated by the IAED and cannot be modified. However, for the EOA-contracted ambulance provider, Capability, Response Priority, and Response Resources shall be assigned by the EMS Medical Director or the EMS Agency.

C. Response Priorities and Resource Assignments are detailed below (see Table 1). The EMS Medical Director may modify Response Priority and Response Resources to any level or determinant as needed.

III. POLICY

A. Only the designated EMS Communications Center ~~(s)~~ shall dispatch the EOA-contracted ambulance provider, as specified in this policy.

B. The~~A~~ designated EMS Communications Center shall ensure that all medical calls are~~will be~~ dispatched using a standard dispatch script.

C. The EOA-contracted ambulance provider response is subject to reassignment to a higher priority call only if the following conditions exist, as determined by the Emergency Medical Dispatcher (EMD):

   a. The reassignment presents a clear and obvious time savings to the higher priority call; OR

   b. The diversion from the lower priority call will not cause~~subject~~ unnecessary risk to the lower priority patient.

D. Any EOA-contracted ambulance provider response is subject to upgrade~~s~~ or downgrade~~s~~ of Priority as additional information is obtained or the patient's condition changes, as determined by MPDS or by first responders on scene. Upgrade ~~of a Priority~~ to a lights and siren response is prohibited for the sole purpose of expediting ~~speeding up~~ a perceived extended response by a transport provider, unless the first responder on scene has determined the patient requires immediate transport or ALS intervention.

E. EOA-contracted ambulance provider Response Resources and Response Priorities must be approved by Local Medical Control (EMS Medical Director) and are subject to internal EMS Agency review at any time. The EMS Medical Director may approve modifications of Response Resources and/or Response Priorities based on other information sources including, but not limited to: QI processes, medical best practices, case studies, and internal review~~, and other sources~~.

F. ~~E~~Each fire department or fire district may determine their own Response Priorities to each type of call. If a fire department or fire district chooses to use response plans and/or Response Priorities that differ from EMS System policies, that fire department or fire district shall submit its response plans to the EMS Agency.

~~F.~~G. The d~~D~~esignated EMS Communications Center(s) shall be responsible ~~to implement~~for implementing internal Dispatch Review Committee (DRC) and/or Dispatch Steering Committee (DSC) processes.

IV. RESPONSE ASSIGNMENTS

A. ~~EOA-contracted ambulance provider~~ Response Resources and Response Priorities for the EOA ambulance services provider shall be built into the CAD in accordance with this policy and EMS Medical Director approval.

B. Creation of the Medical Call Incident and routing to the dispatch queue for first response and ambulance dispatch shall occur simultaneously as defined in EMS ~~Agency~~ System Policy 3030.

C. ~~Monterey County~~County of Monterey EMS Agency-approved MPDS Response Resources and Response Priorities for chief complaint protocols are specified in Table 1.

   a. CHARLIE and BRAVO response levels may indicate a single resource or multiple resources based on recommended resource ETA.

   b. BRAVO and ALPHA response levels may have BLS or ALS response assignment based on recommended resource ETA.

Table 1.

Response Level	Capability (Level of Care Required)	Clinically-Indicated Response Resource(s) and Priorities		Rationale
		First Responder	Ambulance	
ECHO	**ALS**	**Red Lights & Siren**	**Red Lights & Siren**	
DELTA	**ALS**	**Red Lights & Siren**	**Red Lights & Siren**	• Life-threatening conditions exist • Dispatch c~~C~~losest First Response Unit and ALS Ambulance ~~dispatched~~ • Immediate lights and siren response ~~needed~~required • Multiple resources are likely necessary • ALS transport likely
CHARLIE Urban	**ALS**	**Optional Response - No Red Lights & Siren**	**Red Lights & Siren**	• Condition ~~may be~~is potentially life-threatening • Dispatch ALS Ambulance ~~dispatched~~ • Dispatch of First Response Unit recommended ~~dispatched~~ for extended ETAs • Multiple resources may not be necessary • ALS or BLS transport likely
CHARLIE Rural	**ALS**	**Red Lights & Siren**	**Red Lights & Siren**	
BRAVO Urban	**ALS**	**Optional Response - No Red Lights & Siren**	**Red Lights &Siren**	• Condition is unlikely to be life-threatening • Dispatch ALS Ambulance ~~dispatched~~ • Dispatch of First Response Unit recommended ~~dispatched~~ for extended ETAs • Ambulance t~~T~~ransport less likely
BRAVO Rural	**ALS**	**Red Lights & Siren**	**Red Lights & Siren**	
ALPHA	**Closest BLS or ALS**	**Optional Response- No Red**	**No Red Lights & Siren**	• Condition is likely not life-threatening • Dispatch BLS or ALS Ambulance ~~dispatched~~

		Lights & Siren		• First Response Unit not ~~needed~~recommended • Multiple resources ~~not necessary~~likely unnecessary • Ambulance t~~T~~ransport ~~less likely~~unlikely
OMEGA	**~~Referral~~ BLS or ~~BLS~~Referral**	**Not indicated**	**No Red Lights & Siren**	• ~~Ambulance transport not indicated~~Dispatch BLS ambulance or refer patient to outpatient service as appropriate • ~~Referral to outpatient service appropriate~~Ambulance transport unlikely

~~REFERENCES~~

~~California Code of Regulations, Title 22, Division 9~~

~~California Health and Safety Code § 1797.220~~

END OF POLICY

John Beuerle, M.D.
EMS Medical Director

Teresa Rios
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~~Monterey~~ County ~~of Monterey~~ EMS System Policy

Policy Number: 4070
Effective Date: 7/1/2025
Review Date: 6/30/2028

EMS AIRCRAFT OPERATIONS

I. PURPOSE

A. To establish guidelines and standards of operation for the utilization of EMS ~~air~~ Aircraft ~~transport and destination decisions.~~within the County of Monterey EMS System.

~~B. To authorize the use of and provide a standard of operation for EMS Aircraft services in Monterey County.~~

~~C.~~B. To establish minimum standards for the integration of EMS Aircraft and personnel into the local EMS prehospital patient transport system as a specialized resource for the transport and care of emergency medical patients.

~~D. To establish a process for addressing and resolving formal complaints regarding the integration of aircraft into the prehospital patient transport system.~~

~~E. To designate that~~identify ~~Monterey County of Monterey~~ EMS policies and procedures ~~protocols that all EMS Aircraft personnel shall abide by(with the exception of treatment protocols and scope of practice specifically detailed in Monterey County EMS System Policy 2001: EMS Aircraft Based Paramedic Scope of Practice) shall apply to the EMS Aircraft flight crew as outlined in this policy.~~

~~F. To designate that Monterey County EMS policies and procedures for record keeping and quality improvement, shall apply to EMS aircraft operations.~~

II. POLICY

A. EMS Aircraft ~~providers~~ service ~~organizations~~providers and personnel shall follow the standards established by California Code of Regulations ~~this policy, adhere to the requirements of~~ Title 22, ~~as~~ along with the ~~well as follow Monterey~~ County of Monterey EMS policies ~~and regulations~~ regarding patient transport and destination.

B. EMS aircraft must be authorized by Monterey County EMS Agency ~~in order to~~to provide prehospital patient transport within Monterey County. Authorized EMS aircraft service providers shall comply with this and other Monterey County EMS Policies related to provision of air transport for emergency patients. The classification of EMS Aircraft by the EMS Agency shall be included as part of the EMS Plan.

C. Patients shall be transported to the hospital via ground ambulance unless such transport is unavailable or if ground transport is significantly longer than air transport (and this difference in time may negatively impact the patient's condition).~~EMS Aircraft, in the~~

~~prehospital setting, are to be utilized in situations where a ground ambulance transport will be extended, and the use of an aircraft will shorten the patient's arrival time to the receiving hospital.~~

D. The request for activation of an EMS aircraft should consider:

1. Whether the patient will receive a time to arrival at the destination benefit over ground ambulance transport.

2. Patient needs, such as advanced airway management, that may be more promptly delivered by EMS aircraft personnel than if the patient were transported by ground and the patient's condition requires the intervention for survival.

~~RequestInitiation of for an EMS Aircraft response may be performed by the following entities:~~

D. The request for an EMS aircraft shall be from one of the following:

1. A request from the scene of an incident shall be made through Incident Command.

2. Responding fire, EMS, and/or law enforcement may request an EMS aircraft response prior to arrival of any responders.

3. Emergency Communications Personnel who determine that the nature of the call or the condition of the patient meets auto-launch criteria established by the EMS Agency may request an EMS aircraft response.

~~Fire Department or EMS Public Safety pPersonnel responding to thean incident, delivering patient care at the scene of an incident, or performing triage or incident command.~~

~~EMS personnel having patient care jurisdiction over the location of the incident.~~

~~i. Emergency Communications Ppersonnel who determine that the nature of the call or the condition of the patient meets the EMS Agency's auto-launch criteria.~~

~~C.~~E. The medical flight crew of an EMS aircraft shall have training in aeromedical transportation as specified and approved by the authorizing EMS agency.

~~D.~~F. EMS Aircraft service providers shall orient their pilots and medical flight crews to the local EMS system.

~~E.~~G. An EMS Aircraft shall not be used as a replacement for a ground ambulance. A ground ambulance shall always be dispatched for scene calls. The ground ambulance shall not be cancelled until the air ambulance is off the ground and en-route to the destination hospital.~~An EMS Aircraft shall not be used as a replacement for a ground ambulance. All EMS response will require a ground ambulance response. A ground ambulance may only be cancelled once the aircraft has begun transporting the patient to the receiving hospital.~~

~~F.~~H. In accordance with ~~Monterey~~ County of Monterey EMS A~~a~~gency policies, all EMS aircraft shall have the capability of communicating with:

1. Designated dispatch center(s)~~.~~
2. EMS ground units~~. at the scene of an emergency.~~
3. Designated base hospitals~~.~~
4. Receiving hospitals~~.~~
5. Other ~~appropriate~~ facilities or agencies that the County of Monterey EMS Agency deems appropriate~~.~~

III. PATIENT DESTINATION DECISIONS, ADULT AND PEDIATRIC TRAUMA

A. Adult patients who meet criteria for classification as a Major Trauma Patient (MTP) under the Field Trauma Triage Criteria policy are to be transported to Natividad or the closest ~~Level 2 or higher~~most appropriate Level I or Level II trauma center.

B. Air transport should be considered when the anticipated transport time by ground exceeds 45 minutes. Anticipated transport times must be determined on a case-by-case basis. The decision must consider travel times, weather, road conditions, traffic volume, availability and location of air ambulance resources, ongoing extrication or patient access, responding ambulance ETA, and other pertinent factors.

C. Pediatric MTPs shall be transported to a pediatric trauma center or to the destination ordered by Natividad.

D. When possible, the landing zone (LZ) should be established in a location that is closer to Natividad rather than transporting the patient away from Natividad should air transport become unavailable.

E. Patients requiring emergency airway management that cannot be successfully performed by EMS or EMS Aircraft providers shall be transported to the closest, most accessible emergency department.

F. Base hospital contact with Natividad is mandatory if initial rendezvous is aborted or redirected.

IV. PATIENT DESTINATION DECISIONS, MEDICAL PATIENTS

A. For patients whose emergency medical condition requires emergency (Code 3) transport to a hospital, air transport should be considered if:

1. The destination hospital has an on-site helicopter landing pad and the ~~Air transport should be considered when the a~~anticipated transport time by ground exceeds 45 minutes, or

2. ~~.~~ The destination hospital does not have an on-site helicopter landing pad and the a~~A~~nticipated transport time~~s~~ by ground exceeds 60 minutes.

~~G.~~B. The decision about whether air transport is appropriate must be determined on a case-by-case basis. C~~The decision must c~~onsiderations should include travel times, weather, road conditions, traffic volume, availability and location of air ambulance resources, responding ambulance ETA, and other pertinent factors.

~~H.~~C. When possible, the LZ should be established in a location that is closer to a local hospital rather than transporting the patient away from a local hospital should air transport become unavailable.

~~I.~~D. Patients in extremis or with an uncontrolled airway shall be transported to the closest, most accessible emergency department.

V. PROCEDURES

A. Activation of an EMS aircraft response shall follow the requirements found in this policy. ~~Outside the Urban Response Zone: Units responding to an incident may , prior to arrival at scene, request the response of an EMS Aircraft. should they believe conditions such as distance make it likely that the EMS Aircraft will be able to respond faster than ground resources or the patient's condition requires EMS Aircraft response.~~

B. All requests for EMS Aircraft shall be made through the County of Monterey Emergency Communications Department (ECD) or by the CALFIRE Dispatch Center through the ECD.

~~B. EMS Aircraft Dispatch:~~

~~1. EMS Aircraft will be dispatched based on the criteria listed above.~~

~~1. All requests for EMS Aircraft shall be made through the County of Monterey Emergency Communications Department (ECD) or by the CALFIRE Dispatch Center through the ECD.~~

C. The following information shall be given to the ECD when requesting EMS Aircraft:

1. Agency name and dispatch frequency of agency requesting helicopter;
2. Location and the number of patient(s);
3. Type and extent of injuries, if known;
4. Request for a hoist or other specialized capabilities, if needed;
5. Designated Landing Zone;
6. General location of nearest landing site (Thomas Bros. Page and GPS coordinates and/or significant landmarks identifiable from the air); and,
7. General weather/visibility conditions.

D. The ECD ~~-~~shall request an estimated time of arrival (ETA) when notified that an EMS aircraft will accept the mission. This ETA shall be provided to the Incident Commander.

1. The EMS aircraft provider shall respond with the ETA and aircraft identification, within three (3) minutes. The ECD shall request the next available EMS aircraft if no ETA is provided within three (3) minutes of making the request.

E. EMS Aircraft should not accept a mission unless there is the reasonable expectation that they will be able to complete the transport to the destination hospital. Factors including weather, fuel, or other considerations shall be taken into account.

1. Any delay in response of the EMS aircraft shall be reported by the flight crew to the Incident Commander. Notification shall include the reason for delay, ETA, and any pertinent information to assist the IC in determining whether another EMS aircraft should be requested or alternate means of patient transport should be utilized.

F. EMS Aircraft auto-launch shall be initiated by ECD in instances that meet the following criteria and are within the EMS Agency's designated auto-launch area:

i. Penetrating trauma to the head or trunk
ii. Burns to the head or trunk
iii. Fall greater than 20 feet
~~Vehicle versus Pedestrian/Bicycle/AVT/Motorcycle~~
iv. Explosion with suspected injuries to people present
v. Electrocution
vi. MCI
vii. Industrial/Agricultural accident with loss of consciousness or major injuries suspected
viii. Vehicle versus Pedestrian/Bicycle/ATV/Motorcycle with loss of consciousness or major injuries suspected
ix. MVC with loss of consciousness or major injuries suspected
x. Watercraft collision with loss of consciousness, near drowning, or major injuries suspected

~~Burns to the head or trunk~~

~~D.~~G. Communications:

1. The ECD shall request the closest EMS Aircraft, according to the matrix established by the EMS Agency, be dispatched unless the Incident Commander determines the use of a Rescue Aircraft is appropriate.
2. The ECD shall advise all responding ground and air units of EMS Aircraft dispatch, estimated time of arrival, radio frequency, and/or cancellation.
3. CALCORD is the preferred channel for ground-to-helicopter communication. The Incident Commander or designee, in consultation with the ECD, can identify other radio frequencies to be used.

4. The EMS Aircraft shall contact the ECD when enroute to the scene to ascertain the radio frequency and contact person to be used for air-to-ground communication.
5. The EMS Aircraft shall notify the receiving facility of their impending arrival as soon as possible prior to arrival. This notification is to include patient information and an ETA.
6. EMS Aircraft providers shall notify the ECD if a ~~Monterey County~~ ground ambulance is needed from the terminal airport or LZ to the receiving hospital.
7. Ambulance crews may talk directly with fire crews for coordination of EMS Aircraft requests. The ECD shall advise the EMS Aircraft Dispatch Center(s) if multiple aircraft are providing support to the incident.

~~E.~~H. Cancellation of EMS Aircraft~~/Ground Providers~~

1. ~~The responding ground ambulance shall not be canceled until the EMS Aircraft has departed the scene with the patient on board.~~ Only the Incident Commander may cancel the EMS Aircraft from the scene of an emergency. This decision should be made after consultation with the ground ALS provider and when it is determined that transport is no longer needed or ground transport is appropriate.
2. The Incident Commander's decision to cancel the requested EMS Aircraft should be based upon the total pre-hospital time from dispatch to arrival at the hospital, patient's medical condition, severity of injury, and/or safety and environmental conditions.
3. The EMS Aircraft crew may transfer responsibility for patient care to a ground ambulance crew if no interventions beyond the ~~Monterey~~ County of Monterey Paramedic Scope of Practice have been utilized, and if both parties are in agreement.

~~3.~~4. EMS aircraft personnel may cancel their response when the crew has determined that safety of the aircraft, personnel, and/or the patient may be compromised by continuing the mission.

~~F.~~I. Air and Ground Ambulance Rendezvous:

1. In the event that an EMS Aircraft is unable to land at the scene, consideration shall be given by the Incident Commander or designee to arrange for a rendezvous at a pre-designated LZ. The ground ALS transport provider shall be consulted.
2. Following Initiation of Ambulance Transport:
    a) If patient transport is initiated by the ground ambulance but the original ground ETA becomes extended, rendezvous at an approved LZ may be initiated by ambulance personnel when the patient's~~(1) patient~~ condition deteriorates, ~~(2)~~ traffic conditions are prohibitive, or the ~~(3)~~ unit develops mechanical failure. ~~Monterey County Emergency Communications Center~~ECD shall be notified.

b) If circumstances preclude EMS Aircraft from landing at an approved LZ, the ground ALS transport provider should request a public safety agency response to assist in securing and preparing the selected LZ.

3. Only personnel trained in EMS Aircraft landing procedures shall be utilized to determine the LZ and assist in landing the EMS Aircraft.

~~G.~~J. Medical Control

1. Each EMS Aircraft provider shall have a designated Flight Medical Director.

~~H.~~K. ~~EMS~~ Aircrafts that do not have a medical flight crew shall not transport patients unless accompanied by medically-qualified ground EMS personnel. Ground ambulance personnel shall obtain approval from the on-duty supervisor prior to transport.

~~I.~~L. Helicopter Safety:

1. All first responder and ambulance provider personnel shall be trained in helicopter safety and landing procedures.
2. Scene security is of prime importance. The agency coordinating the landing shall ensure the LZ is secure and safe.
3. The EMS Aircraft pilot shall have final authority as to the safe operation of the air transport. If the pilot deems that patient transport by EMS Aircraft would be unsafe, the patient will be transported by ground ambulance.
4. Ground personnel shall not approach the EMS Aircraft unless directed to do so by EMS Aircraft crew. When approaching or departing the helicopter, ground personnel shall not lift anything higher than their head nor shall they at any time approach or depart a helicopter from the rear or from the uphill side when the aircraft is landed on a slope.
5. Hats, helmets, turnouts, or any loose items are to be secured or removed prior to approaching the helicopter. Any removable objects shall be stripped from the gurney when approaching the helicopter.

VI. AUTHORIZATION OF AN AIR AMBULANCE

A. ~~Air Ambulance~~ All EMS Aircraft and Air Rescue service providers—including companies, lessees, agencies (excluding federal agencies), owners, operators, and hospitals that base, house, or station EMS aircraft either permanently or temporarily—must comply with all applicable federal, state, and local laws, regulations, policies, and procedures governing EMS aircraft operations. This includes requirements related to flight crew qualifications and aircraft maintenance.~~and Air Rescue service providers including any company, lessee, agency (excluding agencies of the federal government), provider, owner, operator who provides or makes available prehospital air transport or medical personnel either directly or indirectly or any hospital where an EMS aircraft is based, housed, or stationed permanently or temporarily shall adhere to all federal, state and local statutes, ordinances, policies, and procedures related to EMS aircraft operations, including qualifications of flight crews and aircraft maintenance.~~

B. EMS Aircraft service providers ~~shall request authorization to operate in the County of Monterey from the Monterey County~~that want to operate within ~~EMS Agenc~~the County of Monterey~~y. The~~ shall submit a written request to the EMS Agency. ~~shall include a statement that the EMS Aircraft service provider will follow Monterey County policies regarding EMS aircraft. In addition, service providers will agree to provide an electronic Patient Care Report (ePCR) to the EMS Agency for each patient transported from or within Monterey County (see Monterey County EMS System Policy 6180 – Patient Care Records).~~ The request shall also include the classification and location of aircraft ~~that are proposed~~ to be available to Monterey County.

C. Within five (5) business days following transport, EMS Aircraft service providers shall provide the County of Monterey EMS Agency with ~~a copy of the~~copies of all ePCRs for ~~all~~ patients transported ~~from or~~ within the County of Monterey ~~to the Monterey County EMS Agency within 10 5 business days for QI purposes~~. EMS Aircraft ePCR's will be reviewed by EMS Agency staff on a regular basis.

VII. FORMAL COMPLAINTS

A. Complaints regarding the integration of EMS Aircraft into the EMS system shall be handled by the County of Monterey ~~County~~ EMS Agency.

B. EMS Aircraft service providers shall follow County of Monterey ~~County~~ EMS System Policy #6020 (Unusual Occurrence Reporting) for reporting of all complaints ~~or other unusual occurrences~~.

END OF POLICY

~~Monterey~~ County of Monterey EMS System Policy

Policy Number: 4080
Effective Date: ~~7/1/2023~~
Review Date: ~~6/30/2026~~

EMT PATIENT CARE

I. PURPOSE

To authorize and provide:

A. A~~a~~ procedure for an EMT to be the primary patient care provider when working with a paramedic on an ALS ambulance.
B. ALS first response personnel guidance for the orderly transfer of patient care and responsibility to an EMT assigned to a BLS ambulance for transport.

II. POLICY

A. Transfer of patient care from a paramedic to an EMT may only occur ~~The EMT~~EMTs ~~member of an ALS ambulance~~ provider ~~may provide primary patient care under the guidance of the~~only after the ~~a~~ paramedic ~~only~~ has performed an initial assessment and deemed the patient to be safe and appropriate for BLS care.~~under the utilization guidelines specified in this policy.~~

B. The patient must not have any cardiac, respiratory, traumatic, or neurological complaints that may warrant an ALS intervention(s) on scene or during transport. No patient will be turned over from an ALS provider to a BLS provider once ALS interventions have been initiated.

C. At the scene of a declared MCI, BLS ambulances may be utilized when the patient is not expected to need care which exceeds the scope of practice of the EMT.

~~B. All factors specified in these guidelines must be present for the EMT to provide primary patient care.~~

~~C. For the EMTs member of the ALS of the ambulance to be permitted to function as the primary provider of patient care under this policy, the staffing educational and reporting requirements of this policy must be met.~~

III. UTILIZATION GUIDELINES

A. ~~The~~ EMT~~'~~s may provide primary patient care when reasonable care has been taken to ensure that no ALS interventions or assessments are anticipated during patient transport.

B. Paramedics shall be responsible for the initial patient assessment and care provided to the patient until the transfer of care occurs to the EMT. If it is discovered ~~that~~ during the initial assessment there were signs that indicated a need for ALS care, that paramedic shall be held responsible.

~~B. The paramedic has responsibility for the patient assessment and care provided to the patient whether provided directly by the paramedic or by the EMT.~~

C. ~~The~~ EMT~~'~~s may monitor the following treatments/medical devices:

1. IV ~~locks and~~ lines and the IV infusion of~~delivering~~ either glucose solutions or isotonic balanced salt solutions, including Ringer's L~~l~~actate. The EMT may only monitor, maintain, and adjust if necessary to maintain a preset rate of flow or turn off the flow of IV fluid.

2. Nasogastric (NG) tubes or gastrostomy tubes.

3. Foley catheters.

~~—~~ Tracheostomy tubes.~~.~~ ~~The EMT may only monitor, maintain, and adjust if necessary to maintain a preset rate of flow or turn off the flow of IV fluid.~~

4.

~~C.~~

~~D. The EMT may transfer a patient who has nasogastric (NG) tubes, gastrostomy tubes, heparin/saline locks, foley catheters, tracheostomy tubes, and/or indwelling vascular access lines (excluding arterial lines) when the sending physician does not specify ALS monitoring of the patient.~~

~~E. The EMT shall not be required to provide primary patient care under this policy should they have any concerns about the patient status or perceived need for ALS assessment or care.~~

~~F. The paramedic is to provide primary patient care when the patient needs ALS assessment or interventions.~~

~~IV. STAFFING REQUIREMENTS~~

~~A. The EMT must have been fully cleared to function as a crew member of the provider agency.~~

~~B. The paramedic shall have a minimum of two (2) years full-time service as a paramedic with one (1) year full-time experience in Monterey County.~~

~~V.~~IV. AMBULANCE SERVICE PROVIDER RESPONSIBILITIES

A. The ambulance service provider shall ensure that the EMT functioning under this policy is familiar with and has a working knowledge of this policy.

~~The ambulance service provider shall provide the following statistics to the EMS Agency for review every six (6) months.~~

B. ~~The total number of patients transported with the EMT providing primary patient care.~~

~~The total number of patients where the paramedic took over primary responsibility after transport was started.~~

C. The ambulance service provider shall notify the EMS Agency ~~within 24 hours~~immediately if a patient being transported under this policy clinically worsens, ~~or has an adverse event during transport,~~ if patient care responsibilities are taken over by the paramedic, and/or if the patient is diverted to a specialty center.

END OF POLICY

John Beuerle, M.D.
EMS Medical Director

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EMS Bureau Chief

~~Monterey County~~County of Monterey EMS System Policy

Policy Number: 4150
Effective Date: ~~7/1/2026~~3
Review Date: ~~6/30/2029~~6

ALS FIRST RESPONDER AUTHORIZATION AND APPROVAL PROCESS

I. PURPOSE

A. To establish standards and procedures for the EMS Agency to authorize First Responder Applicant Agencies to provide Advanced Life Support (ALS) within the ~~Monterey County~~County of Monterey EMS System.

II. POLICY

A. This policy defines the process by which a ~~new potential ALS~~ First Responder Agency that desires to provide ALS First ~~r~~Responses~~e~~ Services, but not ~~-~~transport services, applies to provide ALS First~~emergency medical response~~ Response ~~s~~Services. This policy also details ~~and~~ the evaluation, processing, and adjudication of that application by the County of Monterey EMS Agency.

B. The ~~Monterey County~~ County of Monterey EMS Agency will evaluate each potential ALS First ~~Emergency~~ Responder Agency's application primarily for: (1) clinical benefit, clinical detriment, and clinical effect on patients within the ~~Monterey County~~County of Monterey EMS System; and (2) financial and operational benefit, financial and operational detriment, and financial and operational effect on ~~and~~ the ~~Monterey County~~County of Monterey EMS System.

C. The ~~Monterey County~~County of Monterey EMS Agency uses a four-phase process to integrate new ALS First Responder~~s~~ Agencies into the ~~Monterey County~~County of Monterey EMS System. Those phases are:

1. Phase 1: Application Phase
2. Phase 2: Application Review and Approval Phase
3. Phase 3: Paramedic Service Provider Agreement Phase
4. Phase 4: Final inspection, approval, and authorization to implement ALS Phase

D. Potential ALS First Responder Agencies may not implement ALS service before all phases are complete.

E. ALS service areas will be granted for and defined by specific geographic areas.

F. ALS First Responder agencies shall ensure that personnel participate in a Quality Improvement process. Each provider shall facilitate call review and provide Quality Improvement reports to the EMS Agency, consistent with County of Monterey EMS System~~Agency~~ policies and procedures.

G. The EMS Agency shall review and collaboratively determine whether to renew, revise,

cancel or otherwise modify its agreement with each ALS First Responder Agency at least every five (5) years. ~~and at the end of each EOA Ambulance Contract Cycle.~~

H. The EMS Agency may deny, suspend, or revoke the approval of an ALS First Responder Agency for failure to comply with applicable policies, procedures, and regulations.

I. Successful completion of this process allows an organization to provide ALS ~~Emergency Response~~First Response Service. It does not provide authorization for ALS or BLS transport.

J. Successful completion of this process does not confer exclusivity to provide BLS or ALS ~~emergency~~First ~~r~~Response ~~s~~Services within the authorized zone.

III. PROCEDURE

A. A First Responder Agency wishing to provide ALS services must complete the following application process:

B. Phase 1: Application Phase

1. Submit a proposal to the EMS Agency that documents:

a. Justification for ALS services

1) Document the medical/clinical need and justification for ALS service

b. Geographic Service Area

1) Provide a narrative description and a map identifying the Applicant Agency's proposed ALS service area. Identify whether the Applicant Agency's proposed ALS service area includes the entire response zone or if part of the Applicant Agency's response zone will continue to receive BLS service.

2) Identify the proposed specific locations of the Applicant Agency's emergency response units that will be staffed and equipped at the ALS level.

3) Identify whether the Applicant Agency's proposed ALS response area overlays the jurisdiction of another local EMS agency.

c. Quality Improvement Program

1) Applicant Agency must h~~Applicant Agency must h~~ave a current, approved QI plan on file with the EMS Agency. ~~Submit the Applicant Agency's current QI Plan.~~

2) Submit documents that demonstrate a QI Program consistent with the QI Plan for at least six months (*e.g.*,

annual updates, data reports).

3) Document the number of hours per month that the Applicant Agency will allocate to quality improvement activities.

4) ~~Before beginning service,~~ Ddesignate an agency member to serve as the provider liaison, ~~and~~ training officer, and as the main contact person ~~for the EMS Agency~~ for Applicant Agency-based quality improvement and training issues.

d. Staffing

1) Document the number of Applicant Agency's proposed paramedic positions and the number~~s~~ of paramedics that will fill those positions.

2) Document the Applicant Agency's proposed shift schedule, the number of hours per shift, and the amount of time off between shifts.

3) Document that the Applicant Agency's response to emergency medical requests will be staffed with a minimum of one ~~Monterey County~~ County of Monterey ~~-~~accredited Paramedic and one California ~~-~~licensed EMT.

e. Hours of Operation

1) Document that the Applicant Agency shall provide ALS services on a continuous 24 hours/day basis.

f. Response Time Performance

1) Provide dispatch and response time data or authorize access to the Applicant Agency's data ~~dispatch and response time data~~ for the most recent 12-month calendar year, in an editable excel spreadsheet, using the most current version of the National EMS Information System (NEMSIS) and California EMS Information System (CEMSIS) ~~-s~~Standard~~s data. points identified in Attachment A.~~

2) Provide dispatch and response time data or authorize access to the Applicant Agency's ~~dispatch and response time~~ data on an ongoing basis.

g. EMS Call Handling/Dispatch of ALS Resources

1) Identify the flow of the Applicant Agency's emergency calls from the primary PSAP through each intermediary point to a~~the Monterey County~~County of Monterey ~~-~~designated EMS Communication Center~~.~~ to ensure callers have access to emergency medical ~~-~~based dispatch,

including MPDS-based caller interrogation and, if indicated, pre-arrival instructions.

2) ~~The~~ Describe the Applicant Agency's ~~call taking, and~~ dispatch process ~~must assure that all callers within the~~of ALS resources within the proposed ALS service area. ~~will have access to emergency medical based dispatch, including MPDS-based caller interrogation and, if indicated, pre-arrival instructions~~.

3) The Applicant Agency's call taking~~,~~ and dispatch process must assure that the Applicant Agency is dispatched in a manner consistent with EMS Agency-approved MPDS protocols.

h. EMS System Participation/Coordination with Ambulance Providers

1) Document the Applicant Agency's commitment to support the EMS System by:

a) Participating in EMS Agency-recognized MCI and disaster exercises.

b) Allowing EMT and paramedic students to ride as interns.

c) Otherwise participating in the training and mentorship of EMT and paramedic~~s~~ students and interns, ED personnel, and communications center personnel.

i. Patient Care Record System

1) Document the electronic patient care record system used.

2) If not currently utilizing the ~~Monterey County~~County of Monterey EMS Data System, document that the Applicant Agency will either switch to the ~~Monterey County~~County of Monterey EMS Data System or incur the costs and accept the liability to connect and continuously maintain bi-directional interoperability with the ~~Monterey County~~County of Monterey EMS Data System.

j. Compliance with Federal, State, and Local Law

1) State that the Applicant Agency will comply with all federal and state laws, local ordinances, and EMS System P~~p~~olicies, P~~p~~rocedures, and P~~p~~rotocols.

k. Equipment and Supplies

1) Document the Applicant Agency's plan to secure, maintain and replenish controlled substances, other drugs, solutions,

and equipment.

l. ALS Financing

1) Describe the method that the Applicant Agency will use to finance the ALS service, including any proposed fees and method of fee collection.

2) The EMS Agency will reject any application that utilizes a funding mechanism that may detrimentally affect the financial viability of the County of Monterey EMS System. ~~contracted EOA 911 ambulance provider~~.

2. The application shall be signed by the individual authorized by the Applicant Agency~~'s chief executive~~ to enter into agreements. ~~This person should be the same person who would sign the Applicant Agency's paramedic service provider agreement, if authorization to provide ALS Emergency Response Services is authorized. For contracted provider organizations, the chief executive of the organization providing service and the contracting agency must sign. If the contracting agency does not have a chief executive, the chairman of the policy board must sign.~~

C. Phase 2: Application Review and Approval Phase~~:~~

The EMS Agency and EMS Medical Director will review~~,~~ and determine whether to approve~~,~~ the Applicant Agency's application.~~:~~

~~3.~~1. The EMS Agency shall date and time stamp the Applicant Agency's application at the time of receipt, and shall acknowledge receipt of the application in writing to the applicant.

~~4.~~2. EMS Agency personnel shall review the application and determine ~~or~~ if it is complete and meets applicable federal, state, and local ordinances~~,~~ and EMS System P~~p~~olicies, P~~p~~rocedures, and P~~p~~rotocols.

~~5.~~3. If the application is incomplete~~,~~ or does not meet applicable laws and EMS System P~~p~~olicies, P~~p~~rocedures, and P~~p~~rotocols, the EMS Agency will decline to process the application, and will notify the Applicant Agency in writing of the application's deficiencies. The Applicant Agency may resubmit the application after correcting any deficiencies.

~~6.~~4. If the application is complete and meets applicable laws and EMS System P~~p~~olicies, P~~p~~rocedures, and P~~p~~rotocols, the EMS Agency will further evaluate the application. The evaluation will consider, but will not be limited to, the information presented in the application~~,~~ and the clinical, operational, and financial impacts of granting the applicant's request ~~on~~for that organization, those that it serves, and the ~~Monterey County~~County of Monterey EMS System.

~~7.~~5. The EMS agency shall meet and discuss the application with representatives of the Applicant Agency~~,~~ before issuing a tentative determination.

~~8.~~6. The EMS Agency will issue a tentative determination to either authorize~~,~~ or not

authorize~~,~~ the First Responder Agency to provide ALS services. This determination will identify the EMS Agency's rationale for ~~their~~ its decision. If the authorization includes conditions, those conditions will be explained in this tentative determination.

~~9.~~7. Upon EMS Agency verification of receipt~~ving~~ of a completed application from the Applicant Agency, the EMS Agency will schedule a discussion of the application on the agenda of the next meeting of the ~~Medical Advisory Subcommittee~~ Clinical Care Committee (~~MAC~~CCC) ~~next meeting~~ to seek the ~~MAC~~ CCC's ~~committee's~~ recommendation ~~on~~regarding the application. At the ~~MAC~~ CCC meeting, the applicant may present ~~their~~ its rationale for ~~their~~ its request to provide ALS ~~emergency~~ first response service. The EMS Agency may present ~~their~~ its rationale for supporting or denying the applicant's application. The CCC~~MAC~~ may ~~recommend~~ endorse ~~whether to authorize or not~~ the EMS Agency's recommendation or may issue its own recommendation. ~~authorize~~approve ~~or deny~~ ~~the Applicant Agency's application to the EMS Medical Director and EMS Director.~~

~~10. The EMS Agency may convene a public hearing to discuss and take comment on the Applicant Agency's application.~~

~~11.~~8. ~~Based upon the recommendations of the MAC subcommittee, and the input provided at the public hearing, if convened,~~ The EMS Director and EMS Medical Director will make a final determination.

a. A final determination to approve or deny the Applicant Agency to provide ALS services will be made within 90 days of receipt of a completed application.

b. If the EMS Director and EMS Medical Director's determination is to authorize the Applicant Agency to provide ALS services, the Applicant Agency advances to Phase 3: Paramedic Service Provider Agreement Phase.

c. If the EMS Director and EMS Medical Director's determination is to not authorize the Applicant Agency to provide ALS services, the application process ends.

D. Phase 3: Paramedic Service Provider Agreement Phase~~.~~

The EMS Agency and the ~~First Responder~~ Approved Applicant Agency wishing to provide ALS services ~~will attempt to~~must enter into ~~an~~ the ALS Service Provider Agreement, identified as Attachment A, as required by California Code of Regulations, Title 22, Section 100096.01~~67~~. The Paramedic Service Provider Agreement shall minimally address the following items:

1. ~~Scope of services~~Term of agreement

~~12.~~2. ~~-~~Scope of services (to include primary service/geographic area to be served)

3. ~~Geographic area to be served~~Medical control and ~~q~~Quality ~~i~~Improvement Program/Plan~~????~~

4. EMS data management and reporting

~~13.~~5. ~~-~~Telecommunications

~~14. Emergency response procedures and standards~~

~~15. Level of service standards, quality improvement, and disputes~~

~~16.~~6. MPDS, communication, and dispatch standards

7. Equipment, supplies, and medications ~~and supply standards~~

8. MCI and EMS System Preparedness

~~17.~~9. ~~-~~Ride along by EMS Agency staff

~~18.~~10. Personnel standards

11. Shift schedules/fatigue

12. Performance reporting

~~19.~~13. Record inspection

~~20. Process to provide quality improvement reports to EMS agency~~

14. Patient privacy

~~—~~Prohibitions on sub-contracting or transferring ALS Authorization

15.

~~21.~~16. Insurance and indemnification

17. Pricing, Fees, Billing, and Compensation (if applicable)~~-~~

18. Compliance with statutes, regulations, ordinances, policies, and procedures

19. Suspension, Revocation and Termination of Agreement

20. Waiver

21. No Third-Party Rights

22. Relationship of the parties

~~22.~~23. Notices

~~23. Performance Reporting~~

~~24. Performance, breach, and default~~

~~25. Coordination with ALS ground ambulance companies~~

~~26. MCI and EMS System training, drilling and exercising~~

~~27. Mutual aid~~

~~28.1. Prohibitions on sub-contracting or transferring ALS Authorization~~

29. HIPAA, CCMIA, and HITECH

C.E. Phase 4: Final inspection, approval, and authorization to implement ALS Phase

1. Following the execution of a paramedic service provider agreement by all parties, the EMS Agency will inspect the Applicant Agency's ALS Program. This inspection will verify the presence of the personnel, equipment, and supplies, and will verify the Applicant Agency's compliance with EMS System Policies, Procedures, and Protocols.
2. Following a successful inspection, the EMS Agency shall authorize the Applicant Agency to start providing ALS service.
3. The EMS Agency will notify Base Hospitals, Receiving Hospitals, County Communicationsthe County of Monterey Emergency Communications Department, and the EMS Communications ' Center that the Applicant Agency is an authorized ALS First Responder Agency.

NOTE:

In instances where a First Responder Agency has an active paramedic service provider agreement in place at the time of this policy's implementation or subsequent revisions, that agreement shall remain valid and enforceable through its original expiration date. The agency shall not be required to renew or modify the existing agreement to comply with the updated policy until the current agreement term has expired or is otherwise terminated.

IV. REFERENCES

California Health and Safety Code, Division 2.5, Sections 1797.52, 1797.78, 1797.84, 1797.178, 1797.206, 1797.218, 1797.220

California Code of Regulations, Title 22, Sections 100167 and 100144.

Monterey County Code of Ordinances, Section 15.40, et. seq.

END OF POLICY

John Beuerle, M.D.
EMS Medical Director

Teresa Rios
EMS Bureau Chief

Attachment A

NEMSIS 3.4 Time Point Standards

Provide the following Dispatch and Response Time data points, consistent with the following definitions:

1. PSAP Call Date/Time: The date/time the phone rights (9111 call to public safety answering point or other designated entity requesting EMS services. (NEMSIS eTimes.01)
2. Dispatch Notified Date/Time: The date/time dispatch was notified by the 911 call taker (if a separate entity) (NEMSIS eTimes.02)
3. Unit Notified by Dispatch Date/Time: The date/time the responding unit was notified by dispatch. (NEMSIS eTimes.03)
4. Dispatch Acknowledged Date/Time: The date/time the dispatch was acknowledged by the EMS Unit. (NEMSIS eTimes.04)
5. Unit En Route Date/Time: The date/time the unit responded; that is, the time the vehicle started moving. (NEMSIS eTimes.05)
6. Unit Arrived on Scene Date/Time: The date/time the responding unit arrived on the scene; that is, the time the vehicle stopped moving at the scene. (NEMSIS eTimes.06)
7. Arrived at Patient Date/Time: The date/time the responding unit arrived at the patient's side. (NEMSIS eTimes.07)
8. Transfer of EMS Patient Care Date/Time: The date/time the patient was transferred from this EMS agency to another EMS agency for care. (NEMSIS eTimes.08)
9. Unit Left Scene Date/Time: The date/time the responding unit left the scene with a patient (started moving). (NEMSIS eTimes0.9)
10. Arrival at Destination Landing Area Date/Time: The date/time the Air Medical vehicle arrived at the destination landing area. (NEMSIS.10)
11. Patient Arrived at Destination Date/Time: The date/time the responding unit arrived with the patient at the destination or transfer point. (NEMSIS eTimes.11)
12. Destination Patient Transfer of Care Date/Time: The date/time that patient care was transferred to the destination healthcare facilities staff. (NEMSIS eTimes.12)
13. Unit Back in Service Date/Time: The date/time the unit back was back in service and available for response (finished with call, but not necessarily back in home location). (NEMSIS eTimes.13)
14. Unit Canceled Date/Time: The date/time the unit was canceled. (NEMSIS eTimes.14)
15. Unit Back at Home Location Date/Time: The date/time the responding unit was back in their service area. With agencies who utilized Agency Status Management, home location means the service area as assigned through the agency status management protocol. (NEMSIS eTimes.15)
16. EMS Call Completed Date/Time: The date/time the responding unit completed all tasks associated with the event including transfer of the patient, and such things as cleaning and restocking. (NEMSIS eTimes.16)

~~Monterey County~~County of Monterey EMS System Policy

Policy Number: 4160
Effective Date: ~~7/1/2026~~3
Review Date: ~~6/30/2029~~6

ADVANCED LIFE SUPPORT (ALS) TRANSPORT AGENCY

I. PURPOSE

To establish requirements for the designation of a ~~Monterey County~~County of Monterey Advanced Life Support (ALS) Transport Agency.

II. REQUIREMENTS

A. A designated ALS Transport Agency shall:

1. Have a written agreement, as specified in **EMS System Policy 4150-ALS First Responder Authorization and Approval Process**, with the local EMS Agency to participate in the County of Monterey EMS System, ~~ALS program~~ and shall~~to will~~ comply with all applicable State regulations, ~~and~~ local policies, procedures, protocols, and ordinances.
2. Provide ALS emergency medical service response on a continuous twenty-four (24) hours per day basis.
3. Have and agree to utilize and maintain communications as specified by the EMS Agency.
4. Have and agree to maintain a drug and solution inventory, and BLS and ALS medical equipment and supplies as specified by the EMS Agency.
5. Designate a Quality Improvement Manager who shall be at minimum an EMT-P and the liaison to the County, ALS Base Hospital(s), and ALS Receiving Hospital(s).
6. Participate in the ~~Monterey County~~County of Monterey ~~a A~~pproved Quality Improvement Program.
7. Establish a mechanism to ensure that all paramedics employed by the agency are currently licensed and hold all ~~required~~ certificates (*e.g.*, CPR, ACLS, PALS or equivalent, PHTLS or equivalent) required by the EMS Agency.
8. Agree to permit the EMS Agency ~~staff to observe~~to conduct ride alongs on ambulances.
9. Agree to permit base hospital coordinators and emergency department physicians to observe on ambulances.
10. Agree to provide paramedic internship opportunities to qualified applicants in accordance with County policy.
11. Agree to utilize the assigned Base Hospital(s) for on-line medical direction.

12. Agree to ~~provide visible identification of paramedic personnel~~ensure that paramedic personnel have visible identification at all times when those personnel are on duty.
13. Agree to notify the EMS Agency of significant operational problems or changes and unusual occurrences in a timely manner and as per policy, including changes in the number of units, permanent unit location(s), and major agency personnel changes.
14. Ensure liability, malpractice, and other insurances necessary for ALS participation in the ~~ALS Program~~County of Monterey EMS System.
15. All ALS ambulances, both public and private, shall be staffed at minimum with one (1) State of California--licensed ~~licensed~~ and County of Monterey--accredited Paramedic. It is the responsibility of the ALS Transport Agency to ensure the availability of well-trained and rested personnel necessary to provide optimal patient care.
16. Any person who drives an ambulance will have in his/her possession a valid California Driver's License and a current, valid Ambulance Driver's Certificate. Ambulance may be driven by individuals who do not possess an Ambulance Driver's Certificate if they are salaried full-time police officers, deputy sheriffs or fire fighters, as per Title 13, Section 1100.2 California Code of Regulations.

B. All ALS ambulances will be stationed in such a manner as to permit arrival at the scene of an emergency within the requirements set forth for each Agency as per contract.

~~C. The ALS Transport Agency shall not respond to any inter-facility transfer request when doing so requires the use of the last or only unit available to serve the Agency's response zone.~~

~~D.~~C. No Agency shall advertise itself or a responding unit as providing ALS services unless it does, in fact, routinely provide ALS services on a continuous twenty-four (24) hour per day basis and is currently designated by the EMS Director per contract to provide such services.

~~E.~~D. The EMS Agency may deny, suspend or revoke the contract with an ALS Transport Agency, as per the contract, for failure to comply with applicable policies, procedures, protocols, ordinances, and regulations.

END OF POLICY

John Beuerle, M.D.
EMS Medical Director

Teresa Rios
EMS Bureau Chief

Pleural Decompression	6091-C
Effective ~~7/1/2023~~	**Expires** ~~6/30/2026~~
Low Frequency/High Risk: **Pleural Decompression**	Approval: Medical Director **John Beuerle, M.D.**	Signed
Applies To: **Paramedics**	Approval: EMS Director **Teresa Rios**	Signed

Performance Objective

Relieve intrathoracic pressure due to tension pneumothorax to improve cardiac output, ventilation and oxygenation.

Prior to Needle Pleural Decompression

Assess the patient:

1. Be suspicious of tension pneumothorax in the context of known or suspected torso trauma
2. Be suspicious of spontaneous tension pneumothorax
3. Be suspicious of tension pneumothorax during prolonged artificial ventilation
~~3.~~4. Identify traumatic cardiac arrest with evidence of chest trauma

Recognize and differentiate the signs and symptoms of tension pneumothorax:

1. Hypotension
2. Pleural pain
3. Air hunger
4. Respiratory distress
5. Tachycardia
6. Neck vein distension
7. Tracheal deviation away from the side of the injury
8. Unilateral absence of breath sounds
9. Elevated hemithorax without respiratory movement
10. Cyanosis (late manifestation)

Treat hypoxemia and inadequate ventilation:

1. Position the patient as clinically indicated to meet physiologic requirements
2. Assist breathing as clinically indicated:
    a. Give only sufficient volume to cause chest rise
3. Use minimum titratable oxygen to reach 94% SpO_2

Recognize and correct confounding factors:

1. Occlusive dressing of open pneumothorax
2. Misplaced endotracheal tube

Confirm the indication for unilateral needle pleural decompression:

1. Signs and symptoms of tension pneumothorax with compromised cardiac output AND rapidly progressing respiratory distress unrelieved by less invasive means

Confirm the indication for bilateral needle pleural decompression:

1. Traumatic cardiac arrest with known / suspected chest trauma

Assemble equipment required for needle pleural decompression

Identify and aseptically mark the appropriate side(s), approach(es), and insertion site(s):

Left, right, or bilateral:

~~1.~~ Anterior approach:

1. Second intercostal space at the midclavicular line immediately above the third rib
2. Lateral approach: Fourth or fifth intercostal space at the midaxillary line (age 15 and older only)

Note: Inability to positively identify the insertion site is a contraindication to needle pleural decompression.

Prepare the insertion site:

1. Use aseptic technique
2. Swab the site with alcohol, povidone iodine, and/or ChloraPrep
3. Confirm use of the clinically indicated personal protective equipment (PPE)
4. Remove the Luer lock or slip tip fitting from the end of the IV needle-catheter set
    a. Alternatively attach a syringe partially filled with Normal Saline

Needle Pleural Decompression

Perform needle pleural decompression:

1. Firmly but carefully insert the IV Catheter at a 90° angle, just over the superior aspect of the rib, through the skin and pleura until air escapes or a distinct "give" is felt. The undersurface of the rib should be avoided to limit injury to the neurovascular bundle. Air should be freely aspirated, or a rush of bubbles will be in the partially filled syringe.
2. If air is released:
    a. Withdraw the needle while leaving the catheter in place
    b. Secure the catheter using bandages and tape
    c. Reassess signs and symptoms of tension pneumothorax
    d. Monitor patency of catheter
3. If air is not released:
    a. Reassess for placement in the pleural space and adjust as needed.
    b. Withdraw the needle-catheter set and dress the insertion site with an occlusive dressing
    c. Reassess for signs and symptoms of tension pneumothorax, hemothorax, or other conditions and treat appropriately
    d. Monitor for iatrogenic pneumothorax

Critical Success Targets

1. Improved cardiac output, including return of pulses, improved skin color, improved BP, improved level of consciousness
2. Chest rise and fall with each breath or ventilation
3. Sp02 of 94%
4. Improved ETC02

Equipment Requirements

1. Personal Protective Equipment
2. Respiratory Protection
3. Medical Exam Gloves
4. Barrier Garment
5. Stethoscope
6. Monitoring and resuscitation equipment
7. Alcohol, Povidone Iodine and/or ChloraPrep Swab
8. Syringe and Hypodermic needle
9. Normal Saline 0.9% - 10 mL Prefilled Syringe or Vial
10. Catheter(s) for Needle Pleural Decompression. Options include:
    a. 3.25-inch 14 g IV Catheter(s)
    b. 3.25-inch 16 g IV Catheter(s)
    c. 1.75-2-inch 18 g IV Catheter(s)
11. Portable Sharps Container
12. Gauze Sponge, Pad, Bandage, and/ or Dressing
13. Tape
14. Petrolatum Gauze Dressing
15. Biohazard Bag
16. Waste Bag

Instructor Resource Materials

1. Advanced Trauma Life Support, ~~9th Edition~~11th Edition
2. Prehospital Trauma Life Support, ~~8th Edition~~10th Edition
~~2.~~3. Tactical Emergency Casualty Care, 2nd Edition
~~3. NHTSA EMS Educational Instructor Guidelines for EMT and Paramedic~~

Pleural Decompression

Successful (y/n)	Performance Steps	Additional Information
	Use standard, contact, and droplet precautions	Personal protective equipment includes multiple-use eye protection, respiratory protection, barrier garment, and medical exam gloves
	Assess the patient	• Consider ~~Be suspicious of t~~tension pneumothorax in the context of known or suspected torso trauma • Consider ~~Be suspicious of~~ the possibility of spontaneous tension pneumothorax • Consider tension pneumothorax in ~~T~~traumatic cardiac arrest with chest trauma
	Recognize and differentiate the signs and symptoms of tension pneumothorax *	• Pleural pain • Air hunger • Respiratory distress • Tachycardia • Hypotension • Tracheal deviation away from the side of the injury (late manifestation) • Unilateral absence of breath sounds • Elevated hemithorax without respiratory movement • Neck vein distension • Cyanosis (late manifestation)
	Treat hypoxemia and inadequate ventilation *	• Position the patient as clinically indicated to meet physiologic requirements • Assist breathing as clinically indicated: ○ Give only sufficient volume to cause chest rise • Use minimum titratable oxygen to reach 94% SpO2
	Recognize and correct confounding factors *	• Tension pneumothorax due to occlusive dressing of open pneumothorax • Misplaced endotracheal tube

	Confirm the indication for needle pleural decompression *	• Unilateral:
		  ○ Signs and symptoms of tension pneumothorax with rapidly progressing respiratory distress unrelieved by less invasive means with s/s compromised cardiac output
		• Bilateral:
		  ○ Traumatic cardiac arrest with known / suspected chest trauma

	Assemble equipment required for needle pleural decompression	• Personal Protective Equipment • Respiratory Protection • Medical Exam Gloves • Barrier Garment • Stethoscope • Monitoring and resuscitation equipment • Alcohol, Povidone Iodine and/or ChloraPrep Swab • Syringe and Hypodermic needle • Normal Saline 0.9% - 10 mL Prefilled Syringe or Vial • 3.25-inch 14 g IV Catheter(s) for Needle Pleural

		Decompression ○ 3.25-inch 16 g IV Catheter(s) for Needle Pleural Decompression • 1.75 – 2-inch 18 g IV Catheter(s) for Needle Pleural Decompression • Portable Sharps Container • Gauze Sponge, Pad, Bandage, and/ or Dressing • Tape • Petrolatum Gauze Dressing • Biohazard Bag • Waste Bag
	Identify and aseptically mark the appropriate side(s), approach(es), and insertion site(s) *	• Left, right or bilateral ○ The side(s) requiring needle chest decompression • Anterior approach: ○ Second intercostal space at the midclavicular line immediately above the third rib ~~○~~ • Lateral approach: (a~~A~~ge 15 and older only) ~~•~~○ Fourth or fifth intercostal space at the midclavicular line ***The inability to positively identify the insertion site is a contraindication to needle chest decompression.***
	Prepare the insertion site *	• Use aseptic technique • Swab the site with alcohol, povidone iodine, and/or ChloraPrep • Confirm use of the clinically indicated personal protective equipment (PPE) • Remove the Luer lock or slip tip fitting from the end of the IV needle-catheter set ○ Alternatively, attach a syringe partially filled with Normal Saline
	Perform Needle Pleural Decompression *	• Firmly but carefully insert the IV Catheter at a 90° angle, just over the superior aspect of the rib, through the skin and pleura until air escapes or a distinct "give" is felt. The undersurface of the rib should be avoided to limit injury to the neurovascular bundle. Air should be freely aspirated, or a rush of bubbles will be in the partially filled syringe. • If air is released: ○ Withdraw the needle while leaving the catheter in place ○ Secure the catheter using bandages and tape ○ Reassess signs and symptoms of tension pneumothorax ○ Monitor patency of catheter • If air is not released, the catheter is not in the pleural space: ○ Withdraw the needle-catheter set and dress the insertion site with an occlusive dressing ○ Reassess signs and symptoms of tension pneumothorax ○ Monitor for iatrogenic pneumothorax

Critical Failure Criteria

- **Failure to use standard, contact, and droplet precautions**
- **Failure to recognize and differentiate the signs and symptoms of tension pneumothorax**
- **Failure to treat hypoxemia and inadequate ventilation**
- **Failure to recognize and correct confounding factors**
- **Failure to confirm the indication for needle pleural decompression**
- **Failure to identify and aseptically mark the appropriate side(s), approach(es), and insertion site(s)**
- **Failure to prepare the insertion site**
- **Failure to perform clinically indicated needle pleural decompression**
- **Failure to reassess and monitor**
- **Any procedure that would have harmed the patient**

Transcutaneous Pacing	6091D
Effective ~~7/1/2023~~	**Expires** ~~6/30/2026~~
Low Frequency/High Risk: **Transcutaneous Pacing**	Approval: Medical Director **John Beuerle, MD**	Signed 
Applies To: **Paramedics**	Approval: EMS Director **Teresa Rios**	Signed 

Performance Objective

Electrical capture and control of the mechanical contraction of the heart resulting in adequate cardiac output and tissue perfusion.

Before performing transcutaneous cardiac pacing (TCP), paramedics must:

1. Methodically assess patient's ABC's within 30 seconds.
2. Determine the patient is hemodynamically unstable due to bradycardia and is a candidate for immediate TCP by confirming all the following are present:
   a. The patient is exhibiting signs and symptoms of systemic poor perfusion, ***and***
   b. ~~b~~Bradycardia is present on the ECG, ***and***
   ~~c.~~ Underlying causes of the dysrhythmia have been considered, and reversible causes have been treated (*e.g.*, brady-dysrhythmias in children are usually respiratory related), ***and***
   c. ~~***and***~~
   d. Confirm no contraindications to TCP are present, ***and***
   e. The cardiac monitoring equipment is placed correctly on patient, and a baseline rhythm strip is printed.
      1) Consider performing a 12 Lead ECG prior to initiating TCP if such delay does not cause harm to the patient.
3. Identify contraindications for TCP:
   a. Children less than or equal to 15 kg ~~12 years old (brady-dysrhythmias in children are usually respiratory-related)~~
   b. Asystolic cardiac arrest, unless approved by base hospital physician.
4. Prepare for TCP
   a. Administer Atropine, if indicated by heart rhythm, while preparing pacer. Do not delay TCP if there is difficulty establishing an IV.
   b. Use TCP without delay for high-degree block (~~type II~~ 2nd ~~second~~ degree type II (Mobitz II) AV block or 3rd ~~third~~ degree AV block)
5. Explain to patient/family what they can expect to feel and to see but do not delay immediately needed treatment.
6. Once capture is obtained with TCP, strongly consider Versed for sedation and amnesic effect of conscious patient.
   a. Use IN/IM route for sedation if IV access is poor and would delay TCP.

While performing transcutaneous cardiac pacing (TCP), paramedics must:

1. Apply the ECG defibrillation/pacer multifunction pads (MFP) firmly to the patient's clean, bare skin in the correct anatomical locations for maximum electrical current flow through the heart.
   a. Proper pad placement on cleaned, dry skin is essential to minimize pain (heat generated from passage of current through the skin) and maximize current conduction. The better the contact, the more effective pacing will be.
2. Identify a patient with a pacemaker or automatic internal cardiac defibrillator (AICD) and place the MFP(s) in alternate position(s) to minimize damage to the device(s) and disruption of current flow through the heart.

3. Place the ECG monitor into pacing mode.
4. Turn Pacer on and set initial Rate and Current values for procedure (60 bpm and 100 mA). Gradually increase current in increments of 10 mA until electrical capture is gained. (*i.e.*, Ppacer spike generates a QRS complex on the ECG).
5. Once capture has been obtained, increase the output by 10%.
6. Determine and utilize minimum electrical current needed to maintain capture (*i.e.*, decrease current by 5 mA increments until pulses capture lost, increase current by 5 mA increments until capture/pulses regained.
7. Confirm mechanical capture by palpating pulses that match pacemaker.
8. Evaluate the effectiveness of TCP by assessing the patient's level of consciousness and vital signs for improvement.
9. Identify continuing signs and symptoms of poor perfusion (including but not limited to hypotension, altered level of consciousness, chest pain, dyspnea/tachypnea, diaphoresis, pale, cool skin) despite effective mechanical capture and increase TCP rate in increments of 10 bpm to a max of 80 bpm to increase cardiac output.
10. Provide Versed per protocol for sedation and amnesic effect as clinically required ~~per protocol~~.
11. Continuously re-assesses the patient's vital signs and level of consciousness throughout the prehospital period of treatment.
12. Contact the base hospital if signs and symptoms of poor perfusion persist.
13. Properly document procedure, printing paced rhythm strip and attach it to the PCR.

Critical Success Targets for TCP

1. Electrical and mechanical capture
2. Resolution of patient's bradycardia related signs and symptoms (hypotension, skin signs, level of consciousness, dyspnea/tachypnea, chest pain).

System Benchmark

Percentage of patients that experience mechanical capture with signs of improved cardiac output (i.e. improved level of consciousness/mentation, peripheral pulses, BP, skin signs).

Core Competency Requirements to be covered during education/ training on TCP

1. Assess~~ment of~~ patient to determine if appropriate indications are present (hemodynamically unstable patients with bradycardia, Mobitz II, or 3rd AV blocks ~~with wide complexes~~).
2. Assess patient for ~~, and~~ contraindications (patients ~~under~~ 15 kg~~age 12~~ or less, or patients in asystole)
3. Proper placement of ECG electrodes on patient
4. Proper identification of cardiac dysrhythmia(s) requiring TCP
5. Proper placement of multi-function pads on patient
6. Assessment for and recognition of hemodynamic instability
7. Verbalize possible treatments for hemodynamically unstable bradycardias other than TCP
8. Explain procedure to patient (where applicable)/ pre-medicate patient (where applicable)
9. Demonstrate proper technique for setting rate and current
10. Demonstrate proper technique for gaining electrical capture with minimum required current
11. Describe how to obtain mechanical capture if not gained with initial electrical capture
12. Cardiac monitoring/ rhythm recognition and treatment

Equipment Requirements

1. PPE
2. COR mannequin(s)
3. Stethoscope
4. Cardiac monitor/ECG/Defibrillator
5. ECG Rhythm Generator
6. ECG electrodes

7. Defibrillation/ Multifunction pads
8. Versed
9. Pre-medication equipment (IV access, IN equipment, IM equipment)

Instructor Resource Materials

1. AHA ACLS Provider Manual
2. AHA PALS Provider Manual
3. Current AHA Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care
4. NHTSA EMS Educational Instructor Guidelines for EMT and Paramedic

Transcutaneous Cardiac Pacing

Successful (y/n)	Performance Steps	Additional Information
	Take or verbalize body substance isolation.	Selection: gloves, goggles, mask, booties, gown, N95 PRN
	Methodically assess patient's ABC's within 30 seconds.*	
	Determine the patient is hemodynamically unstable due to bradycardia and is a candidate for immediate Transcutaneous Pacing (TCP)*	Confirm that ***all*** of the following are present: • The patient is exhibiting signs and symptoms of systemic poor perfusion; ***and*** • Symptomatic bradycardia is present on the ECG; ***and*** • Underlying causes of the dysrhythmia have been considered and reversible causes have been treated; ***and*** • No contraindications of TCP are present.
	Place cardiac monitoring equipment on the patient correctly and print a baseline rhythm strip.	Consider performing a 12 Lead ECG prior to initiating TCP, if such delay does not cause harm to the patient.
	Identify contraindications for TCP.	• Children less than or equal to 15 kg~~12 years old~~ (brady-dysrhythmias in children are usually respiratory related)
	Prepare for TCP.	• Administer Atropine if indicated while preparing pacer. o Do not delay TCP if there is difficulty establishing an IV. • Use TCP without delay for high-degree block (~~type II second~~ 2nd degree type II (Mobitz II) AV block or 3rd ~~third~~ degree AV block)
	Explain to patient/family what they can expect to feel and to see.*	Do not delay immediately needed treatment.
	Strongly consider Versed for sedation/amnesic effect while preparing TCP equipment.	Use IN/IM route for Versed for sedation/amnesic effect if IV access is poor and would delay TCP.

	Apply the ECG monitor/pacer multifunction pads (MFP) firmly to the patient's clean, bare skin in the correct anatomical locations for maximum electrical current flow through the heart. *	• Anterior-posterior placement is recommended, if possible. • Proper pad placement on the patient's cleaned, dry skin is essential to minimize pain (heat generated from passage of current through the skin) and maximize current conduction. The better the contact, the more effective pacing will be.
	Identify a patient with a pacemaker or automatic internal cardiac defibrillator (AICD) and place the MFP(s) in alternate position(s) to minimize damage to the device(s) and disruption of current flow through the heart *	
	Correctly place the ECG monitor into pacing mode. *	
	Turn the pacer on and accurately set initial rate and current values for procedure. *	~~8~~60 beats per minute (bpm) and 10~~0~~ mA
	Gradually increase current until electrical capture is gained *	i.e., a Pacer spike generates a QRS complex on the ECG
	Confirm mechanical capture by palpating pulses that match pacemaker. *	
	Evaluate the effectiveness of TCP*	Assess the patient's mentation and vital signs for improvement.
	Identify continuing signs and symptoms of poor perfusion despite effective mechanical capture and increase TCP rate in increments of 10 bpm to a maximum of 100 bpm to increase cardiac output.	Signs and symptoms of poor perfusion include but are not limited to: • Hypotension • Altered level of consciousness • Chest pain • Dyspnea/tachypnea • Diaphoresis • Pale/cool skin
	Provide Versed for sedation/amnesic effect and Morphine for pain as clinically indicated per protocol.	
	Accurately document all assessment findings, therapeutic treatments, and the patient's response to therapy.	Print paced rhythm strip and attach it to the PCR.

	~~Identify a patient with a pacemaker or automatic internal cardiac defibrillator (AICD) and place the MFP(s) in alternate position(s) to minimize damage to the device(s) and disruption of current flow through the heart *~~	
	~~Correctly place the ECG monitor into pacing mode. *~~	
	~~Turn the pacer on and accurately set initial rate and current values for procedure. *~~	~~80 beats per minute (bpm) and 10 mA~~
	~~Gradually increase current until electrical capture is gained *~~	~~i.e., a Pacer spike generates a QRS complex on the ECG~~
	~~Confirm mechanical capture by palpating pulses that match pacemaker. *~~	
	~~Evaluate the effectiveness of TCP *~~	~~Assess the patient's mentation and vital signs for improvement.~~
	~~Identify continuing signs and symptoms of poor perfusion despite effective mechanical capture and increase TCP rate in increments of 10 bpm to a maximum of 100 bpm to increase cardiac output.~~	~~Signs and symptoms of poor perfusion include but are not limited to:~~ ~~• Hypotension~~ ~~• Altered level of consciousness~~ ~~• Chest pain~~ ~~• Dyspnea/tachypnea~~ ~~• Diaphoresis~~ ~~• Pale/cool skin~~
	~~Provide Versed for sedation/amnesic effect and Morphine for pain as clinically indicated per protocol.~~	
	~~Accurately document all assessment findings, therapeutic treatments, and the patient's response to therapy.~~	~~Print paced rhythm strip and attach it to the PCR.~~

Critical Failure Criteria

____Failure to take or verbalize BSI appropriate to the skill prior to performing the skill
____Failure to identify indications/contraindications for procedure
____Failure to ensure the functionality of cardiac monitor and availability of equipment
____Failure to adjust current and rate appropriately
____Failure to confirm efficacy of intervention – using electrical and mechanical capture
____Any procedure that would have harmed the patient

EZ-IO		6091-F
	Effective ~~7/1/2023~~	**Expires** ~~6/30/2026~~
Low Frequency/High Risk: **EZ-IO**	Approval: Medical Director **John Beuerle, M.D.**	Signed
Applies To: **Paramedics**	Approval: EMS Director **Teresa Rios**	Signed

Performance Objective

To establish, maintain, and ensure intraosseous vascular access for the delivery of drugs and fluids.

Before establishing intraosseous access, paramedics must:

1. Confirm that intraosseous access is clinically indicated and required for emergency stabilization.
2. Do not place if any of these contraindications to intraosseous access are present:
    a. Fracture of insertion site bone
    b. Inability to clearly identify insertion site (absence of anatomical landmarks / excess tissue / other problem)
    c. Infection at insertion site
    d. Previous orthopedic procedure at insertion site (IO attempt within last 48 hours / joint replacement / prosthetic)

While establishing intraosseous access, paramedics must:

1. Select the most appropriate insertion site based on clinical needs, operational requirements, and the available device:
        1) EZ-IO Power Driver may be used by paramedics while following a standing order at these insertion sites: Proximal tibia in adults & pediatrics and proximal humerus in adults.
2. Identify the insertion site using anatomical landmarks.
3. Select the size of needle set or device based on patient size, the selected insertion site, and tissue depth.
4. Cleanse and prepare the insertion site using aseptic technique.
5. Assemble and prepare equipment using aseptic technique.
6. Establish IO access by following the manufacturer's instructions for the available device:
    a. EZ-IO with pink, blue, or yellow needle sets:
        1) ~~http://www.teleflex.com/en/usa/ezioeducation/indes.html~~ https://www.teleflex.com/usa/en/product-areas/emergency-medicine/intraosseous-access/arrow-ez-io-system/literature/VA_IOS_EZ-IO_Pocket_Guide.pdf
        2) http://www.ezioapp.com
        3) https://www.youtube.com/watch?v=Wu-KVibUGNM
7. Verify Intraosseous placement:
    a. Needle is free standing, without support
    b. Aspiration of blood/marrow
    c. Infusion without extravasation
8. Attach IV set and adjust infusion rate as clinically indicated.
    a. Despite proper placement, pressure infusion may be needed to achieve the required flow rates.
    b. Give Lidocaine 2% as ordered by the applicable treatment protocol or a base hospital order for infusion pain in the conscious patient.
9. Secure the insertion site and splint the limb to maintain intraosseous vascular access despite scene activity, patient movement, and transport.
10. Routinely reassess the insertion site to ensure vascular access.
11. Document the procedure.

Critical Success Targets for IO

1. Aspiration of blood/marrow from the intraosseous access site
2. Infusion without extravasation

Core Competency Requirements to be covered during education/ training on EZ-IO

1. Assessment
2. Anatomy and physiology
3. Differences between neonatal, pediatric, adult, and bariatric patients
4. Indications and contraindications
5. Equipment and site selection
6. Precautions and complications

Equipment Requirements

1. Personal protective equipment
2. An intraosseous access device and EZ-IO with pink (15g / 15 mm), blue (15g / 25 mm), and yellow (15 g/45 mm) needle sets
3. 10 mL syringe containing 3 to 5 mL of normal saline
4. Normal saline
5. IV administration set
6. Tape
7. Antiseptic
8. Gauze/Securing Device

Instructor Resource Materials

1. Paramedic Care Principles & Practice, Third Edition, Bledsoe, Porter, Cherry

Intraosseous Infusion

Score	Performance Steps	Additional Information
	Take or verbalize body substance isolation. *	Selection: gloves, goggles, mask, gown, booties, P100 PRN
	Confirm that intraosseous access is clinically indicated. *	
	Do not place if contraindications to intraosseous access are present. *	Fracture of insertion site bone Inability to clearly identify insertion site (absence of anatomical landmarks / excess tissue / other problem) Infection at insertion site Previous orthopedic procedure at insertion site (IO attempt within last 48 hours / joint replacement / prosthetic)
	Select the most appropriate insertion site based on clinical needs, operational requirements, and the available device.	EZ-IO Power Driver may be used while following a standing order at these insertion sites: Proximal tibia in adults & pediatrics Proximal humerus in adults only
	Identify the insertion site using anatomical landmarks.	
	Select the size of needle set or device based on patient size, the selected insertion site, and tissue depth.	EZ-IO with pink (15g / 15 mm), blue (15g / 25 mm), and yellow (15g / 45 mm) needle sets
	Cleanse and prepare the insertion site using aseptic technique. *	
	Assemble and prepare equipment using aseptic technique. *	
	Establish intraosseous access by following the manufacturer's instructions for the available device.	

	Verify Intraosseous placement.	1. Needle is free standing, without support 2. Aspiration of blood/marrow 3. Infusion without extravasation
	Attach IV set and adjust infusion rate as clinically indicated.	Despite proper placement, pressure infusion may be needed to achieve the required flow rates.
	Secure the insertion site	
	Routinely reassess the insertion site to ensure vascular access. *	
	Document the procedure.	

Critical Failure Criteria

____Failure to take or verbalize BSI appropriate to the skill prior to performing the skill.
____Failure to confirm that intraosseous access is clinically indicated.
____Placement when any contraindication to intraosseous access is present.
____Failure to identify the insertion site using anatomical landmarks.
____Failure to select the size of needle set or device based on patient size, the selected insertion site, and tissue depth.
____Failure to cleanse and prepare the insertion site using aseptic technique.
____Failure to assemble and prepare equipment using aseptic technique.
____Failure to follow the manufacturer's instructions for the available device.
____Failure to attach IV set and adjust infusion rate as clinically indicated.
____Failure to secure the insertion site and splint the limb.
____Failure to routinely reassess the insertion site to ensure vascular access.
____Any procedure that would have harmed the patient

Protocol Number: C-1
Effective Date: 7/1/2021
Review Date: 6/30/2024

CARDIAC ARREST-ASYSTOLE/PEA

BLS CARE

Follow Routine Medical Care Protocol (M-3).

Begin CPR.

- Perform ~~C~~continuous compressions at a rate of 100-120 compressions ~~a~~per minute. Only stop compressions for AED placement, rhythm checks, and defibrillation~~s~~.
- Apply an AED and perform a rhythm check.
- Establish a patent airway. An OPA or NPA should be placed to assist with airway maintenance. A supraglottic airway may be placed by EMT~~'~~s with Expanded Scope accreditation.~~Initial airway device placement should be Establish either a supraglottic airway (SGA), if possible. Alternatively, place both an OPA and NPA.. Intubation can be considered depending on the security of the airway.or both an OPA and NPA with high-flow oxygen.~~
- BVM ventilations with high-flow (15 LPM) supplemental oxygen.~~:~~ The ventilation ratio~~sequence~~ is 30 compressions to 2 ventilations until an ET tube or supraglottic airway is placed. After ET tube or supraglottic airway placement, ventilate every 6 seconds.

  ~~With an OPA and NPA, 2 ventilations shall be performed after 30 compressions.~~

  ~~With a SGA or ET tube, Perform 1 ventilations shall occur on the upstroke of every 10~~5th~~ compression. Do not pause compressions to ventilate.~~

Consider and treat potential causes of the patient's condition.

~~Apply AED immediately when available.~~ ~~Continue CPR during application of the AED pads.~~

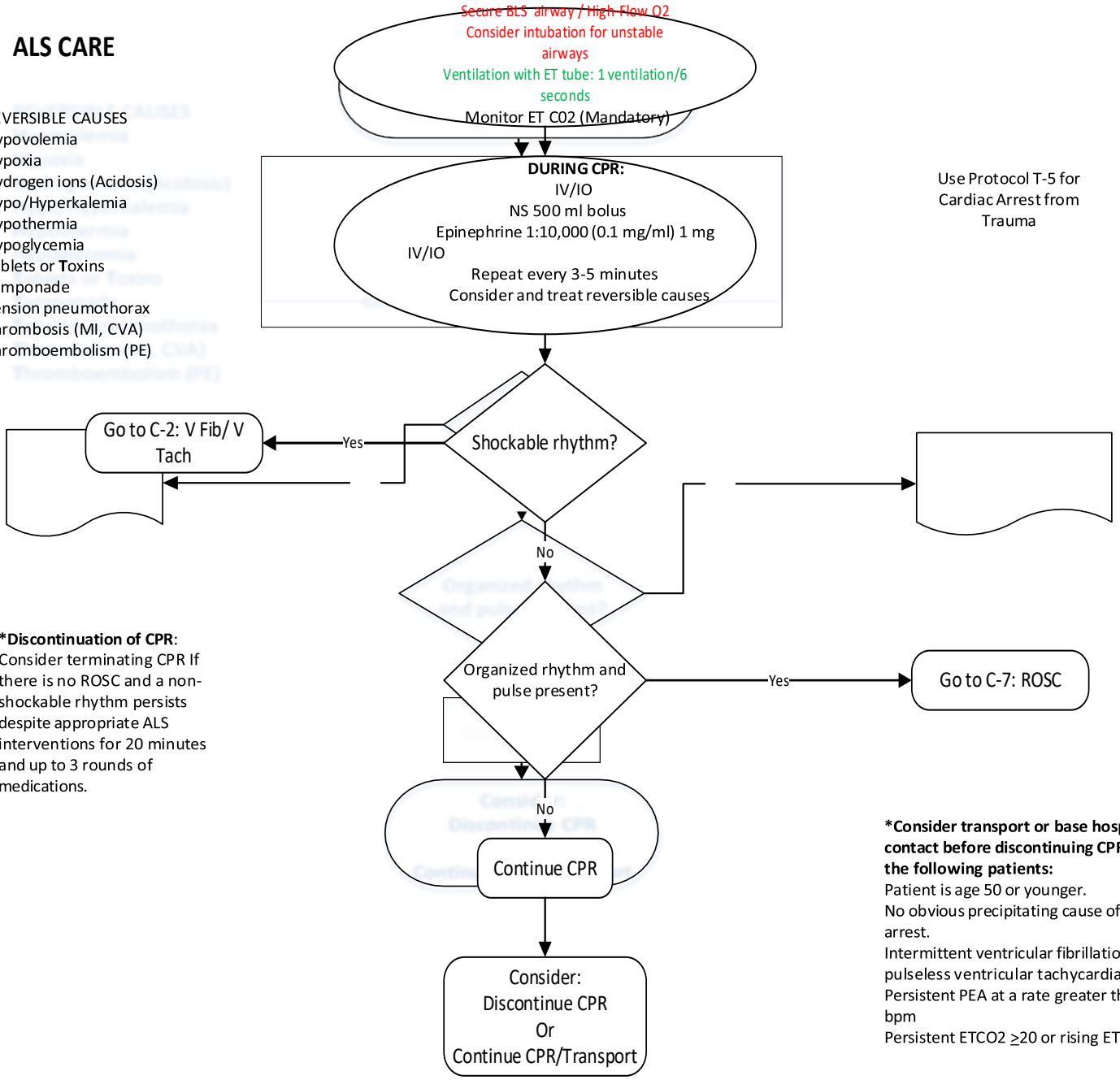
After two minutes of CPR, ~~Continue CPR for two minutes.~~pause CPR briefly to perform an ~~AED~~AED ~~Rhythm~~ rhythm check and ~~Assess~~ assess for ~~spontaneous circulation~~ROSC.

~~Continue resuscitation efforts i~~If there is no return of spontaneous circulation, continue resuscitation efforts.

Mechanical CPR devices can be utilized in medical cardiac arrest~~. that do not involve significant blunt or penetrating trauma~~. Providers shall follow the manufacturer's recommendations and age

ALS CARE

REVERSIBLE CAUSES
Hypovolemia
Hypoxia
Hydrogen ions (Acidosis)
Hypo/Hyperkalemia
Hypothermia
Hypoglycemia
Tablets or **T**oxins
Tamponade
Tension pneumothorax
Thrombosis (MI, CVA)
Thromboembolism (PE)



Use Protocol T-5 for Cardiac Arrest from Trauma

***Discontinuation of CPR**:
Consider terminating CPR If there is no ROSC and a non-shockable rhythm persists despite appropriate ALS interventions for 20 minutes and up to 3 rounds of medications.

***Consider transport or base hospital contact before discontinuing CPR for the following patients:**
Patient is age 50 or younger.
No obvious precipitating cause of cardiac arrest.
Intermittent ventricular fibrillation or pulseless ventricular tachycardia.
Persistent PEA at a rate greater than 40 bpm
Persistent ETCO2 ≥20 or rising ETCO2

Note: Patients in cardiac arrest due to hypothermia shall be transported.

~~ALS CARE~~

~~REVERSIBLE CAUSES~~
~~Hypovolemia~~
~~Hypoxia~~
~~Hydrogen ions (Acidosis)~~
~~Hypo/Hyperkalemia~~
~~Hypothermia Hypoglycemia~~
~~Tablets or Toxins~~
~~Tamponade~~
~~Tension pneumothorax~~
~~Thrombosis (MI, CVA)~~
~~Thromboembolism (PE)~~

~~Continuous CPR for at least 2 minutes~~
~~O2 High Flow Monitor EtC02 (Mandatory)~~

~~DURING CPR:~~
~~IV/IO~~
~~NS 500 ml bolus~~
~~Epinephrine 1:10,000~~

~~(0.1 mg/ml)~~

~~1 mg IV/IO~~

~~Repeat every 3-5 minutes Intubate or place supraglottic airway Consider and treat reversible causes~~

~~Use Protocol T-5 for Cardiac Arrest from Trauma~~

~~Shockable rhythm?~~

~~To C-2: V fib/V Tach~~

~~Yes~~

~~No~~

~~Yes~~

~~Go to C-7: ROSC~~

~~Organized rhythm and pulse present?~~

***Discontinuation of CPR**:
If non-shockable rhythm persists despite appropriate ALS interventions for 20 minutes and up to 3 rounds of drugs.

~~No Continue CPR~~

~~Consider: Discontinue CPR Or~~

~~Continue CPR/Transport~~

~~*Consider transport or base hospital contact before discontinuing CPR for the following patients:~~

~~Patient is age 50 or younger.~~

~~No obvious precipitating cause of cardiac arrest.~~

~~Intermittent ventricular fibrillation or pulseless ventricular tachycardia.~~

~~Persistent PEA at a rate greater than 40 bpm/~~

~~min.~~

~~Persistent ETCO2 ≥20 or rising ETCO2~~

~~Note: Patients in cardiac arrest due to hypothermia shall be transported.~~

Protocol Number: C-2
Effective Date: ~~7/1/2023~~
Review Date: ~~6/30/2026~~

CARDIAC ARREST-VENTRICULAR FIBRILLATION/PULSELESS VENTRICULAR TACHYCARDIA

BLS CARE

Follow Routine Medical Care Protocol (M-3).

Begin CPR.

- Perform ~~C~~continuous compressions at a rate of 100-120 compressions ~~a~~per minute. Only stop compressions for AED placement, rhythm checks, and defibrillations.
- Apply AED and perform rhythm check. Defibrillate if indicated~~and shock~~.
- Establish a patent airway. An OPA or NPA should be placed to assist with airway maintenance. A supraglottic airway may be placed by EMT~~'~~s with Expanded Scope accreditation. ~~Initial airway device placement should be Establish either a supraglottic airway (SGA), if possible. Alternatively, place both an OPA and NPA. Intubation can be considered depending on the security of the airway.or both an OPA and NPA with high-flow oxygen.~~
- BVM ventilations with high-flow (15 LPM) supplemental oxygen.~~:~~ The ventilation ratio~~sequence~~ is 30 compressions to 2 ventilations until an ET tube or supraglottic airway is placed. After ET tube or supraglottic airway placement, ventilate every 6 seconds.

  ~~With an OPA and NPA, 2 ventilations shall be performed after 30 compressions.~~

  ~~With a SGA or ET tube, Perform 1 ventilations shall occur on the upstroke of every 10~~5th ~~compression. Do not pause compressions to ventilate.~~

Consider and treat potential causes of the patient's condition.

~~Apply AED immediately when available.~~ ~~Continue CPR during application of the AED pads.~~

After two minutes of ~~Continue CPR for two minutes.~~CPR, pause CPR briefly to perform an ~~AED~~AED ~~Rhythm~~ rhythm check and ~~Assess~~ assess for ~~spontaneous circulation~~ROSC. If there is no return of spontaneous circulation, ~~C~~continue resuscitation efforts ~~if no return of spontaneous circulation~~.

Mechanical CPR devices can be utilized in medical cardiac arrest ~~that do not involve significant blunt or penetrating trauma~~. Providers shall follow the manufacturer's recommendations and age criteria. Ventilation should be provided to coordinate with the device settings for ventilation frequency.

BLS CARE

Routine Medical Care

Consider and treat potential causes of the patient's condition.

Apply AED immediately when available. Continue chest compressions during application of the AED pads.

Continue CPR for two minutes even ifafter defibrillation is performedshock is delivered.

Compressors should be rotated every two minutes.

AED rhythm check and assess for spontaneous circulation

Continue resuscitation efforts if no return of spontaneous circulation.

If return of spontaneous circulation (ROSC) occurs, treat the patient based on condition.

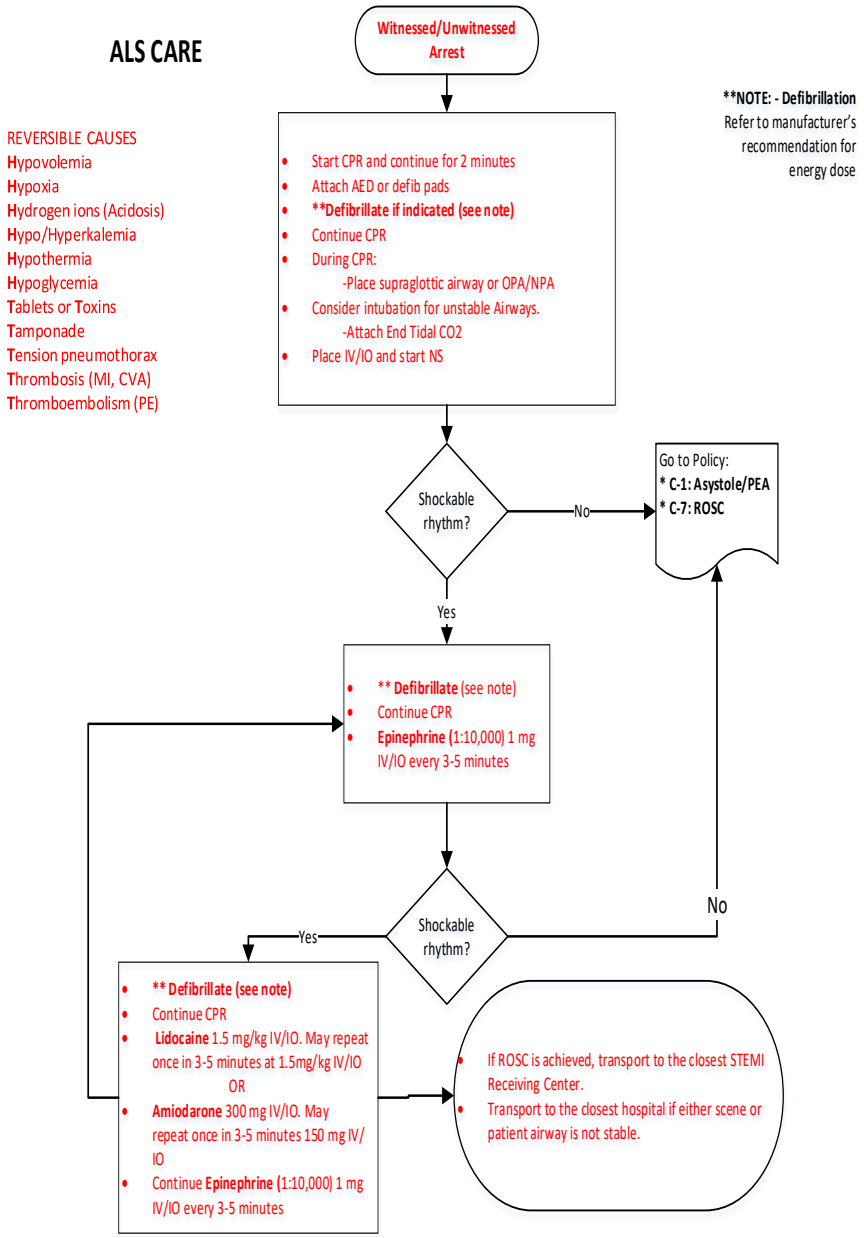
Consider transport after 20 minutes if no return of circulation.

ALS CARE

Continue CPR for two-minute intervals. Consider transportIf after 20 minutes of CPR if there is no return of circulationROSC, contact base hospital for transportation decision..

If return of spontaneous circulation or change in rhythm, use appropriate protocol to treat patient based on condition.

ALS CARE


Witnessed/Unwitnessed Arrest
REVERSIBLE CAUSES
Hypovolemia
Hypoxia
Hydrogen ions (Acidosis)
Hypo/Hyperkalemia
Hypothermia
Hypoglycemia
Tablets or Toxins
Tamponade
Tension pneumothorax
Thrombosis (MI, CVA)
Thromboembolism (PE)
• Start CPR and continue for 2 minutes
• Attach AED or defib pads
• **Defibrillate if indicated (see note)
• Continue CPR
• During CPR:
-Place supraglottic airway or OPA/NPA
• Consider intubation for unstable Airways.
-Attach End Tidal CO2
• Place IV/IO and start NS
**NOTE: - Defibrillation
Refer to manufacturer's recommendation for energy dose
Shockable rhythm?
No
Go to Policy:
* C-1: Asystole/PEA
* C-7: ROSC
Yes
• ** Defibrillate (see note)
• Continue CPR
• Epinephrine (1:10,000) 1 mg IV/IO every 3-5 minutes
Shockable rhythm?
No
Yes
• ** Defibrillate (see note)
• Continue CPR
• Lidocaine 1.5 mg/kg IV/IO. May repeat once in 3-5 minutes at 1.5mg/kg IV/IO
OR
• Amiodarone 300 mg IV/IO. May repeat once in 3-5 minutes 150 mg IV/IO
• Continue Epinephrine (1:10,000) 1 mg IV/IO every 3-5 minutes
• If ROSC is achieved, transport to the closest STEMI Receiving Center.
• Transport to the closest hospital if either scene or patient airway is not stable.

~~NOTES:~~

~~The use of mechanical CPR devices can be used in cardiac arrest cases that are believed to be of medical origin. Providers shall follow the manufacturer's recommended age criteria. These devices should be placed within the first 3 defibrillations or 6 minutes of EMS CPR. The only reason to apply the device after this timeframe is due to a lack of manpower.~~

Monterey County EMS System Policy

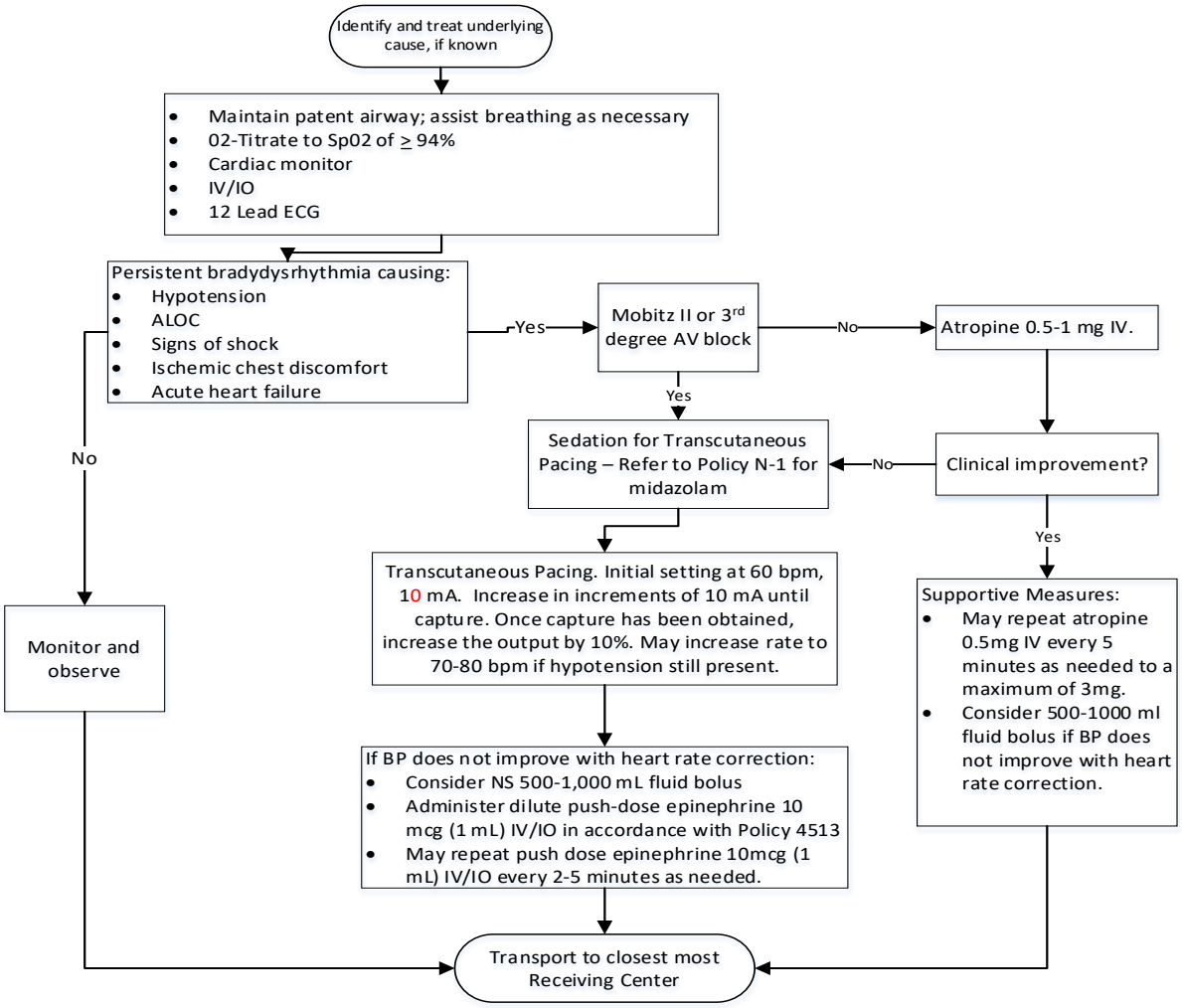
Protocol Number: C-5
Effective Date: ~~7/1/2025~~
Review Date: 6/30/2027

SYMPTOMATIC BRADYCARDIA

BLS CARE

Follow Routine Medical Care Protocol (M-3)

ALS CARE



Consider additional causes of symptomatic bradycardia such as beta blocker or calcium channel blocker OD. Follow Protocol E-5 Overdose and Poisoning if evidence of OD is present.

Note: Push-dose epinephrine requires dilution. See Policy #4513.

~~Monterey~~ County of Monterey EMS System Policy

Protocol Number: CP-1
Effective Date: 7/1/2025
Review Date: 6/30/2028

CARDIAC ARREST-ASYSTOLE/PEA-PEDIATRIC

BLS CARE

Follow Routine Medical Care Protocol (MP-2) ~~Consider and treat potential causes of the patient's condition.~~

Begin CPR.

- Provide continuous compressions at a rate of 100-120/minute. Only stop compressions for AED placement, rhythm checks, and defibrillations.
- Establish a patent airway. An OPA or NPA should be placed to assist with airway maintenance.~~Establish either a supraglottic airway or both an OPA and NPA with high-flow oxygen.~~
- Provide oxygen 15L/min by BVM.

Consider and treat potential causes of the patient's condition.

Apply AED immediately when available AED pads must not touch after placement on the patient. Anterior- Posterior placement for pads preferred.

Continue CPR for two minutes.

AED rhythm check and assess for spontaneous circulation.

Continue resuscitation efforts if no return of spontaneous circulation.

BLS CARE

Follow Routine Medical Care Protocol (MP-~~3~~2).

Begin CPR.

- Perform ~~C~~continuous compressions at a rate of 100-120 compressions ~~a~~per minute. Only stop compressions for AED placement, rhythm checks, and defibrillations.

~~Initial airway device placement should be~~ Establish ~~either a supraglottic airway (SGA), if possible. Alternatively, place both an OPA and NPA. Intubation can be considered depending on the security of the airway.~~or both an OPA and NPA with high-flow oxygen.

- Ensure that the airway is patent. Place a blanket roll under the shoulders if needed. Insert an OPA or NPA if needed.

- Perform BVM ventilations with high-flow supplemental oxygen at 15 LPM:

  Compression-to-Ventilation Ratios:

  - ~~o~~ 2 Rescuers: 15:2 ~~With an OPA and NPA, 2 ventilations shall be performed after 30 compressions.~~
  - ○
  - ○ 1 Rescuer: 30:2

~~With a SGA or ET tube, ventilations shall occur on the upstroke of every 10th compression.~~

Consider and treat potential causes of the patient's condition.

Apply AED immediately when available. Anterior-Posterior pad placement is preferred. ~~. Continue CPR during application of the AED pads.~~

After two minutes of ~~Continue CPR for two minutes.~~CPR, pause CPR briefly to perform an

~~AED~~AED ~~Rhythm~~ rhythm check and ~~Assess~~ assess for ~~spontaneous circulation~~ROSC. Continue resuscitation **e**fforts if no return of spontaneous circulation.

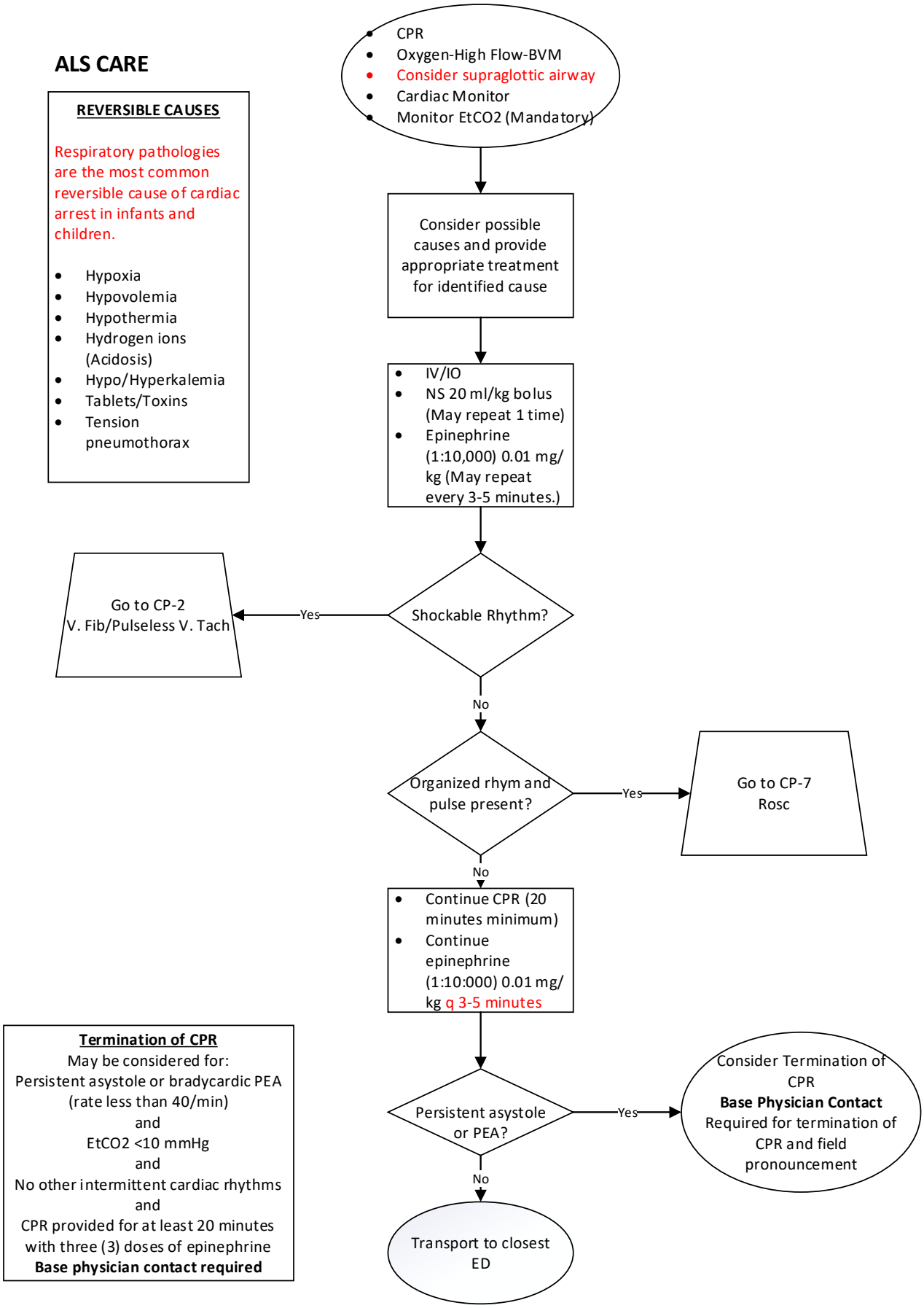
Mechanical CPR devices are contraindicated in children and infants.

ALS CARE

REVERSIBLE CAUSES

Respiratory pathologies are the most common reversible cause of cardiac arrest in infants and children.

- Hypoxia
- Hypovolemia
- Hypothermia
- Hydrogen ions (Acidosis)
- Hypo/Hyperkalemia
- Tablets/Toxins
- Tension pneumothorax



Termination of CPR

May be considered for:
Persistent asystole or bradycardic PEA (rate less than 40/min)
and
EtCO2 <10 mmHg
and
No other intermittent cardiac rhythms
and
CPR provided for at least 20 minutes with three (3) doses of epinephrine
Base physician contact required

Protocol Number: CP-2
Effective Date: 7/1/2024
Review Date: 6/30/2027

CARDIAC ARREST-VENTRICULAR FIBRILLATION PULSELESS VENTRICULAR TACHYCARDIA - PEDIATRIC

BLS CARE

Follow Routine Medical Care Protocol (MP-~~3~~2).

Begin CPR.

- Perform ~~C~~continuous compressions at a rate of 100-120 compressions ~~a~~per minute. Only stop compressions for AED placement, rhythm checks, and defibrillations.

- Ensure that the airway is patent. Place a blanket roll under the shoulders if needed. Insert an OPA or NPA if needed.

- Perform BVM ventilations with high-flow supplemental oxygen at 15 LPM:

  Compression-to-Ventilation Ratios:

  - 2 Rescuers: 15:2
  - 1 Rescuer: 30:2

~~Establish a patent airway. An OPA or NPA should be placed to assist with airway maintenance.Establish either a supraglottic airway BVM ventilations~~

~~Provide oxygen 15L/BVM. Ventilations should be provided at a ratio of 30 compressions to 2 ventilations.~~

Consider and treat potential causes of the patient's condition.

Apply AED immediately when available. Anterior-posterior pad placement is preferred. AED pads must not touch after placement on the patient. ~~The anterior-posterior pad placement is preferred.~~

Continue CPR for two minutes, then pause CPR briefly to perform an AED rhythm check and

BLS CARE

Routine Medical Care.

Begin CPR.

- Provide continuous compressions. Only stop compressions for AED placement, rhythm checks, and defibrillations.
- Establish either a supraglottic airway or both an OPA and NPA with high-flow oxygen.

Apply AED immediately when available. Continue chest compressions during application of the AED pads. AED use for age ages 1 and older only. AED pads must not touch after placement on the patient.

Continue CPR for two minutes after defibrillation is performed.minutes even if shock is delivered.

AED rhythm check and assess for spontaneous circulation.

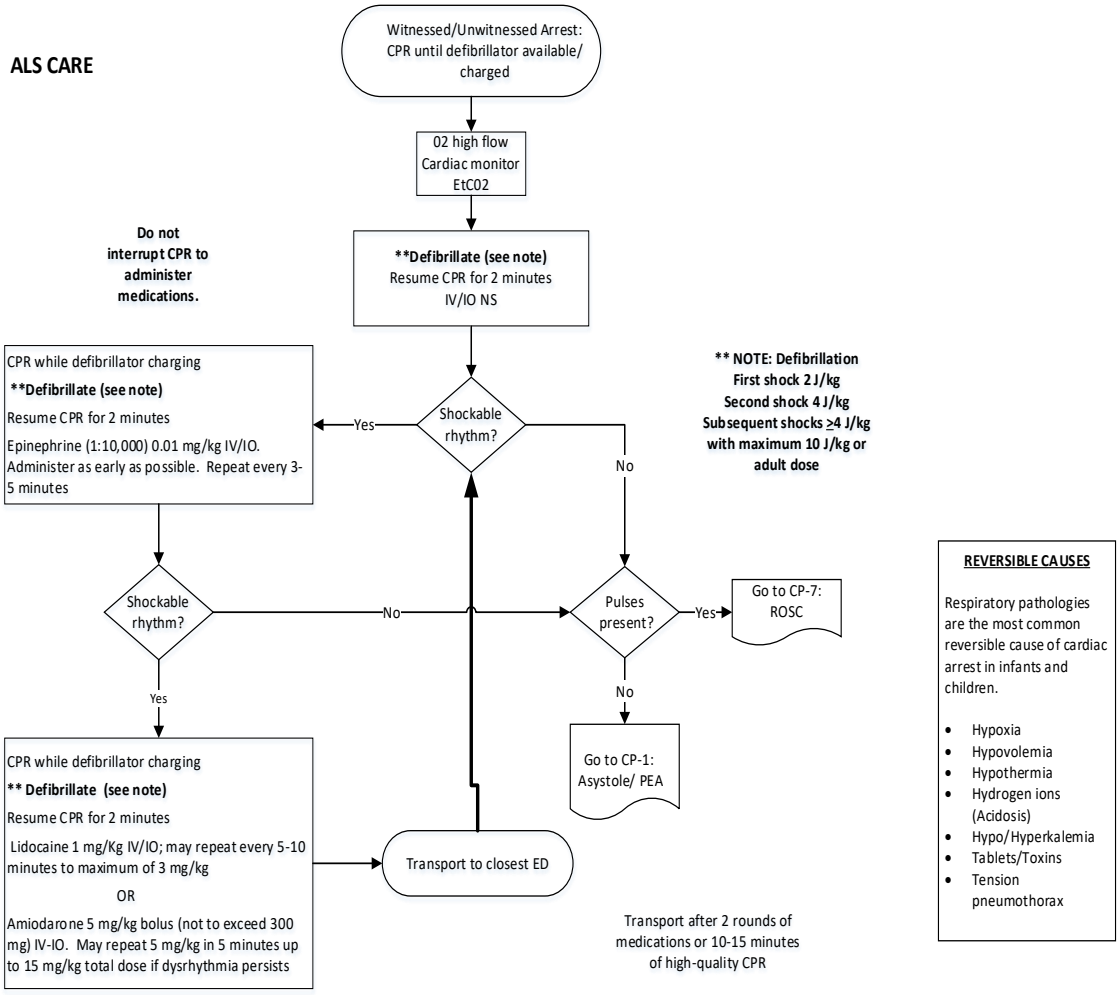
If return of spontaneous circulation (ROSC) occurs, treat the patient based on condition.

If return of spontaneous circulation, treat the patient based on condition.

ALS CARE

Routine Medical Care.

ALS CARE



REVERSIBLE CAUSES

Respiratory pathologies are the most common reversible cause of cardiac arrest in infants and children.

- Hypoxia
- Hypovolemia
- Hypothermia
- Hydrogen ions (Acidosis)
- Hypo/Hyperkalemia
- Tablets/Toxins
- Tension pneumothorax

Protocol Number: M-2
Effective Date: ~~7/1/2025~~
Review Date: ~~6/30/2028~~

PAIN CONTROL

BLS CARE

Routine medical care.

Positioning.

Splinting as indicated.

Ice packs as indicated.

ALS CARE

Routine medical care.

Morphine Sulfate 2-5 mg IV/IO every 5 minutes, titrated to pain relief, up to a maximum total dose of 20 mg. Hold if systolic blood pressure is less than 110 mmHg.

or

Morphine Sulfate 5-10 mg IM. May repeat initial dose in 10 minutes if needed to a maximum total dose of 20 mg.

or

Fentanyl 50-100 mcg slow IV/IO over 1 minute. May repeat every 5 minutes to a total of 200 mcg. Hold if systolic blood pressure is less than 110 mmHg.

or

Fentanyl Intranasal (IN)/IM 50-100 mcg. May repeat in 10 minutes up to a maximum of 200 mcg.

or

Ketamine 0.3 mg/kg IV/IO in 100 ml NS IVPB over 5 minutes. Max dose is 30 mg. May repeat once in 10 minutes.

or

Ketamine 0.3 mg/kg IM with a maximum dose of 30 mg. May repeat initial dose in 10 minutes to a maximum total dose of 60 mg.

Base Hospital Contact required for additional doses of morphine or fentanyl beyond the standing orders detailed above. Ketamine administration is limited to standing orders only (maximum of 0.6 mg/kg or 60 mg).

Base Hospital Contact required to switch ~~between~~ pain medications for subsequent ~~additional~~ dosing.

Base Hospital contact communication failure:

NOTE:

~~In the event that~~If the maximum dose of pain medication has been administered under standing orders and base hospital contact fails, the following additional dosing of analgesics may be administered:

Morphine Sulfate 2-5 mg IV/IO or 5-10 mg IM up to an additional 10mg. Maximum total dose (including dosages administered under standing orders) is 30 mg.

or

Fentanyl 50-100 mcg IV/IO/IN/IM up to an additional 100 mcg. Maximum total dose (including dosages administered under standing orders) is 300 mcg.

NOTE:

A. Attempt pain management through measures such as a cold pack, coaching, splinting, or other methods as indicated by the patient's condition.

B. The use of narcotics for pain management should be reserved for patients in moderate to severe pain.

C. The patient's respiratory status is to be monitored closely when narcotics are administered.

D. Titration of medications can be done to achieve a desired outcome or prevent unwanted side effects.

E. Document the patient's pain level before and after pain management efforts. The method of evaluation must be consistent each time pain is evaluated. Patient response, if any, is to be recorded.

F. Follow the appropriate protocol for specific conditions.

~~F.~~G. The use of multiple different analgesic ~~pain~~ medications to achieve ~~control of~~ pain control ~~is discouraged and~~ requires base physician direction.

Monterey County EMS System Policy

Protocol Number: N-2
Effective Date: ~~7/1/2023~~
Review Date: ~~6/30/2026~~

Protocol: Neurological

Non-Traumatic Neuro Impairment Suspected CVA

~~BLS CARE~~

~~Routine medical care~~

~~Identify time last well known. Be as specific as possible~~

~~Obtain a cell phone number for a family member who can make decisions for the patient, if possible.~~

~~Blood glucose measurement.~~

~~ALS CARE~~

~~Routine medical care.~~

~~Use B.E. F.A.S.T for patient assessment for possible CVA.~~

- ~~B- Balance. Loss or change in balance or coordination~~
- ~~E- Eyes. Sudden vision changes~~
- ~~F- Face. Facial droop~~
- ~~A- Arm. Arm Drift~~
- ~~S- Speech. Slurred of confused speech~~
- ~~T- Time. What time did symptoms begin? When was patient last known well?~~

~~Obtain a 12-Lead ECG. Do not delay time on scene to obtain this.~~

~~Follow Protocol N-4 Suspected Hypoglycemia if blood glucose measurement is <70.~~

~~Patients with positive B.E.F.A.S.T. findings AND last known well time of 24 hours or less should be transported Code 3 to a designated Stroke Receiving Center.~~

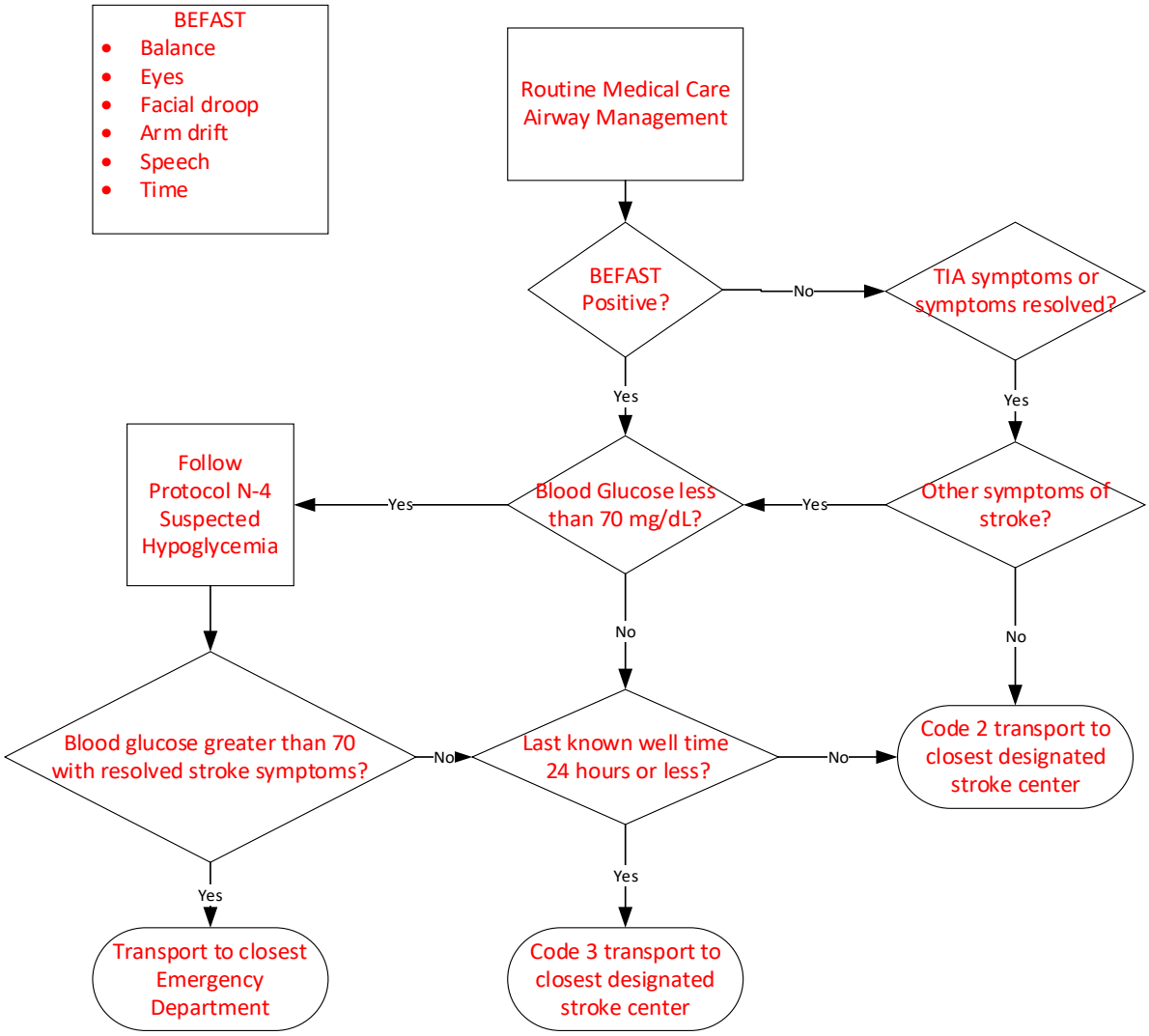
~~Patients whose stroke/TIA symptoms began within the past 24 hours but have resolved completely should be transported Code 2 to a designated Stroke Receiving Center.~~

~~Patients whose new-onset stroke symptoms have been present for more than 24 hours should be transported to the closest Stroke Receiving Center.~~

~~NOTE:~~

~~Scene time should be kept to 15 minutes or less.~~

~~For patients with symptoms of acute stroke who are being transported Code 3 to a Stroke Receiving Center, contact the Stroke Receiving Center as early as possible to allow time to prepare for the patient's arrival. Inform the hospital that a "Stroke Alert" is being transported. Provide patient name and date of birth only if using the telephone.~~



Other Acute Symptoms of CVA/TIA

- Difficulty swallowing
- Altered level of consciousness of unknown etiology
- Difficulty walking or sitting upright without assistance
- Acute motor or sensory deficits

- Obtain and document last known well time.
- Scene time should be 15 minutes or less.
- Do not delay transport for ECG and/or IV start.
- Contact the receiving stroke center early to provide a Stroke Alert

Care and Assessment Considerations:

Use B.E. F.A.S.T for patient assessment for possible CVA.

- B- Balance. Loss or change in balance or coordination

- E- Eyes. Sudden vision changes
- F- Face. Facial droop
- A- Arm. Arm Drift
- S- Speech. Slurred of confused speech
- T- Time. What time did symptoms begin? When was patient last known well?

  Identify and document last known well time as closely as possible.

NOTE:

For patients with symptoms of acute stroke who are being transported Code 3 to a Stroke Receiving Center:

- Contact the Stroke Receiving Center as early as possible to allow time to prepare for the patient's arrival.
- Inform the hospital that a "Stroke Alert" is being transported. Provide patient name and date of birth only if using the telephone.

Consider stroke for patients who ~~F~~falls~~s~~ with no obvious mechanical cause~~. Consider stroke over trauma unless Trauma Triage Steps 1-3 are present~~.

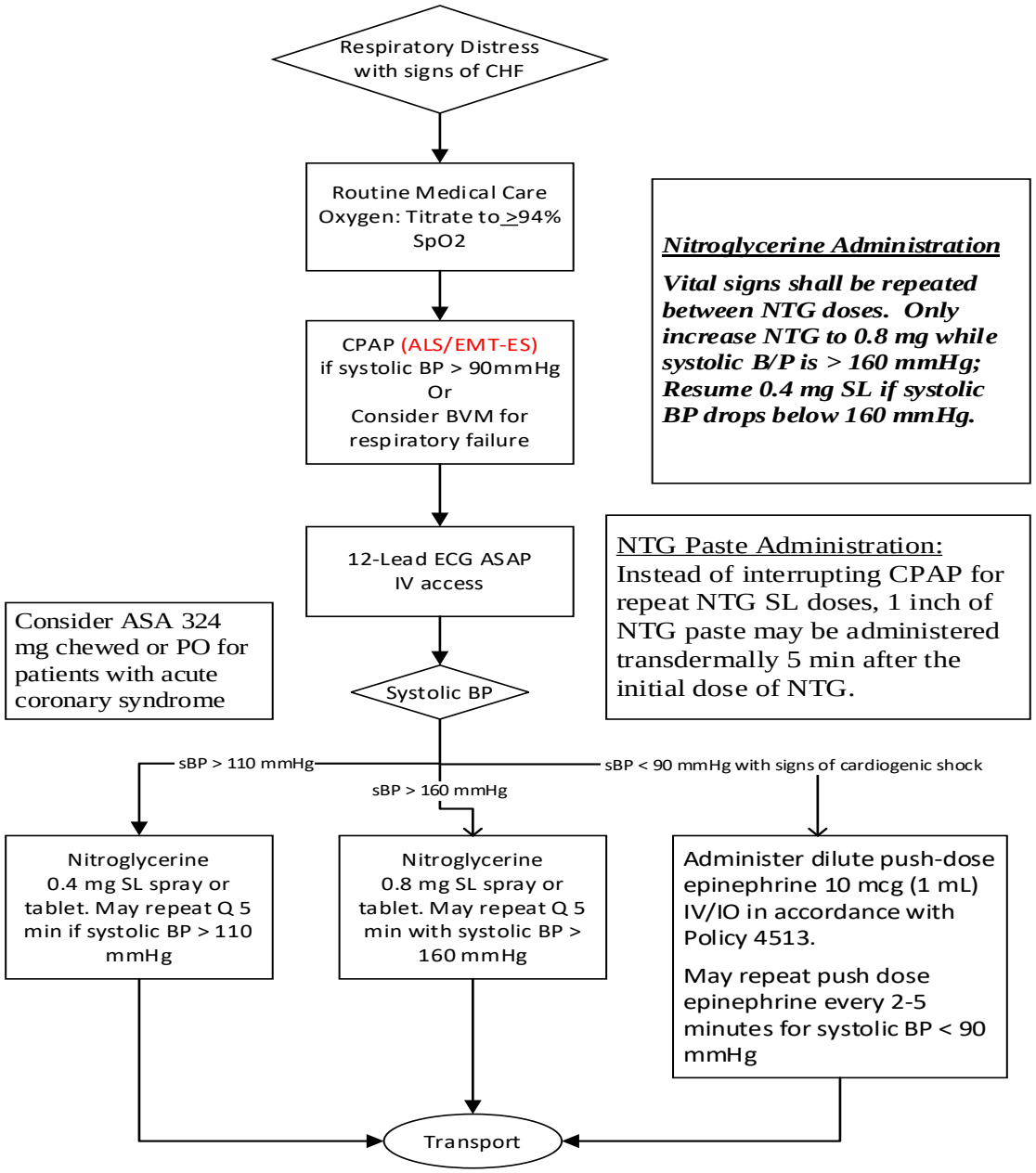
Follow Protocol N-4 Suspected Hypoglycemia if blood glucose measurement is less than 70 mg/dL. If blood glucose is corrected and stroke symptoms persist, assess for last known well time and treat for stroke.

Monterey County EMS System Policy

Protocol Number: R-2
Effective Date: 7/1/2025
Review Date: 6/30/2028

PULMONARY EDEMA

ALS AND BLS



NOTES:

Contraindications for NTG:

- Known sensitivity to nitrate medications
- Have taken Phosphodiesterase Inhibitors within the past 24 hours, such as sildenafil (Viagra), tadalafil (Cialis), vardenafil (Levitra or Staxyn), or avanafil (Stendra).
- Systolic BP < 110mmHg
- Age 12 years or younger

Warnings:

Avoid placing defibrillation pads over NTG paste or a preexisting NTG patch if defibrillation pads are used. If necessary, remove the NTG paste or NTG patch, wipe off the area, and then place defibrillation pads.

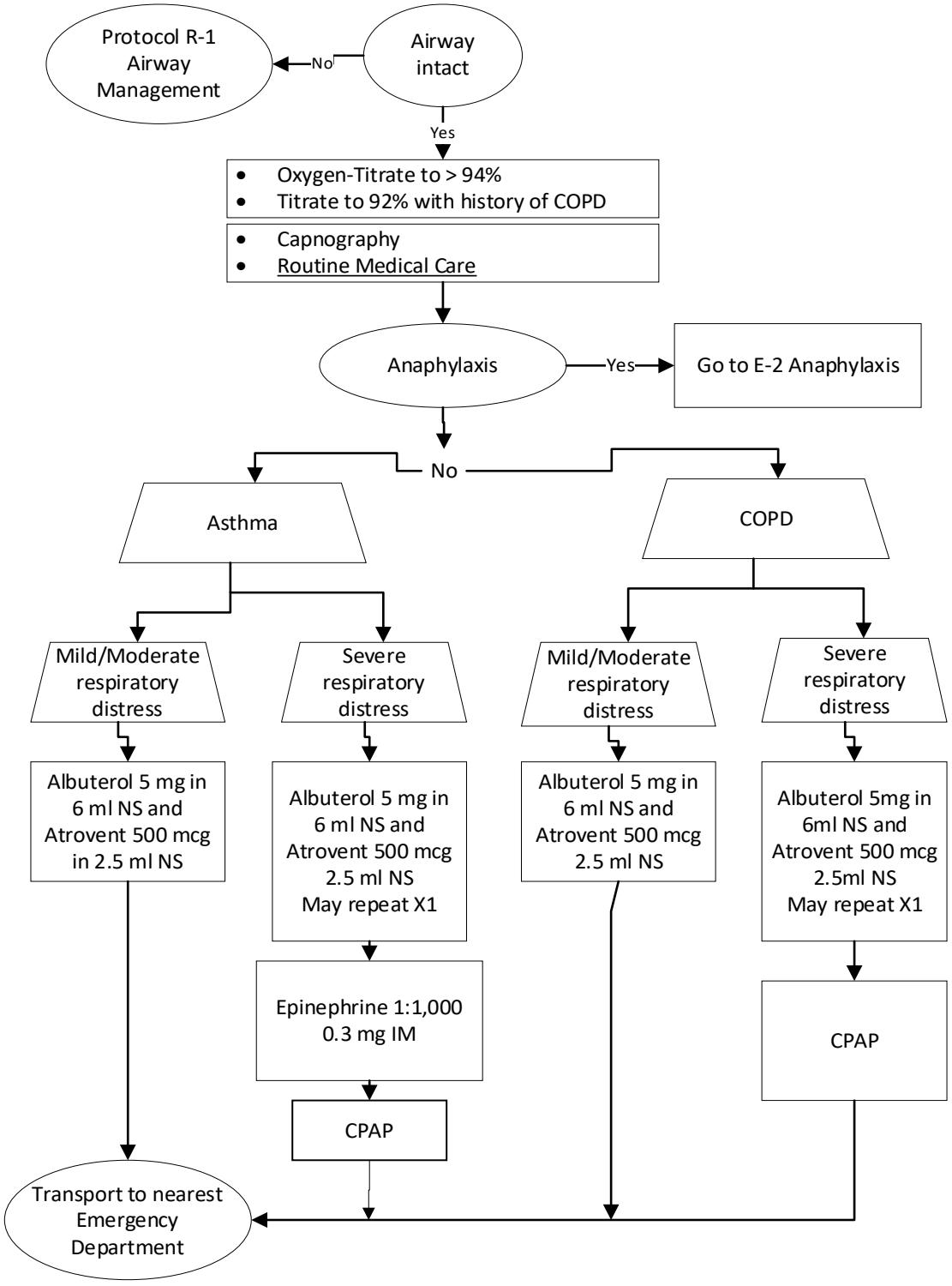
See Policy 4503 for CPAP contraindications.

Monterey County EMS System Policy

Protocol Number: R-3
Effective Date: ~~7/1/2023~~
Review Date: ~~6/30/2026~~

RESPIRATORY DISTRESS DUE TO ASTHMA/COPD

ALS and BLS CARE

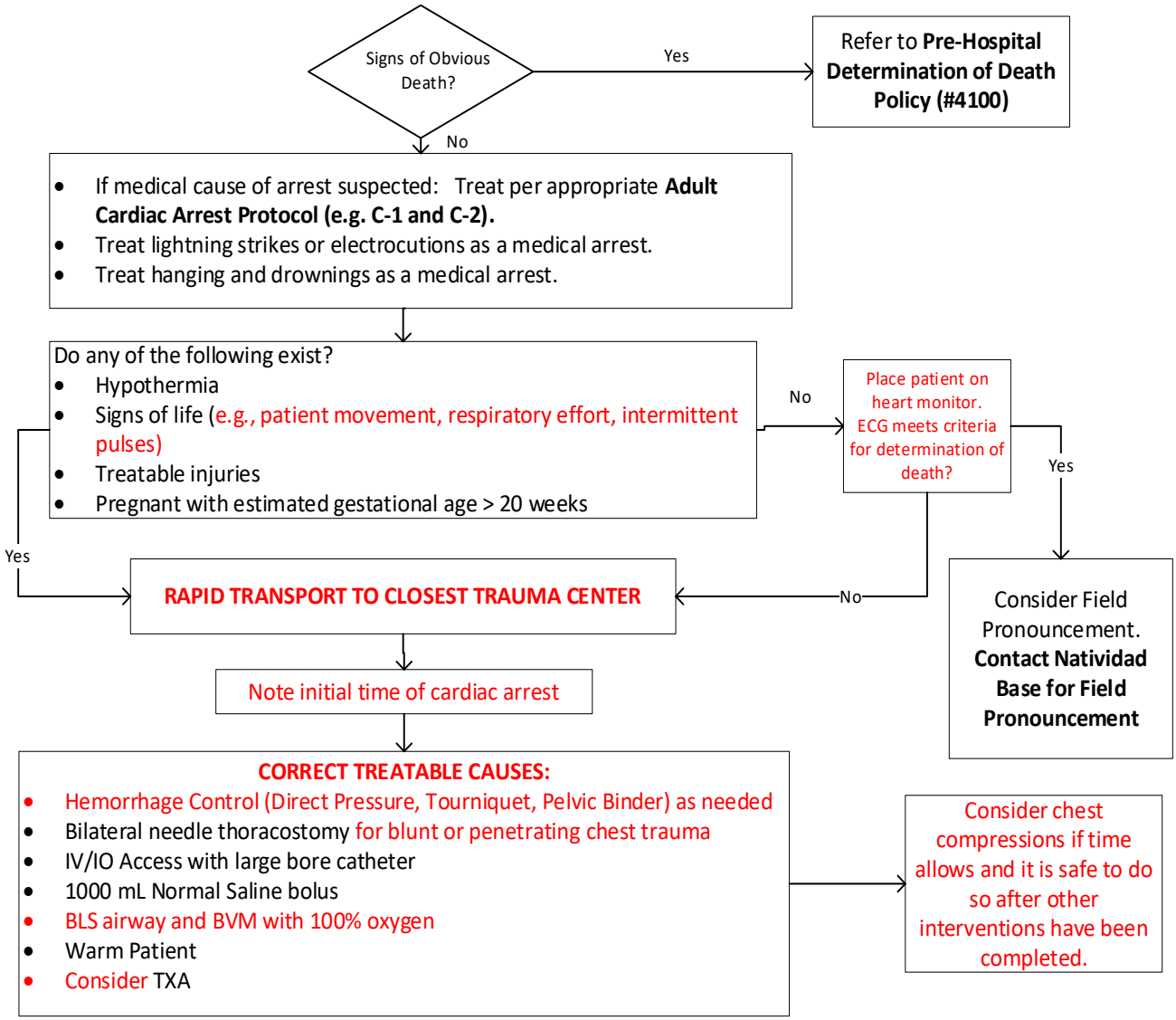


Monterey County EMS System Policy

Protocol Number: T-5
Effective Date: ~~7/1/2025~~
Review Date: ~~6/30/2028~~

TRAUMATIC CARDIAC ARREST

ALS and BLS CARE



Note: Cardiac medications and machine-generated compressions~~echanical CPR~~ are not indicated during cardiac arrest due to trauma with obvious chest or abdominal trauma.

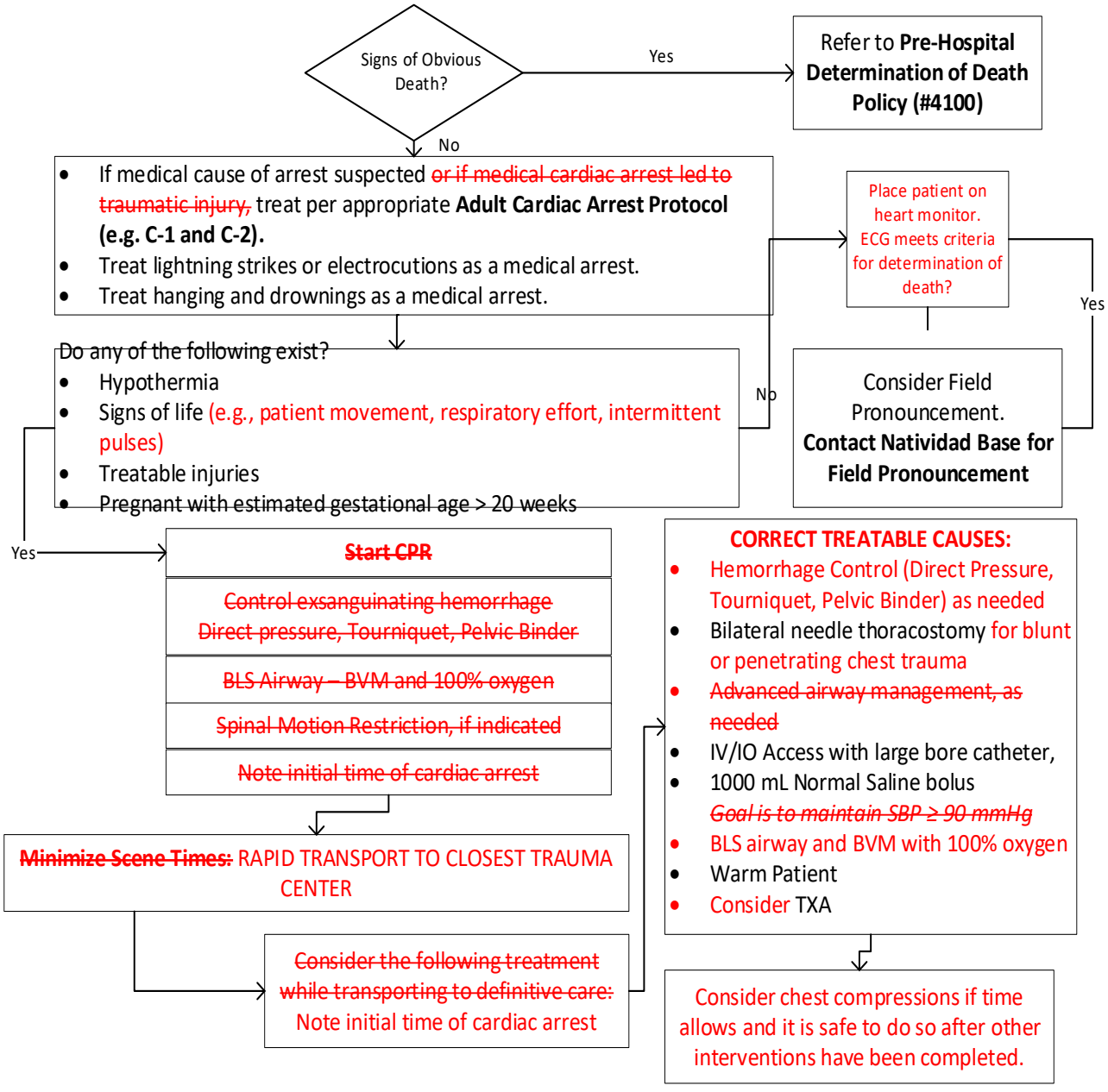
If utilized, p~~P~~lacement of a mechanical CPR device should only be initiated during transport and after other life-saving interventions have been completed. ~~not delay efforts to transport the patient.~~

Monterey County EMS System Policy

Protocol Number: T-5
Effective Date: ~~7/1/2025~~
Review Date: ~~6/30/2028~~

TRAUMATIC CARDIAC ARREST

ALS and BLS CARE



Note: Cardiac medications and machine-generated compressions~~echanical CPR~~ are not indicated during cardiac arrest due to trauma with obvious chest or abdominal trauma.

If utilized, p~~P~~lacement of a mechanical CPR device should only be initiated during transport and after other life-saving interventions have been completed. ~~not delay efforts to transport the patient.~~