



COGs 3.2 (Bexar/Frio)

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1 Preliminaries

1.1: Values of EMS Medical Care

Revised 01/04/2026

Aggressive Medical Care

We are committed to delivering purposeful, professional care that alleviates pain, reduces suffering, enhances the quality of life, and prevents death. We will continuously improve our skills and knowledge, utilizing our tools effectively for the benefit of our patients.

Advocates for Patient Well-being

We are committed to the well-being of our patients and are dedicated to delivering exceptional service that prioritizes health. We will honor each patient with respect and dignity, and when needed, we will extend social support, compassion, and emergency medical care.

Evidence-Based Medicine

As stewards of the science of EMS, we embrace change and adapt to evolving knowledge, techniques, services, equipment, and procedures. We recognize that nothing is absolute or dogma. We will rigorously evaluate evidence, develop innovative practice patterns, and passionately share our results.

Love of Profession

We are dedicated professionals, fully committed to our craft. Our journey may require sacrifices of time, sleep, hunger, and mental energy for the greater good of our community. It is essential that we look out for one another, support each other, and advocate for our profession. We will proudly present ourselves to the community, embracing our work with a sense of ownership. For those who struggle to find joy and purpose in our field, we will guide them toward new opportunities.

We set high expectations and strive for excellence from every team member. Each individual is empowered to uphold our values, shaping our future evolution and growth. While we may stumble at times, we will foster an environment of support that encourages growth in a just and nonpunitive way. With these guiding principles, we will enhance the health and well-being of our patients and our community.

| |
|--------------------------------|
| Expect ROSC Expect Survival |
|--------------------------------|

1.2 : Overview

Revised 01/04/2026

Chief Medical Officer

All providers must be in good standing with Allegiance Mobile Health and maintain credentialing by the Medical Director in order to utilize these guidelines at their designated level of certification. Allegiance Mobile Health personnel providing medical care under the delegated practice of the Chief Medical Officer are expected to always deliver patient care with compassion, professionalism, and to maintain the knowledge and skills necessary to provide the best possible care to all patients.

This document provides guidelines for medical care given by providers of Allegiance Mobile Health operating under the oversight of the Medical Director. Every effort has been made to include guidance for treatment during the majority of possible emergencies; however, due to the nature and scope of pre-hospital medicine, it is impossible to write a document that is completely comprehensive, encompassing every possible patient-care scenario.

Providers should keep in mind that, while these guidelines have the effect of policy, at times, variation or deviation from these guidelines may be necessary. In such cases, agency personnel must use critical thinking and sound clinical judgment in order to optimize treatment for the patient. Whenever possible, deviation from these guidelines should be done in conjunction with on-line medical direction, as well as the provider's EMS Supervisor. When deviation from these COGs occurs, the provider must document on the Patient Care Report (PCR) the treatment rendered and the reason for the deviation and notify the Medical Director on call immediately. Because medicine is constantly changing, and standards of care and scientific evidence are dynamic, these COGs will be frequently updated. Input from agency providers on these COGs is always welcome and encouraged.

Bryan Everitt, MD, NRP, FAAEM, FAEMS

Date: 1 JUN 2025

Chief Medical Officer

1.3: Geographical Response Area

Revised 01/04/2026

1. These Clinical Guidelines are to only be used under the Medical Director's authorization in the Allegiance Mobile Health primary service area in Bexar/Frio Counties or;
2. Within the region or the State of Texas, during a disaster situation, mutual aid response, or other special circumstances.

2 Clinical Standard Documents

CS-01: Atypical Protocol Utilization & Online Medical Direction

Revised 01/04/2026

Standard

Provide direction on managing patients and circumstances that are outside the protocols.

Purpose

Provide guidance for providers who face complicated, unusual, and atypical patient encounters, and establish an orderly method to rapidly address clinical issues.

Application

- a) Clinical encounters requiring use of this protocol may be divided into two types:
 - Those whose clinical situation is covered by existing protocol but who are presenting a clinical/administrative challenge (e.g., clarification of a COG, patient destination, other healthcare provider issues, etc.) and require non-medical control guidance or
 - Those whose clinical situation is not covered by existing protocol (e.g., modification of drug dosage, patient medication not addressed in protocol or unfamiliar to a provider, termination of resuscitation) and thus require medical control orders via online medical direction (Medication Direction/OMD).
- b) Patients requiring OMD shall contact the medical director. The provider requesting OMD will typically be at the patient's side.
- c) All consultations will take place using Pulsara to document the encounter.
- d) The first call for operational/administrative issues related to an individual patient or patients will be placed to a designated clinical supervisory personnel (e.g., Supervisors, Command Staff, etc.). If the clinical supervisory personnel are not available, the call should be directed to the Online Medical Direction (Medical Direction).

e) If OMD consultation is required, contact the Medical Director. In the event the Medical Director is unavailable, please follow the backup guidelines, including contacting the clinical supervisor. If no backup is available or contact cannot be made due to reception issues, providers are expected to use their best clinical judgment and contact OMD via Pulsara as soon as feasible once a connection is established.

f) In the PCR, the name of the individual providing OMD or administrative direction will be documented as a consultation in the ESO flowchart.

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CS-02 : Cancellation or Alteration of Response

Revised 01/04/2026

Standard

Establish direction for canceling or altering an initial response to a request for service.

Purpose

To give the providers in the EMS System guidance on when they may be able to alter or cancel an initial response based on patient or scene presentation.

Application

- a) Resources will be initially dispatched to a 9-1-1 request for service based on the currently approved operational policies. Responses utilizing lights and sirens provide benefits in a limited number of patient conditions and should be used judiciously.
- b) After assessing the patient(s) and making a determination of needed resources any on-scene Credentialed Provider may modify or cancel the response mode of any other System Provider not already on-scene.
- c) No entity other than a licensed EMS agency may cancel a response from the EMS system.
- d) If canceled, responders may, at their discretion, reduce their response to non-lights and sirens ("non-emergent") and continue to the scene in order to provide other assistance deemed appropriate by their organization or department. This does not apply to responses for responsibilities other than patient care (scene safety, fluids, etc.).
- e) On-scene providers may cancel 3rd party transport providers if:
 - Patient care and treatment have been initiated at the appropriate level of care.
 - The patient refuses transport to a hospital.
 - On-scene provider deems that transport is not required based on patient's condition (i.e., Refusal of treatment on scene, obvious death).
 - Medical control/direction has been contacted on high-risk refusals
 - The transport provider has not documented their arrival on-scene.

CS-03: Child Abuse Recognition & Reporting

Revised 01/04/2026

Standard

Assessment of child abuse is based upon the following principles:

- **Protect** the child's life from harm and the EMS team from liability.
- **Suspect** that the child may be a victim of abuse, especially if the injury/illness is not consistent with the reported history.
- **Respect** the privacy of the child and family.
- **Collect** evidence as possible, especially information related to the incident.

Purpose

Children suffer several types of abuse. All are harmful to their physical and emotional development and require intervention. Under the Child Abuse Prevention and Treatment Act (CAPTA), child abuse and neglect mean, at a minimum, *"Any recent act, or failure to act, on the part of a parent or caretaker, which results in death, serious physical or emotional harm, sexual abuse, or exploitation, or an act or failure to act which presents an imminent risk of serious harm."* By Texas State law, all healthcare providers are obligated to report cases of suspected child abuse or neglect to either the local law enforcement agency or the Texas Department of Family and Protective Services (TDFPS). To report to TDFPS, call 1-800-252-5400 or submit a report online at www.txabusehotline.org. Failure to report suspected child abuse could result in immediate de-credentialing.

Contact
Texas Department of Family and Protective Services (TDFPS)
Phones: Phone: (800) 252-5400
Note: To report to TDFPS, call the number here or submit a report online at www.txabusehotline.org
[Services](#)

Application

- a) Stabilize and treat all injuries.
- b) Immediately request law enforcement assistance.
- c) Do NOT attempt to initiate a report to law enforcement or social services in front of the patient, parent, or caregiver.
- d) If sexual abuse is suspected, discourage the patient from washing/bathing/showering.
- e) Protect your safety if the patient, parent, or caregiver is hostile or refusing care. Immediately request law enforcement assistance.
- f) Do not confront or become hostile to the parent or caregiver.
- g) Document:
 - In their own words, all statements by the patient, the parent, witness, or caregiver, including statements made about the manner of the injuries
 - Any abnormal behavior of the patient, parent, or caregiver
 - The condition of the environment and other residents present
 - Who received the report of suspected abuse or neglect
 - If reporting is done after PCR completion, an addendum should be written and attached with the reporting date, time, who reported to, etc. This will serve to assist the Provider
- h) Transport Providers:
 - If law enforcement or the TDFPS has been notified of abuse or suspected abuse, notify the appropriate Supervisor to provide support for completing reporting regulations and processes. Upon arrival at the destination hospital, inform the accepting providers of your concerns.
- i) Other System Providers:
 - If a notification of abuse or suspected abuse has been made to Law Enforcement or TDFPS, contact an EMS Supervisor to provide support for the completion of reporting regulations and processes

CS-04: Clinical Event Review

Revised 01/07/2026

Standard

When clinically related concerns are identified, each System Organization's Performance/Quality Improvement staff will evaluate the associated actions to find improvement opportunities. A clinical event review does not require actual harm or adverse outcomes. Key performance indicators, found in the appendix for QA/QI purposes, have been developed to guide systems on patient-oriented clinical metrics.

Purpose

Establish a standardized process for each System Organization and the OMD to review clinical concerns and/or reports of suboptimal or outstanding clinical performance. The primary objective is to identify individual and system improvements to clinical care. The medical director can also implement this process via CS-19.

Definitions

Clinical Quality Improvement (CQI) occurs when an assertion is made that a clinical error or less-than-optimal clinical performance may have happened. A clinical event does not imply that the assertion is valid or invalid. This term is sometimes referred to as a Clinical Concern or Clinical Complaint. The review provides professional remediation and recommendations for improvement.

Case Review (CR) systematically examines actions and omitted actions associated with a specific event or situation to compare performance to accepted standards and expectations and identify improvement opportunities. A clinical event review does not require actual harm or adverse patient outcomes. The degree of complexity of the review varies based on the type of event and the circumstances surrounding it.

Event Levels

Level 1 Events are reported to the Medical Director as soon as initial facts are obtained. This category of events includes, but is not limited to, the following examples:

- Unrecognized esophageal intubation
- Intubation without Capnography Verification/Monitoring
- Medication error with apparent harm to the patient
- ED Physician Director, Hospital Administrator, or Transporting Agency Complaint/Concern/Conflict
- High Profile emergency medical events such as
 - Significant injury or illness of an elected official, public safety staff, or high-profile community member
 - Any significant injury related to a law enforcement activity
- Inability to provide a critical and indicated intervention due to a device failure. Examples include but are not limited to:
 - Defibrillator failure while caring for a cardiac arrest patient
 - Transcutaneous pacer failure while caring for a bradycardic patient
- The hospital refuses a patient who is appropriate for that Facility
- Any Potential Decredentialing Issues -
 - Falsification of clinical documentation or clinical event review information
 - Intentional harm to a patient
 - Intentional withholding of care to a patient
 - Providing care under the influence of drugs or alcohol
 - Failure to remediate

Level 2 Events are reported to the Medical Director within 1 Business Day. This category of events includes, but is not limited to, the following examples:

- Surgical Airway
- Medication Assisted Intubation (MAI)
- Absolute deviation from a Medical Priority Dispatch protocol with a clinical impact
- Provider practicing beyond the scope of System Credential level
- Transport to an inappropriate receiving facility
- Medication Error without harm to the patient
- Any concerns related to the clinical performance of an individual provider

The primary difference between Level 1 and Level 2 events is the reporting timeframe. The medical director has defined Level 1 events as highly likely to require immediate Medical Director intervention and thus require immediate notification. Level 2 events require reporting within 24 hours, which should typically occur within normal business hours.

Application

a) Allegiance Mobile Health will foster an environment that encourages reporting of clinical concerns and errors, including self-reporting

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b) A clinical event review will be conducted when Level 1 or 2 events are identified, as defined in the Clinical Event Review Process document.

c) The system medical director will receive reporting of Level 1 or 2 events within the prescribed time intervals.

d) The QA department staff will conduct an initial review to:

- (i) gather pertinent facts, documentation, and data
- (ii) analyze the facts, data, and related information
- (iii) Identify the cause(s) of the less-than-optimal performance

e) After the initial review, a CQI/CR will be convened with all providers involved.

- (iv) In CQI, the providers involved may elect to limit review to the Medical Director alone to maintain confidentiality and ensure a safe and open environment.

f) After the CQI/CR, a report of the above findings will be drafted and submitted to the Clinical Leadership Committee.

g) Copies of the CQI/CR report should be maintained for future review by authorized persons only.

h) Under Texas Health and Safety Code Section 773.095, all aspects of the CQI/CR, including the proceedings, recordings, and documents, are considered confidential.

i) All persons involved in the CQI/CR will maintain confidentiality and not share details outside of the CQI/CR process.

j) The Clinical Leadership Committee will ensure its identified performance/quality improvement staff is appropriately trained in the current performance review and analysis methods.

k) The Clinical Leadership Committee will provide professional development to System performance/quality improvement staff on performance review and analysis.

l) Providers are expected to participate in CQI reviews. Failure to participate will be considered failure to remediate.

m) The medical director will review the information, data, findings, and causation for Level 1 and 2 events and recommend process improvement as part of the Clinical Leadership Committee.

CS-05: Crime Scene

Revised 01/04/2026

Standard

To establish guidelines for conducting patient care on a potential crime scene.

Purpose

When prehospital care or resuscitation efforts are no longer appropriate, every provider must assist law enforcement by preserving evidence at potential crime scenes. Providers should also maintain a heightened awareness of the presence of weapons.

Application

General principles of crime scene management:

1. The first arriving Credentialed Provider on-scene must assess patients to determine whether resuscitative efforts are indicated. If law enforcement prevents entry, additional responding units should be reduced to "non-emergent" responses. All law enforcement refusals by providers to access patients will be retrospectively reviewed. The on-call medical director should be notified of any patient access limitations.
2. Providers should not handle weapons unless necessary to ensure a safe patient care environment. If weapons must be handled, the Provider must wear gloves, clearly document the items' original and new location, and inform on-scene Law Enforcement.
3. Avoid using anything (phones, sinks, bathrooms, towels, sheets, blankets, pillows, etc.) from the incident scene.
4. Victims of a suspected assault should be strongly discouraged from "cleaning up," washing, or showering before the arrival of Law Enforcement or transport.
5. Providers should not touch anything at the crime scene unless required for patient care activities. When possible, patient demographic information should be obtained from law enforcement.
6. Any ligature(s) involved should be left as intact as possible and cut rather than untied. All cuts made should be in an area well away from any knots.

7. Containers of any substance that may have been ingested by the patient/victim should be left in the position found unless needed for ongoing patient care. If the container must be touched, use gloved hands and limit handling to a minimum to preserve any fingerprints that may be present.
8. Disposable items used during resuscitation efforts must be left in place. Sharps used during resuscitation should be stored in an appropriate container, with the container being left in the area.
9. Intravenous/IO lines, airways, and all other disposable equipment used, successfully or unsuccessfully, are to remain in place and/or on-scene.
10. Death is determined by Texas Health and Safety Code Title 8, Chapter 671, Subchapter A, which requires a physician. EMS providers practice under a physician's delegated authority. Pronouncement should be made following the standards outlined in the Criteria for Death or Withholding Resuscitation/Discontinuation of Resuscitation Standards. The existence of a possible crime scene should not influence the decision to initiate resuscitative efforts.
11. A top sheet may be provided to the officer on-scene to cover the body. All efforts should be made to protect the patient's dignity and block the public's view of the body.
12. Once a pronouncement time is obtained, the body becomes the property of the Medical Examiner. It may not be touched or altered without authorization from the Medical Examiner's Office.
13. It is acceptable to share Patient Care information with appropriate on-scene law enforcement if the patient has been pronounced dead.

Crime scene management where no resuscitation is initiated:

14. Any Responder not properly credentialed to seek pronouncements of an obvious Dead on Scene (DOS) should immediately leave the area without touching anything via the path of entry.
15. When confirmation of death is required, only one properly credentialed provider should enter the area.

Crime scene management with unsuccessful resuscitation:

16. Once resuscitation efforts have ceased and a pronouncement has been obtained, Providers should immediately vacate the area.
17. The Medical Examiner must be able to differentiate between punctures originating from resuscitation efforts and those present before arrival. All unsuccessful IV/IO or pleural decompression attempts should be marked on the body by circling with a marker or pen.

Crime scene management with patient transport:

18. Clothing, jewelry, or other objects removed from the patient should be left on-scene. Clearly document any items left and inform on-scene Law Enforcement of their original and current locations.

19. When cutting clothing for assessment and/or treatment, avoid cutting through existing defects in the clothing (tears, entry or exit points) whenever possible.

20. If the patient has been placed on a sheet, notify the receiving facility that the sheet and all personal effects may be considered evidence.

- If law enforcement is not on the scene prior to transport, the first response agency is to remain on the scene, out of the crime scene perimeter, until law enforcement arrives. An effort should be made to keep all individuals out of the area.

CS-06: Criteria for Death or Withholding Resuscitation

Revised 01/04/2026

Standard

Define the parameters by which providers in the EMS system may withhold resuscitative efforts.

Purpose

CPR and ALS treatment are to be withheld if the patient is obviously dead per the criteria below or a valid **Out-of-Hospital Do Not Resuscitate Form** (OOH-DNR) and/or **OOH-DNR ID device**. The form and device may be from any (US) state. (see separate DNR policy)

Application

a) Resuscitation efforts should not be initiated or continued by an EMS System provider if there are no signs of life and one or more of the following are present:

- Rigor mortis and/or dependent lividity;
- Decomposition;
- Decapitation or total or near-total loss of brain matter
- Incineration;
- Transsection of the body
- Submersion >1 hour
- The chest wall is frozen
- Fetal death with a fetus < 20 weeks by best age determination available at scene or weighing less than 350 grams. (This is considered a product of conception and does not require time of death).

Document the specific indications for withholding resuscitation in the PCR. Fetal death < 20 weeks may be documented on the mother's PCR; if ≥20 weeks, create a separate PCR.

Notes

- Exposed brain matter, grossly mangled body parts, and suspected gross airway trauma do not constitute reasons for withholding resuscitation.
- In an MCI event, **BLACK** tag patients may have Resuscitation withheld until appropriate resources are available. At that time, patients should be reassessed, and if they do not meet the above criteria, they must have Online Medical Direction (Medical Direction) to terminate resuscitation.
- If you are unsure whether the patient meets the above criteria, initiate BLS and contact Online Medical Direction (Medical Direction)

CS-07: Definition of a Patient

Revised 04/27/2026

Standard

To establish guidelines for who meets the criteria to be considered a patient in the EMS System.

Purpose

The definition of a patient is any human being who:

- Has a complaint suggestive of potential illness or injury
- Request an evaluation for potential illness or injury
- Has obvious evidence of illness or injury
- Has experienced an acute event that could reasonably lead to illness or injury.
- Is in a circumstance or situation that could reasonably lead to illness or injury

All individuals meeting any of the above criteria are considered "patients" in the EMS System. These criteria are intended to be considered in the broadest sense.

Determining an individual's status as a patient requires the input of both the individual and the Provider and an assessment of the circumstances that led to the 9-1-1 call. If there are any questions or doubts, the individual should be considered a patient.

Application

a) Anyone who fits the definition of a patient must be adequately evaluated by a system-credentialed provider and offered appropriate treatment and transportation. (If a patient wishes to refuse offered treatment and/or transport Against Medical Advice (AMA), refer to the Refusal of Treatment or Transportation Standard and the Determination of Capacity Standard.)

b) Anyone who does not meet the definition of a patient above requires a PCR to document the interaction and include basic demographics such as name, address, and date of birth. If there is any doubt, an individual should be deemed a patient, and appropriate evaluation should be provided and documented in the PCR.

c) If an individual meets the definition of a patient, the following apply:

- **The definition of an adult is a person who is 18 years of age or older**
 - Adults have the right to consent to or refuse medical treatment

- **The definition of a minor is:**

- A person under the age of 18 who is not and has not been married or who has not had the disabilities of minority (emancipation) removed for general purposes by a court

- *Generally, minors can neither consent to nor refuse medical treatment. Some minors, however, are considered to be emancipated and have the rights of consent/refusal afforded to an adult*

- A minor is considered emancipated if he or she has obtained a court order of emancipation from a Texas court. Minors may petition the court for emancipation if they are:

- *A resident of Texas;*

- *17 years of age or at least 16 years of age and living separate from his parents, managing conservator or guardian;*

- *Is self-supporting and managing his own financial affairs*

d) In certain situations, a minor may consent to medical treatment without parental or legal guardian consent. A minor may consent to treatment if the minor:

- Is on active duty with the US armed services;

- Is 16 years or older, residing separately from his parents or guardian, and managing their own financial affairs (regardless of the source of income);

- Consents to diagnosis and treatment of any infectious/communicable disease with a reporting requirement;

- Is unmarried and pregnant and consents to care related to the pregnancy, other than abortion;

- Consents to examination and treatment relating to drug or alcohol dependency;

- If they are unmarried and have custody of their biological child, they may consent to treatment for the child

- **The protocol definition of a pediatric patient is:**

- For the purpose of determining transport destination, refer to your regional transport guidelines

- For the purpose of selecting an appropriate treatment protocol, any patient <37 kg or who can be measured as pediatric by the Mission Critical Protocols application.

CS-08: Discontinuation of Prehospital Resuscitation

Revised 01/04/2026

Standard

Unsuccessful cardiopulmonary resuscitation (CPR) and other advanced life support (ALS) interventions may be discontinued prior to transport when this standard is followed.

Purpose

The purpose of this standard is to allow for discontinuation of prehospital resuscitation after the delivery of adequate and appropriate ALS therapy.

Application

- a) Any Paramedic or higher Credentialed Provider, in the following circumstances, may discontinue resuscitation efforts without OLMC:
 - Resuscitation efforts were inappropriately initiated when the criteria outlined in the Criteria for Death/Withholding Resuscitation Standard were present
 - A valid Out of Hospital Do Not Resuscitate Form (OOH-DNR) and/or OOH-DNR ID device was discovered after initiating resuscitative efforts. The form and device may be from any (US) State (Original or Copy) as defined in the DNR Standard
- b) In all other cases, the following criteria must be met:
 - Patient must be at least 18 years of age, or the family of a minor must agree after consultation with an Agency Officer or Online Medical Direction (OMD);
 - The cause of arrest is NOT due to suspected hypothermia.
 - Adequate CPR has been administered.
 - The airway has been successfully managed with adequate BLS Ventilation and a measurable end-tidal CO₂ (EtCO₂).
 - Vascular access has been achieved, and fluids have been administered.
 - Rhythm-appropriate medications and defibrillation have been administered in accordance with the Cardiac Arrest protocols; a 4-lead ECG has been obtained.

- Failure to establish persistently recurring or refractory ventricular fibrillation/tachycardia or any continued neurological activity (eye-opening or motor response) after appropriate BLS and ALS resuscitation efforts;
 - All credentialed providers on scene agree with the decision to cease efforts.
 - OMD must be contacted for all discontinuation of resuscitation after the above are met, or the provider believes further efforts are futile. If OMD is unavailable due to reception difficulties, providers should exercise their best clinical judgment and may terminate, provided that the above are met. OMD will still be notified via the standard process once connectivity is restored.
- c) When OMD is involved in the decision to terminate, resuscitative efforts should be continued while:
- The family is counseled on the patient's unchanging condition and impending discontinuation of efforts.
 - Requesting a pronouncement from OMD
- d) If termination of efforts is anticipated, any available support services (e.g., Victim Services) should be contacted as early as possible.
- e) Document all patient care and interactions with the patient's family, personal physician, medical examiner, law enforcement, and medical direction in the EMS patient care report (PCR).

CS-09: DNR Advanced Directives

Revised 01/04/2026

Standard

If any provider of the EMS System is presented with a completed Out of Hospital Do Not Resuscitate (OOH-DNR) form and/or OOH-DNR ID device, the provider shall withhold CPR and the listed therapies in the event of cardiac arrest. The form and device may be from any (US) State. Refer to Texas Administrative Code § 157.25.

Exceptions

- A DNR order may not be honored if responding healthcare professionals know that the patient is pregnant.
- A DNR order may not be honored if there are any indications of unnatural or suspicious circumstances.

The provider shall begin resuscitation efforts until a physician directs otherwise.

Purpose

- To honor the terminal wishes of the patient and to prevent the initiation of unwanted resuscitation.

Application

a) When confronted with a cardiac arrest patient, the following conditions must be present to honor the DNR request and withhold CPR and ALS therapy:

- Out-of-Hospital Do Not Resuscitate (OOH-DNR) - or - OOH-DNR ID device; (Original or Copy)
- Valid Out-of-Hospital Do Not Resuscitate Written Order (Original or Copy) or Device from any (US) State;
- A licensed physician on the scene or in contact by telephone orders that no resuscitation efforts are to take place

b) A DNR request may be overridden by:

- The patient or person who executed the order, destroying or directing someone in their presence to destroy the form and/or remove the identification device

- The patient or the person who executed the order informs the EMS Providers or the attending physician of their intent to revoke the order.
 - The attending physician or physician's designee, if present at the time of revocation, records in the patient's medical record the time, date, and place of the revocation and enters "VOID" on each page of the OOH-DNR.
- c) An advanced directive does not imply that a patient has refused supportive or palliative care.
- d) Patients receiving hospice or palliative care may not be assumed to carry an OOH-DNR; resuscitative efforts should be stated if no OOH-DNR is presented.

DNR Dispute Resolution Process

- o Many scenarios develop regarding DNR Patient encounters. OMD shall be the point of contact for resolving these issues.

CS-10: Documentation of Patient Care Report

Revised 01/04/2026

Standard

Establish the minimum documentation requirements for every patient contact.

Purpose

To provide consistent and accurate documentation of the events of a patient encounter, the EMS System Medical Director is responsible for designating the minimum data required for patient care reporting. The following are the minimum requirements for documentation on all patient encounters.

Application

- For every patient contact, the following documentation requirements must be met:
 - a) Be truthful, accurate, objective, pertinent, legible, and complete with appropriate spelling, abbreviations, and grammar.
 - b) Use only approved medical abbreviations.
 - c) Reflect the patient's chief complaint and a complete history or sequence of events that led to their current request or need for care.
 - d) The report should contain a detailed assessment of the nature of the patient's complaints and the rationale for that assessment.
 - e) Reflect the initial physical findings, a complete set of initial vital signs, all details of abnormal findings considered important to an accurate assessment, and significant changes important to patient care.
 - f) Reflect ongoing monitoring of abnormal findings.
 - g) Summarize assessments, interventions, and the results of the interventions in appropriate detail so the reader may fully understand and recreate the events.
 - h) For drug administrations, include the dosage, route, administration time, and response.
 - i) List all treatments and interventions in chronological order. Response to treatments and interventions should also be listed.

- j) For patients with extremity injury, note the neurovascular status before and after immobilization.
- k) Document motor function before/after spinal immobilization for patients with spinal motion restriction.
- l) For IV administration, document the catheter size, site, number of attempts, type of fluid, and flow rate.
- m) Include a Limb Lead II strip for all patients placed on the cardiac monitor. Any and all 12-lead strips must also be included. Any significant rhythm changes must be documented. The initial strip, ending strip, pre and post-defibrillation, pacing attempts, etc., should be attached for cardiac arrests.
- n) Document clearly any requested orders, whether approved or denied, who gave the order, and the time of the order.
- o) Document any waste of narcotics, including the quantity wasted, where it was wasted, and the name of the person who witnessed the waste.
- p) Explain why an indicated and appropriate assessment, intervention, or action prescribed by the Clinical Operating Guidelines did **NOT** occur.
- q) Clearly and concisely describe the circumstances and findings associated with any complex call or out-of-the-ordinary situations.
- r) Be available in an acceptable time period after the patient encounter.
- s) Remain confidential and be shared only with legally acceptable entities.
- t) For a birth or stillborn/non-viable fetus, note the delivery time. If a fetus shows no signs of life and resuscitation is not attempted, include reasons for withholding it. For products of conception under 20 weeks, documentation may be added to the Mother's PCR.
- u) Once PCR is complete, the original document is to remain unchanged unless otherwise approved by the clinical department management team. Any necessary corrections or clarifications will be noted in an addendum according to agency guidelines.
- v) In the case of an interfacility transfer, documentation must include any medications administered or discontinued during the transfer.
- w) Any patient data imported into the PCR from third-party sources (e.g., Pulsara, LifePak, Handtevy) must be reviewed and verified for accuracy before the record is locked.
- x) Autogenerated narratives, if available, may be used when the following conditions are met:
 - (i) All required and applicable discrete data fields have been completed prior to narrative generation.
 - (ii) The call type and disposition meet system requirements for auto-generated narrative functionality.

- (iii) The provider performs a complete review of the generated narrative for accuracy, completeness, and clinical appropriateness.
- (iv) Any inaccuracies, omissions, or context not captured in discrete fields are corrected or supplemented by the provider.
- (v) The provider electronically attests to reviewing the narrative prior to PCR lock and submission.

CS-11: Documentation Vital Signs

Revised 01/04/2026

Standard

Every patient encounter by EMS will be documented. Vital signs are a crucial component in evaluating any patient, and a complete set of vital signs must be documented for any patient who receives an assessment.

Purpose

To ensure that the evaluation of every patient's volume, cardiovascular, and mental status is documented with a complete set of vital signs.

Application

- a) Initial vital signs may be deferred until transport, when other treatments and packaging may take priority, and vital signs may interfere with the timely execution of these priorities.
- b) An initial complete set of vital signs includes:
 - Pulse rate
 - Systolic AND diastolic blood pressure
 - Respiratory rate
 - Pain/severity (when appropriate to patient complaint)
 - Mental Status for Patients (GCS / AVPU)
- c) Based on the patient's condition and complaint, vital signs may also include:
 - Pulse Oximetry
 - Oral / Temporal / Axillary / Tympanic Temperature
 - Core Temperature
 - End-Tidal CO2
- d) If the patient refuses this evaluation, document the refusal in the PCR per the Refusal of Treatment or Transportation Standard. Ensure that the vital sign section's 'Unable to Obtain' reason is marked as "Refused"
- e) When any components of vital signs were obtained using a cardiac monitor, the data should be exported electronically to the patient care report. Where values are

inconsistent with manually obtained values, values may be appropriately edited to reflect the manually obtained values or addressed in the clinical narrative.

- f) Document situations that preclude the evaluation of a complete set of vital signs.
- g) Record the time vital signs were obtained.
- h) Any abnormal vital signs should be monitored.
- i) Vitals for stable patients should be documented at least every 15 minutes. Unstable vitals should be noted at least every 5 minutes.
- j) Vitals should be documented after each significant intervention.
- k) For patients refusing transport, if vitals are allowed, at least two sets of vitals 5 minutes apart must be documented.

CS-12: Domestic Violence (Partner and/or Elder Abuse Recognition and Reporting)

Revised 01/06/2026

Standard

Domestic violence is physical, sexual, or psychological abuse and/or intimidation, which attempts to control another person in a current or former family, dating, or household relationship. Elder abuse is the physical and/or mental injury, sexual abuse, negligent treatment, or maltreatment of a senior citizen by another person. Abuse may be at the hands of a caregiver, spouse, neighbor, or adult child of the patient. The recognition, appropriate reporting, and referral of abuse are a critical step to improving patient safety, providing quality health care, and preventing further abuse.

Purpose

Assessment of an abuse case is based upon the following principles:

- **Protect** the patient and the EMS team from harm
- **Suspect** that the patient may be a victim of abuse, especially if the injury/illness is not consistent with the reported history.
- **Respect** the privacy of the patient and family.
- **Collect** as much information and evidence as possible and preserve physical evidence.

Application

- a) Assess the patient(s) for any psychological characteristics of abuse, including excessive passivity, compliant or fearful behavior, excessive aggression, violent tendencies, excessive crying, behavioral disorders, substance abuse, medical non-compliance, or repeated EMS requests. This is typically best done in private with the patient.
- b) Assess the patient for any physical signs of abuse, especially any injuries inconsistent with the reported mechanism of injury. Defensive injuries (e.g., to

forearms), and injuries during pregnancy are also suggestive of abuse. Injuries in different stages of healing may indicate repeated episodes of violence.

c) Assess all patients for signs and symptoms of neglect, including inappropriate level of clothing for weather, inadequate hygiene, absence of attentive caregiver(s), or physical signs of malnutrition.

d) Immediately report any suspicious findings to the receiving hospital (if transported).

e) If an elder or disabled adult is involved, also contact the Local Law Enforcement Agency or Texas Department of Family and Protective Services (TDFPS). Abuse can be reported via the following methods:

Contact
Texas Department of Family and Protective Services (TDFPS)
Phones: Phone: (800) 252-5400
Note: To report to TDFPS, call the number here or submit a report online at www.txabusehotline.org
Services

f) Suspected abuse or neglect that occurs in Nursing Homes, Assisted Living Centers, Intermediate Care Facilities, Home Health and Hospice and Day Activity and Health Services should also be reported to the Texas Department of Aging and Disability Services (DADS). Abuse shall be reported via the following method:

Contact
Texas Department of Aging and Disability Services (DADS)
Phones: Phone: (800) 458-9858
Note: Abuse shall be reported by the phone number here.
Services

CS-13: Equipment Failure

Revised 01/04/2026

Standard

Any patient care equipment that fails to function as intended while managing a patient will be removed from service and reported to the clinical department and a supervisor.

Purpose

Define a process for tracking, reporting, and evaluating patient care equipment that has failed to function as intended while managing a patient.

Application

- a) To minimize the risk of equipment failure, each Allengiance Mobile Health shall maintain a daily equipment check sheet and periodically test biomedical equipment in accordance with manufacturer recommendations.
- b) If equipment fails during patient care that is deemed essential to the patient's ongoing care, immediately contact the on-duty supervisor, advise them of the failure, and have the nearest appropriate resource dispatched. Depending on the patient's need, this may be a supervisor, ambulance, or other resource.
- c) Based on the condition of the patient's request, the resource responds either as an emergency or a non-emergency. The decision to await the arrival of replacement equipment is at the discretion of the on-scene provider in charge and is dependent upon how essential the equipment is to the ongoing management and/or monitoring of the patient.
- d) Closely monitor and treat the patient to the best of your ability with the remaining functional equipment.
- e) While it is appropriate to notify supervisory personnel of the failure, care and transport should not be delayed while awaiting the arrival of an agency officer.
- f) All equipment associated with the failure shall be gathered and secured for inspection. This includes all cables, electrodes, tubing, masks, or any other equipment associated with the failure. This equipment shall not be utilized in patient care activity until reviewed by the clinical department and documentation showing that the equipment was evaluated by the manufacturer or their approved service agent, has been received. Accessories such as those mentioned above should be left attached to

the failed equipment in the manner that they were attached at the time failure was noted.

g) All medical equipment failures will be reported to FDA using the link
<<<https://www.accessdata.fda.gov/scripts/medwatch>>>

h) A clinical incident report shall be completed and forwarded to the clinical department as soon as practical after the failure. In all cases, this report shall be completed before the providers' tour of duty ends.

i) This standard should be applied in addition to any process established by a regional operations n and is not considered a substitute for the other reporting requirements.

CS-14: Identification Badges

Revised 01/04/2026

Standard

Badges are valid only if they are issued and maintained as designated by the Medical Director and Clinical Standards. No provider or organization will modify badges. It is the responsibility of Allegiance Mobile Health to immediately collect the badges of those individuals whose Credentials have been revoked or who are no longer associated with the organization.

Purpose

Due to the variety of providers with different levels of training, an ID badge system is required to ensure that everyone on the scene knows each provider's System-credential capabilities.

Application

- a) Proper identification of System Providers is required by the Texas Department of State Health Services.
- b) System identification badges serve as the primary identifier for System-Credentialed individuals and indicate their Credential level.
- c) These badges are not intended for use as an organization or department identification.
- d) Proper provider identification will facilitate the exchange of patient information within the guidelines established by the Health Insurance Portability and Accountability Act (HIPAA).
- e) Any responder should visibly wear badges providing any level of patient care. The exception would be when circumstances require the responder to utilize personal protective outerwear (i.e., bunker gear, rain gear, etc.).
- f) Badges are valid throughout the System and are not limited to specific venues or defined response areas.
- g) Credentialing badges must include:
 - Provider's Picture
 - Name

- Credential Level
- TDSHS Certification or Licensure Level
- TDSHS Certification or Licensure number
- Color coding denoting the appropriate credential level

h) A system responder who is credentialed but lacks a badge functions as a First Aid Provider. If a recognized and credentialed provider is present, the lead on patient care may permit their involvement at their discretion. Both the lead transport medic and the credentialed provider are responsible for badge compliance, and all Providers on-site should identify any discrepancies.

i) A provider within the EMS system who performs a procedure that they are not credentialed to perform is operating outside the scope of their practice. Both the provider performing the procedure and the provider in charge of the scene should immediately report the incident to the clinical department. *Failure to do so may be considered falsification of documentation, which could lead to actions against the provider's credentials and/or state certification/license.* This requirement does not apply to candidates in an approved training program who are operating under the supervision of their training officer.

CS-15: Infant Abandonment

Revised 01/06/2026

Standard

Texas law provides a responsible alternative to mothers who might otherwise abandon or harm a newborn child. It states that a parent may leave an unharmed infant, up to 60 days old, at any hospital, fire station, or EMS station with "no questions asked."

Sec.262.302 of the Texas Family Code, states (a) A designated emergency infant care provider shall, without a court order, take possession of a child who appears to be 60 days old or younger if the child is voluntarily delivered to the provider by the child's parent and the parent did not express an intent to return for the child. (b) A designated emergency infant care provider who takes possession of a child under this section has no legal duty to detain or pursue the parent and may not do so unless the child appears to have been abused or neglected. The designated emergency infant care provider has no legal duty to ascertain the parent's identity, and the parent may remain anonymous. However, the parent may be given a form for voluntary disclosure of the child's medical facts and history. (c) A designated emergency infant care provider who takes possession of a child under this section shall perform any act necessary to protect the physical health or safety of the child. The designated emergency infant care provider is not liable for damages related to the provider's taking possession of, examining, or treating the child, except for damages related to the provider's negligence.

Purpose

To provide:

- Protection for infants placed into the custody of an EMS provider under this law.
- Protection of EMS systems and personnel when confronted with this issue.

Application

- a) Initiate Neonate Protocol as appropriate

Link

10 Obstetric/Neonate

OB-04: Newborn / Neonate

[Go to document](#)

- b) Initiate other treatment protocols as appropriate
- c) Keep the infant warm
- d) Call the local Department of Social Services as soon as the infant is stabilized
- e) Transport the infant to the medical facility per protocol
- f) Assure the infant is secured in an appropriate child restraint device for transport
- g) Document protocols, procedures, and agency notifications in the PCR.

CS-16: On-Scene Authority Patient Care

Revised 01/04/2026

Standard

Establish the clinical hierarchy of authority for on-scene patient care.

Purpose

Credentialed Providers within Allegiance Mobile Health are responsible for providing patient care in accordance with the prescribed guidelines, standards, and procedures. However, there may be times when providers disagree about the care being delivered. Patient safety is every provider's responsibility, and any concerns should be immediately brought to the attention of other caregivers at the scene. In ANY disagreement regarding circumstances relating to patient care, a professional demeanor and focus on the patient's best interest are paramount. In order to maintain an orderly scene and allow rapid resolution of conflict, a hierarchy of clinical responsibilities must be established.

Application

a) In the event of conflicting approaches to providing patient care, extraction, or transport, the on-scene Credentialed Providers must reach a consensus as to the most appropriate care for the patient(s). In the event of unresolved conflict, the Senior Credentialed Provider on-scene has final authority and responsibility for decisions regarding patient care. If a conflict involves a supervised provider (Cadet/Student), the assigned training officer has authority (at their level of Credential) and should be consulted.

b) Seniority of Credentials (in ascending order) is:

- System Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Paramedic First Responder
- Paramedic Transporting Unit
- EMS Supervisor
- On-Scene Physician Provider (Per the Physician on Scene Standard)

- Online Medical Consultation Physician
- On-Scene Affiliated EMS Physician
- Allegiance Regional Medical Director
- Chief Medical Officer

c) Regardless of seniority, all credentialed providers are responsible for patient well-being and safety; therefore, if a potential error or safety concern is noted, providers are expected to speak up and notify the Senior Credentialed Provider. The Senior Credentialed Provider will acknowledge the concern, provide feedback, or take action in a non-punitive manner.

d) All significant or unresolved conflicts regarding on-scene patient management should be reported via the appropriate chain of command. They will be retrospectively reviewed per the Clinical Quality Improvement process.

e) If any provider, regardless of credential seniority, feels the conflict negatively impacted patient care, the incident should be reported to the Medical Director as soon as possible without causing an additional impediment to care.

CS-17: Special Healthcare Needs

Revised 01/04/2026

Standard

This standard is established to provide quality patient care and EMS services to patients with special health care needs. It is also important for EMS providers to understand the need to communicate with patients, families, and caregivers regarding healthcare needs and devices that EMS may not have experience with.

Purpose

Medical technology, changes in the healthcare industry, and increased home health capabilities have created a special population of patients who interface with the EMS system. It is important for EMS to understand and provide quality care to patients with special healthcare needs.

Application

- a) Emergencies involving special needs patients may involve equipment (e.g., LVAD or vagus nerve stimulation device, etc.) that is unfamiliar to the provider. To familiarize themselves with the equipment, providers may:
 - ask the family, caregiver, or patient for any documentation or specific information regarding the condition and/or device;
 - utilize Just in Time Training aides/information regarding devices where available;
 - Contact the patient's primary care physician or OMD for assistance with specific conditions or devices or for advice regarding appropriate treatment and/or transport for the patient's condition.
- b) Transportation will be to the hospital appropriate for the patient's specific condition. This may sometimes involve bypassing the closest facility for a more distant yet more medically appropriate destination. Override of the diversion request is appropriate for patients with special needs.
- c) Steps should be taken to note these patients in the CAD associated with the premise.
- d) We believe that in most cases, the patient or caregiver has more knowledge about the device or illness. We should strive to support the application or deployment. If this

seems unreasonable or outside the norm of your scope of practice, contact OMD for additional guidance.

CS-18: Physician on Scene

Revised 01/04/2026

Standard

The medical direction of prehospital care at the scene of an emergency is the responsibility of those most appropriately trained in providing such care. All care should be provided within the rules and regulations of the Texas Medical Board (TMB) of the State of Texas.

Purpose

This standard is established to identify a chain of command for system providers when dealing with physicians on the scene and to ensure that patients receive the maximum benefit from appropriate physician resources.

Application

The TMB has specific rules regarding a physician's authority to order specific patient care interventions on the scene of a medical call. There are two different types of situations regarding on-scene physicians. One is when the patient's own physician is on-scene ("Patient's Personal Physician"). The other is when a physician who does not have an established relationship with the patient is on-scene ("Intervener Physician").

a) Physician On-Scene / General Guidelines:

- The Credentialed Provider on-scene is responsible for the management of the patient(s) and acts as the agent of the Medical Director.
- In order to participate in care, the patient's personal physician or intervener must present a valid Texas Medical Board License number or be recognized as a physician by the Provider

b) Patient's Personal Physician On-Scene:

- If the patient's personal physician is present and assumes care, the Credentialed Provider should defer to the orders of the patient's personal physician if the directed practice is within the scope and training of the credentialed provider

- The patient's personal physician must document their interventions and orders via a handwritten and signed note to be scanned and added to the EMS PCR.
- OMD should be notified of the participation of the patient's personal physician via Pulsara
 - *If there is a disagreement between the patient's personal physician and the System COGs, the physician shall be placed in direct communication with OMD. If the patient's personal physician and the online physician disagree on treatment, the patient's personal physician must either continue to provide direct patient care and accompany the patient to the hospital or must defer all remaining care to the online physician.*

c) Intervener Physician On-Scene:

- If an intervener physician is present at the scene, has been satisfactorily identified as a licensed physician, and has expressed willingness to assume responsibility for the care of the patient, OMD should be contacted. The online physician has the option to:
 - Manage the case exclusively
 - work with the intervener physician
 - allow the intervener physician to assume complete responsibility for the patient
 - *If there is a disagreement between the intervener physician and OMD, the Provider will take direction from the online physician and place the intervener physician in contact with the online physician*
- The intervener physician must document their interventions and orders via a handwritten note to be scanned and added to the EMS PCR.
- The decision of the intervener physician not to accompany the patient to the hospital shall be made with the approval of the online physician.
- Medical orders are not accepted by any non-physician health care providers unless approved explicitly by OMD.

CS-19: Provider Clinical Performance Review

Revised 01/04/2026

Standard

Establish a standardized process for the medical director to thoroughly review significant clinical performance concerns to identify potential improvements, including revocation of provider system credentialing privileges.

Purpose

The Medical Director will convene a Clinical Performance Review when he believes sufficient information exists to warrant a more thorough and complete review before making decisions regarding a Provider's Credentialing privileges. All Clinical Performance Reviews will be conducted fairly, objectively, respectfully, confidentially, and patient-focused.

Link
2 Clinical Standard Documents
CS-04: Clinical Event Review
[Go to document](#)

Application

- a) The Medical Director determines the need for a Clinical Performance Review.
- b) If there are conflicts of interest, the Medical Director will assign the review to a qualified physician.
- c) Under Texas Health and Safety Code Section 773.095, all aspects of the review, including the investigative proceedings, recordings, and documents, are considered confidential.
- d) All persons involved in the Review must comply with the confidentiality requirements set forth in the Clinical Performance Review Process document.

- e) Each Provider requested to participate will fully participate in the Clinical Performance Review as requested by the Medical Director. Failure to do so may result in the medical director suspending or permanently revoking a provider's credentials.
- f) The Clinical Performance Review will be conducted expeditiously without compromising the focus on performance improvement or the thoroughness of the review.
- g) The Medical Director considers the Clinical Performance Review recommendation when determining the next course of action.
- h) Once the medical director makes a course of action, a provider may appeal the decision directly to the Medical Director. No other appeals regarding the status of Credentialing privileges are available.
- i) The Medical Director will maintain the original Clinical Performance Review records via ESO and Ninth Brain Suite.
- j) The credential status of all providers practicing under the Medical Director's license is at the Medical Director's discretion.
- k) The clinical review's actions/determinations may impact the provider's employment status, state certification or licensure status, and/or national registry status.
- l) It is the provider's responsibility to notify/contact the agency for specific reporting requirements.

CS-20: Provider Credentialing

Revised 01/04/2026

Standard

Define credentialing and the credential levels of providers within the EMS System.

Definitions

Certification or Licensure: an individual who is certified or licensed by a regulatory body as minimally proficient to perform emergency prehospital care at a particular level that is defined by a regulatory body (e.g., EMR, EMT, AEMT, EMT-P/LP, RN, MD/DO).

Credential to Practice: a process defined by the Medical Director that requires a certified or licensed individual to demonstrate competency to practice at a specified level of prehospital care. The credential to practice does not necessarily match the individual's certification or license.

Purpose

Every provider that delivers medical care within the EMS system must be "Credentialed to Practice" and hold a current State of Texas Certification or Licensure. All Credentialed Providers within the EMS System are allowed to provide care under the Medical Director's delegated authority per the rules of the Texas Department of State Health Services and the Texas Medical Board. Credentialing is the final approval by the Chief Medical Officer, ensuring an individual's competency to care for patients within the Emergency Medical Services System. An individual is "Credentialed to Practice" when they successfully meet and maintain the defined Credentialing requirements.

The levels of Credentialing are:

- Emergency Medical Responder (EMR)
- Emergency Medical Technician (EMT)
- Advanced Emergency Medical Technician (AEMT)
- Paramedic/Licensed Paramedic
- Registered Nurse (RN)
- Physician (MD/DO)

Credentialing Requirements, which include what is required to obtain and maintain credentials to practice within the EMS System, are outlined in the separate Credentialing policy.

Credential status will be maintained in Ninth Brain Suite.

Practicing without current credentials is grounds for permanent revocation of credentials.

System providers may be credentialed at levels below their licensure at the discretion of the system medical director.

Special credentialed skills that are above the licensure scope of practice must have documentation of completion of training and a quality assurance plan.

The provider is responsible for reporting changes in clinical status.

CS-21: Refusal of Treatment and/or Transport

Revised 01/06/2026

Standard

To establish guidelines for Providers when addressing issues of consent or for patients who wish to refuse the treatment and/or transportation offered. The core ethical principle guiding this is that patient autonomy must be respected at all times, outweighing operational convenience. This foundational value ensures that providers prioritize the rights and wishes of the patient as they implement these guidelines.

Purpose

Adult patients with decision-making capacity retain the right to refuse care and/or transport against medical advice.

Definitions

Informed Consent

Informed consent is based on an individual's appreciation and understanding of the facts, implications, and future consequences of an action. In order to provide informed consent or refusal, a patient must have adequate reasoning faculties(capacity) and be provided with information (risks/benefits) relevant to the decision-making process. They should also be aware of the options available to them if they choose not to accept evaluation and/or treatment.

Implied Consent

In potentially life-threatening emergencies in which a patient is unable to communicate to give informed consent or demonstrate capacity, the law presumes the patient would give consent if able.

Substituted (Surrogate) Consent

In some circumstances, an individual with legal standing may give consent for a patient when the patient is unable to do so, for example, because the patient is a minor, incarcerated, or has been determined by a court to be legally incompetent.

Parents or guardians are entitled to provide permission because they have legal responsibility and, in the absence of abuse or neglect, are presumed to act in the child's best interests.

The following persons may consent to or refuse the evaluation, treatment, and/or transportation of a minor when the person having the right to consent as otherwise provided by law (parent/legal guardian) cannot be contacted and that person has not given actual notice to the contrary:

- (i) A grandparent of the child.
- (ii) An adult brother or sister of the child.
- (iii) An adult aunt or uncle of the child.
- (iv) An educational institution in which the child is enrolled that has received written authorization to consent from a person having the right to consent.
- (v) An adult who has actual care, control, and possession of the child and has written authorization to consent from a person having the right to consent.
- (vi) A court having jurisdiction over a suit affecting the parent-child relationship of which the child is the subject.
- (vii) An adult responsible for the actual care, control, and possession of a child under the jurisdiction of a juvenile court or committed by a juvenile court to the care of an agency of the state or county.
- (viii) A peace officer who has lawfully taken custody of a minor, if the peace officer has reasonable grounds to believe the minor is in need of immediate medical treatment.

A Provider may be denied access to minor children by a parent or guardian if there is no apparent immediate life-threatening condition. However, in general, parents or guardians cannot refuse life-saving therapy for a child based on religious or other grounds.

Application

- a) All patients refusing treatment and/or transport must:
 - Be at least 18 years of age or an Emancipated Minor;
 - Be able to demonstrate decision-making capacity per the **Capacity Checklist**.

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| <p>Link</p> <p>19 Appendices</p> <p>K: Capacity Checklist</p> <p><u>Go to document</u></p> |
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- NOT have been declared legally incompetent by a court of law. (If a patient has been declared legally incompetent, their court-appointed guardian has the right to consent to or refuse evaluation, treatment, and/or transportation for the patient.)
- NOT be suicidal or homicidal. (A law enforcement officer may arrest a patient who threatens or attempts suicide under Texas Health and Safety Code Section 573.001. The statute also covers other mentally ill patients, and a similar statute allows an arrest for chemical dependency. Only a law enforcement officer can make these arrests.)

b) Patients meeting the above criteria who demonstrate present mental capacity retain the right to refuse any or all treatment and/or transportation.

c) All refusals of patient transport must be approved by the on-duty supervisor (ODS) or medical direction via Pulsara before the refusal is obtained. This step is crucial for ensuring patient safety as it provides a second check on the patient's decision-making capacity and verifies that all documentation is complete and accurate. By involving the ODS, we ensure that refusals are handled with the utmost care and professionalism, which adds an extra layer of assurance. **Signatures should not be obtained until cleared by ODS or medical direction.**

d) Under no circumstances will EMS System providers refuse or deny treatment or EMS transportation to any patient (or legal patient representative) who requests medical assistance from the provider or agency. Treatment initiation should not depend on the patient's willingness to accept transport. (e.g., Hypoglycemia, Asthma, etc.) This does not include the administration of narcotic pain medications or sedative agents.

e) EMS System providers are encouraged to actively support each patient's informed choice regarding their medical care. Providers should collaborate with patients and their legal representatives to ensure that patients understand their options for seeking medical care from a physician or for accepting EMS transport to a hospital. If it is determined that a provider has discouraged a patient from making an informed decision, this may result in immediate credentialing action.

f) When a patient with present mental capacity wishes to refuse care:

- The patient will be instructed that the evaluation and/or treatment is incomplete due to the limitations of the pre-hospital care environment.
- The providers will attempt to identify any patient-perceived obstacles to treatment/transport (e.g., why they do not want treatment/transport) and make reasonable efforts to address them. This includes, but is not limited to, the offer of transportation without treatment or to a facility not recommended by protocol. These should be offered only to facilitate additional evaluation and/or treatment, which would otherwise be refused.
- The provider will inform the patient of the risks of refusal and the benefits of treatment/transport in accordance with the patient's presenting complaint. It should be explained that the risks described are not comprehensive due to the diagnostic

limitations of the pre-hospital environment and that their refusal may result in worsening of their condition, severe disability, or death.

- The patient will be advised to seek immediate medical care at an Emergency Department or with their own physician. They may call 911 again at any time if they wish to be transported to the hospital or if their condition changes or worsens.

g) Law enforcement does not have the legal authority to deny or approve a patient's access to medical care. Detained or arrested individuals maintain the right to request medical evaluation and treatment, and EMS providers are obligated to provide appropriate assessment and transport when medically indicated or requested. These rights are protected under constitutional law and federal civil rights statutes. Failure to provide timely medical care can result in severe legal, ethical, and regulatory consequences, including allegations of deliberate indifference under the Fourth, Eighth, and Fourteenth Amendments, as established in federal case law (e.g., *Estate of Perry v. Wenzel*). EMS personnel should recognize that while law enforcement has an obligation to maintain public safety and security, these responsibilities must not override or delay a patient's right to timely medical evaluation and treatment. Effective communication and professional collaboration between EMS and law enforcement are critical for safe, lawful, and ethical patient care. Law enforcement may provide input on hospital destination only if there are clear safety or operational concerns, but the immediate medical needs of the patient must always be the primary consideration.

- Except in specific cases where a patient is under emergency detention and meets established law enforcement (LE) navigation criteria, law enforcement is not authorized to transport patients to the hospital on behalf of EMS. Law enforcement vehicles lack the medical equipment and trained personnel required to manage emergencies during transport. EMS remains responsible for patient care during transport unless otherwise directed by medical command.
- Any detained individual who meets the criteria of a patient and presents with a medical complaint should be presumed to have a potentially life-threatening condition until evaluated by an Emergency Medicine Physician. Law enforcement officers must not sign a refusal of care on behalf of a patient under any circumstances.
- Detained patients who are determined to have decision-making capacity may refuse care or transport, but only after a thorough examination and a clear explanation of the risks and benefits by EMS personnel. All discussions and the patient's decision must be fully documented in the patient care report.
- If law enforcement refuses to release a patient into EMS custody, EMS personnel must immediately notify a supervisor and contact the on-duty supervisor (ODS). The ODS will clearly communicate to law enforcement that Allegiance Mobile Health does not provide medical clearance for law enforcement transport. If EMS believes the patient is at substantial risk due to lack of medical care, the ODS should escalate the situation to the OMD for further guidance and documentation.

- If law enforcement continues to refuse to release the patient, do not escalate the situation further. Clearly communicate (preferably while body cameras are recording) that EMS is concerned for a potentially life-threatening condition requiring evaluation by an emergency physician, and that any delay or denial of care may result in permanent disability or death. Thoroughly document the names of the involved officers and supervisors, provide a detailed account of the interaction in the narrative and record the final disposition as "no transport." Additionally, notify agency leadership to ensure appropriate follow-up and quality review of the incident.

Documentation

- h) The provider must document facts sufficient to demonstrate the patient's present mental capacity and understanding of their condition, the patient's perceived obstacles to consenting to care, how these obstacles were addressed, alternative options offered, and the consequences of refusing treatment and/or transport, including those mentioned above. The signature on the form does not protect against poor documentation in the narrative, which should clearly describe all avenues taken to confirm decision-making ability and discuss risks and benefits.
- i) If a patient wishes to refuse assessment, treatment, and/or transport, have the patient sign the AMA form for refusal of specific assessment, treatment, destination recommendation, or transport, and have a third-party witness the signature.
- j) If the patient refuses to sign the refusal form, the provider will document the circumstances of the refusal and obtain at least one witness's signature (preferably a law enforcement officer or family member).

CS-22: Suspension or Revocation of Credential to Practice

Revised 01/04/2026

Standard

To identify potential circumstances that may lead to a provider's credential to practice being suspended or revoked.

Purpose

A provider's ability to practice medicine is based on the Medical Director's authorization. Individuals part of Allegiance Mobile Health must always focus on providing appropriate, high-quality clinical care; accountability for actions taken lies with individual providers and agencies. The clinical department strives to be error-friendly and will focus on a non-disciplinary approach to support and re-educate members. However, circumstances that require a change in Credential status, such as suspension or revocation, may arise.

Application

A provider's credential to practice may be temporarily suspended if, in the opinion of the Medical Director, the provider's actions pose a threat to the safety of current or future patients. The provider's credentials may be permanently revoked or downgraded, if substantiated through a process of appropriate investigation and review, for any of the following actions:

- Falsification of a patient care document
- Intentionally withholding care from a patient
- Intentionally harming a patient
- Providing care while clinically impaired by alcohol or drugs
- Failure to remediate and/or participate in required education and/or review
- Additionally, there may be other circumstances that result in the suspension or revocation of Credentials. These may include, but are not limited to, the following:
 - **Lapse or Loss of TDSHS Certification or Licensure**
 - *In the event that a Provider's TDSHS Certification/Licensure is allowed to lapse, the following process will apply:*

- Unless confirmation of renewal, extension, or upgrade can be verified and documented on the TDSHS website, the Provider's Credentials to Practice will be automatically revoked. System Credentialing badges must not be worn.
 - Providers wishing to reinstate their Credentials to Practice after correcting their certification/licensure deficiencies with TDSHS must submit this request in writing to the Medical Director. Credentials are NOT automatically reinstated.
 - Suspended and De-credentialed Providers may still be considered "trained citizens" and have the ability to perform CPR, use an AED, and/or render First Aid as appropriate.
- **Separation from Allegiance Mobile Health**
- A provider's credentials will be revoked after 30 days without affiliation (unless an extension is granted) with Allegiance Mobile Health
 - Should a Provider affiliate with Allegiance following the 30 days, they will be required to complete the current Initial Credentialing Requirements for their level of practice. New badges will be issued at that time.
 - After revocation, the medical director is solely responsible for credentialing providers.. The Medical Director may refuse to credential a provider due to past actions of the provider at other organizations that may be considered a threat to public health.
- **Activity That May Pose a Threat to Public Health**
- The Medical Director will review criminal or Regulatory activity that may pose a threat to public health or other circumstances as deemed appropriate.
 - Individual providers are responsible for reporting any arrests of the provider involving alcohol, drugs, or a felony directly to the Clinical Department on or before the 1st business day after the arrest is made. Failure to do so may result in immediate suspension. Reporting the event to the TDSHS is the responsibility of the individual provider and must occur in accordance with specified Rules, with the appropriate form (s), and within the prescribed timelines.
 - Except for those situations and processes specifically addressed, the Clinical Performance Review Process will determine the process for suspending or revoking Credentials.
 - Suspended and de-credentialed Providers may still be considered "trained citizens" and have the ability to do CPR, use an AED, and/or render First Aid as appropriate.
- **Action Taken By TDSHS**
- Any action taken (administrative review, suspension, revocation, etc.) by the TDSHS must be reported and documentation forwarded to the Clinical Department. Failure to do so may result in suspension/revocation of Credentials.

- The operational leadership will be advised of all events concerning these issues. If deemed appropriate, the leadership of other organizations within the System and/or TDSHS may be notified.
- The credential status of all providers practicing under the Medical Director's license is at the Medical Director's discretion and is a privilege, not a right.

CS-23: System Design

Revised 01/04/2026

Standard

Define the design of the system and how the organizations integrate to form a System of Care.

Purpose

The EMS System is comprised of multiple agencies that include a diverse group of healthcare professionals, including Communications Specialists, First Responders, Transport Providers, Hospital Networks (including specialty receiving centers), and Physicians with varying specialties in the community. Together, this "System" provides the basis for seamless delivery of care to acutely ill or injured patients in our community.

Application

The EMS System maximizes the opportunity to deliver appropriate care to patients as defined by the Protocols, Procedures, and Standards established by the medical director (collectively, the Clinical Operating Guidelines). The goal of these documents is to provide safe, consistent, and sophisticated care to the community's citizens and visitors.

- (i) All medical care within the EMS System should be provided according to the current Clinical Operating Guidelines.
- (ii) All individuals providing medical care as part of the EMS System will be credentialed in accordance with the Credentialing requirements.
- (iii) Specific medical care in the system will be delivered by appropriately Credentialed AND (if applicable) Qualified individuals within the environment specified in the COGs.
- (iv) Individuals holding current Credentials may deliver specialty care as defined by the COGs when appropriate equipment and conditions exist.
- (v) All individuals providing medical care as part of the EMS System will be currently certified or licensed by the Texas Department of State Health Services or the Texas Medical Board.

- (vi) A non-TDSHS-certified/licensed and non-credentialed individual who is trained in an approved CPR/AED Course may respond to and deliver CPR and rapid defibrillation of cardiac arrest patients.
- (vii) All organizations providing medical care as part of the EMS System will comply with Texas Department of State Health Services requirements for Provider or First Responder Organization Licensure.
- (viii) All First Response Organizations will be capable of delivering, at a minimum, Basic Life Support care (BLS).
- (ix) Appropriately credentialed and equipped individuals may provide First Response Intermediate Life Support (ILS) or Advanced Life Support (ALS) level of care according to the COGs.
- (x) First Response ILS and/or ALS level of care is supplemental to the system's minimum requirements.
- (xi) All System First Response Organizations must maintain the BLS supplies identified on the BLS Unit Minimal Equipment List. If a System Registered Organization chooses to equip an ILS or ALS Credentialed Provider, the equipment must be supplied and maintained according to the appropriate Unit Minimal Equipment List for that level of care.
- (xii) Standby and on-site Special Event Providers, Minimal Equipment will be determined based on the needs of the specific event.
- (xiii) Treatment of patients with medications that are not specifically included in the COG or not approved by a specific OMD order is considered practicing outside the scope of practice and the provider's scope of care.
- (xiv) Under unusual or extreme conditions or circumstances, the medical director may modify the above criteria to best meet the needs of the EMS System's patients.

CS-24: Transfer of Care to Provider of Lesser Credentials

Revised 01/04/2026

Standard

To define circumstances and establish a process for transferring patient care from a higher credentialed provider to one of lesser credentials.

Purpose

Providers may be presented with multiple patients, limited resources, or patient conditions requiring early rapid transport to maximize potential outcomes (for example, one critically injured patient and multiple non-injured occupants in a motor-vehicle collision). These situations may require that patients be left in the care of a lesser credentialed provider. The ultimate decision of whether or not to initiate transport of a critically ill or injured patient while awaiting additional resources rests with the on-scene Provider with the most advanced level of system Credentials as defined in the Authority for Patient Care.

Application

When transferring care to a provider of lesser credentials, the following applies:

- a) Leaving patients on-scene should not be a routine procedure. It should be considered only when a patient requires immediate transport to maximize the potential outcome.
- b) The transport Provider may transfer patient care to a Provider of lesser Credentialing when transfer of established care is **not beyond the scope and/or training of the Provider(s) assuming care** (i.e., an intubated patient may not be left with a System Responder level provider or EMT Credentialed Provider).
- c) All patients should be accounted for, assessed, and triaged, and appropriate additional resources requested prior to transporting the critically injured patient.
- d) No patient requiring immediate advanced stabilization (i.e., pleural decompression, intubation, defibrillation etc.) is to be left on-scene awaiting additional resources unless an appropriately credentialed and equipped Provider is present and able to perform such care.

e) Mass and Multi-casualty incident transport decisions will be made by the on-scene command structure.

CS-25: Transport Assistance

Revised 01/04/2026

Standard

This standard establishes guidelines for individuals accompanying ambulances to assist transport providers.

Application

- a) When requested, First Responders will accompany transport providers during the transport of critically ill/injured patients.
- b) If First Responders are unavailable to accompany a patient in an ambulance in need of additional providers, an additional resource should be requested (First Responders from another organization, an EMS Supervisor, or other available resources) to accompany the patient to the hospital.
 - (i) On occasion, a rendezvous with additional resources may be preferable and should be considered.
- c) In the event personnel assist in patient care on scene or during transport, state-certified personnel will follow their individual protocols and medical direction. If a situation arises where there is a disagreement among the providers regarding patient care, the event will be elevated to a discussion with the individual medical directors to facilitate patient care. This should be a rare event and most, if not all scenarios will be addressed by maintaining the patients best interest as the primary concern.
- d) If an outside agency provides primary transport capability, after completing a full time-out and patient handover, it will assume primary patient care and adhere to the agency's primary COGs.
- e) If the transport provider's COGs do not address an aspect of care, the credentialed First Responder may continue to care under their individual protocol and medical direction. The credentialed first responder must complete the PCR as required by OMD guidelines.

CS-26: Transport Destination Decision

Revised 01/06/2026

Standard

Define how a transport destination decision is reached, taking into consideration the specialized care needs of specific conditions and the needs and preferences of our patients.

Purpose

Patients treated by Allegiance Mobile Health may have complex clinical conditions that require care at facilities with specialized capabilities or expertise in treating these conditions. In the absence of the need for specialized care, patients may want to be transported to facilities based on their personal preference or the location of their physician and records. Whenever possible, the providers of Allegiance Mobile Health will provide transport to a prescribed medical facility or the patient's preference.

Application

a) The following assumes the patient or the patient's guardian (in the case of a minor) has decision-making capacity per the "Refusal of Treatment/Transportation Standard". In the absence of decision-making capacity or when consent is implied, the patient should be transported to the nearest appropriate facility. Suppose a patient wishes to refuse treatment/transport but has been determined to lack the capacity to do so. In that case, providers should consult their supervisor and OMD per the "Refusal of Treatment/Transportation Standard.

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| <p>Link</p> <p>2 Clinical Standard Documents</p> <p>CS-21: Refusal of Treatment and/or Transport</p> <p><u>Go to document</u></p> |
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b) When a patient presents with a clinical condition requiring specialized care, the transporting providers will transport the patient to the closest facility that offers that care (PCI, Stroke, Trauma, Resuscitation Center, etc.).

c) If a patient refuses to go to the recommended facility, transport providers will explain the benefits of transport to the recommended facility and the risks of

transporting to another facility. If the patient still refuses transport to the recommended facility, transport providers will recommend transport to the next closest appropriate facility for their condition.

d) If a patient continues to refuse transport to the alternative specialty care facility or requests transport to a facility that lacks the ability to care for the patient's condition, the transport provider will make every effort to explain the need for the specialty care facility. These efforts may include, but are not limited to, contacting the patient's physician, a supervisor, an on-call Medical Director, or a physician at the facility to which the patient wishes to be transported.

e) If, after the efforts described above, the patient continues to request transport to a facility not recommended for the patient's condition, the transport providers will transport the patient to the facility of the patient's choosing. On arrival at the facility, the crew should consult with the attending physician to determine if the patient will be transferred. If such a transfer is imminent, the provider should contact their supervisor and remain immediately available to transfer the patient if requested after the required emergency medical screening examination by the receiving facility and completion of the Memorandum of Transfer (MOT). The supervisor will determine the duration of this availability based on the patient's condition and the anticipated time to transfer.

f) If a patient does not have a condition that requires transport to a specialized facility as prescribed by protocol, the providers will transport the patient to an approved system facility per the Hospital Selection Guild of the patient's choosing when a patient requests transport to a facility other than an approved system facility. The transport decision should be made in consultation with a supervisor.

Link

19 Appendices

E.1: Hospital Selection Guide

[Go to document](#)

g) If, in the provider's opinion, the patient's condition warrants transport to a closer facility for rapid stabilization, the need for this destination should be explained to the patient, and every effort should be made to deliver the patient to the closest appropriate facility. These efforts may include, but are not limited to, contacting a supervisor or OMD. If the patient continues to refuse the recommended destination, the patient will be advised of the associated risks and transported to their chosen destination.

h) If the patient has an MOT or if another healthcare provider has arranged transport, the transport provider should transport the patient to the destination indicated by the MOT.

i) If the patient does not have a condition requiring specialty care as prescribed by protocol and does not express a preference, the transport provider may transport the patient to the nearest appropriate facility.

j) In the event that multiple patients from the same event are to be transported in one unit, the patient with higher acuity determines the transport destination. Where the need for different facilities can be anticipated, reasonable efforts should be made to split the patients at the scene as long as doing so does not place either patient in danger.

k) Any refusal of treatment or recommended transport destination should be performed and documented in accordance with the Refusal of Treatment/Transport Standard and Capacity Checklist.

Link
2 Clinical Standard Documents
CS-21: Refusal of Treatment and/or Transport
[Go to document](#)

Link
19 Appendices
K: Capacity Checklist
[Go to document](#)

CS-27: Controlled Substance Tracking & Compliance

Revised 01/04/2026

Standard

Narcotics, Ketamine, and benzodiazepines are an essential part of the medical and pain management of our patients. Narcotics, Ketamine, and benzodiazepines, however, also have the potential to be abused and can be highly addictive. For this reason, the United States Drug Enforcement Administration (DEA), the Texas Department of Public Safety, the Texas Department of State Health Services (DSHS), and Allegiance Mobile Health maintain strict rules governing the tracking of narcotic and benzodiazepine use and waste that must be followed.

Allegiance Mobile Health is responsible for tracking and accountability of all DEA-controlled substances. Each paramedic and EMS Supervisor is responsible for adhering to department policy and guidelines for controlled substance tracking and compliance.

Federal Inspections

The DEA may conduct unannounced audits and must be able to trace all movement of controlled substances from the time of receipt into inventory to their final use or disposal.

Theft or loss of a controlled substance requires completion of DEA Form 106. Failure to report theft or loss of controlled substances may result in penalties under Sections 402 and 403 of the Controlled Substances Act.

CS-28: EMS Diversion

Revised 01/04/2026

Standard

Allegiance Mobile Health will work diligently with local hospitals to identify solutions and alternatives to prolonged hospital EMS diversions. However, a hospital may still occasionally go on "EMS Diversion" status. "EMS Diversion" is a request from the hospital to EMS to temporarily suspend patient transport to that facility. It is not a hospital right, nor a mandate to EMS. However, EMS personnel shall make every effort to honor a hospital's request for temporary EMS Diversion.

There are some exceptions to the diversion of an EMS patient when a hospital is on "EMS Diversion" status. These exceptions are as follows:

- (i) If a patient is unstable or has an unsecured airway, and there is no other hospital within the same travel time or closer, the hospital shall be notified of the patient's critical condition, and EMS may override the diversion request and transport the patient to the facility.
- (ii) If a patient receives specialty care for a chronic medical condition at a specific hospital and is experiencing an exacerbation of that condition, the hospital should be notified, and the patient should be transported to that hospital, regardless of the hospital's diversion status. Patients meeting these criteria include, but are not limited to, cancer/chemotherapy patients, transplant patients, LVAD patients, and pediatric patients with congenital or chronic conditions.
- (iii) If a patient has been discharged from, or has had surgery at, a hospital within the last 14 days, the hospital should be notified, and the patient should be returned to that hospital, regardless of the hospital's diversion status. Post-partum patients should be included in this patient population.
- (iv) The patient's insurance status requires them to be in a specific hospital system. Note that this rule does not apply to VA beneficiaries or to TRICARE coverage, as the ED is not subject to EMTALA regulations.
- (v) If a patient requests a specific hospital but it is on diversion, inform the patient and offer transport to another facility. If the patient still insists, notify the hospital and transport the patient as requested..

Unless specifically noted by the regional system, the following conditions do not apply to a hospital's EMS Diversion status (hospitals will still accept the following patients when the ER is on EMS Diversion):

- (vi) Obstetrical emergencies
- (vii) Heart Alert
- (viii) Stroke Alert

(ix) Sepsis Alert

(x) Trauma Alerts

If a hospital is experiencing an internal disaster that precludes patient acceptance due to patient safety considerations or a facility emergency, this will be noted, and EMS personnel will be notified by Dispatch of the "Internal Disaster" or CLOSED status of the hospital.

CS-29: Passenger Restraint in Emergency Response Vehicles

Revised 01/04/2026

Standard

To establish guidelines for providing safe passenger restraint in emergency response vehicles.

Purpose

The purpose of this policy is to strongly remind EMS agencies and individual EMS providers to evaluate their overall operations and develop practices or internal controls that lead to a safe working environment and a culture of safety in all aspects of the agency. This policy also assists EMS agencies in reviewing or developing policies and practices that ensure safe driving habits, the appropriate use of seat belts by all crew members, passengers, and patients, and a review of practices in the patient care compartment to improve safety.

Application

It is strongly recommended that all EMS agencies develop and regularly review service-specific policies for their personnel that include the provision of appropriate emergency driver training programs to develop proper driving skills and behaviors. The policies should also include, but are not limited to:

- All passengers, including patients and EMS personnel, should be restrained
- All drivers and front seat passengers of ambulances must always use seat belts when the vehicle is in motion
- All operators & passengers of non-ambulance response vehicles must always use seatbelts when the vehicle is in motion
- All patients, as well as any passengers riding in the patient compartment, must always use seat belts when the vehicle is in motion
- All EMS personnel in the patient compartment must use seat belts when they are not attending to a patient, and the vehicle is in motion. EMS personnel should perform patient care activities while restrained by a seatbelt as much as possible. Only if it becomes necessary to care for the patient should the seat belt be removed. Examples

of necessary care are CPR, artificial ventilation, medication administration, or reassessment of unstable patients.

- All patients on the stretcher must be secured when the vehicle is in motion, or the stretcher is being carried or moved; stretcher harness straps should always be used in accordance with manufacturer recommendations
- It is not permissible or safe to have a parent or caregiver hold a child in his or her arms or lap. The child and the parent/ caregiver should each be restrained appropriately.
- A child's own safety seat- when appropriate, available, and intact - can be used to restrain a child during transport.
- If the ambulance service does not have an ambulance equipped with child safety seats or restraints, it is recommended that the agency purchase approved child safety seat(s) or restraint(s) for each ambulance. More than one size restraint may be needed to accommodate the variety of sizes of children (i.e., Newborn, infant, toddler). Pediatric patients up to 100 pounds should be restrained with a seat or restraint.
- Agencies should routinely train EMS personnel in the use of various child safety seats/ restraints available and have a policy for how injured and uninjured children will be transported
- All safety seats/restraints should be used according to the manufacturer's recommendations
- All equipment and supplies in the driver and patient compartments should be secured in a crash-worthy manner
- Consider limiting the use of lights and sirens when appropriate

Note

Whether paid or volunteer, commercial, municipal, independent, or fire-based, the EMS community cannot afford to lose EMS providers due to death, injury, or disability when the circumstances can be prevented through education and policy improvements. We owe it to our patients and their families to treat them with the most recent evidence-based care, including the safety measures we follow while they are in our ambulances. It is the responsibility of every EMS agency and prehospital care provider to establish and/or continue the culture of safety in emergency medical services.

CS-30: Transport of Patients by Non-EMS Vehicle

Revised 01/04/2026

Background

HB624 enables firefighters to transport patients who are critically ill or injured when EMS transport services are not immediately available. It is important to note that the decision to transport patients using non-EMS vehicles is the responsibility of the Medical Director, as the Fire Departments adhere to the Clinical Operating guidelines.

When a patient meets any of the following criteria, they are considered critically ill:

- They have at least one red criterion for trauma.
- They meet the criteria for a Heart Alert, Stroke Alert, or Sepsis Alert.
- They have unstable vital signs, such as hypotension and hypoxia, and require interventions such as ventilatory support or vasopressor support.
- They have suspected hemorrhaging requiring blood.

Guidelines

Patients who are critically ill require timely transportation. In case transport is not available, the following steps should be taken:

- (i) Notify the transport agency about the patient's condition and obtain an updated estimated time of arrival. If reasonable, continue to manage the patient and wait for arrival.
- (ii) Request Mutual Aid to reduce the arrival time.
- (iii) Request air medical support to reduce the arrival time.
- (iv) Obtain authorization from Medical Direction for transporting the critical patient.

Patients should be transported in accordance with the standards outlined in these COGs. Additionally, prehospital providers should continuously monitor and manage them during transportation.

Link

2 Clinical Standard Documents

CS-29: Passenger Restraint in Emergency Response Vehicles

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Destination decisions should prioritize the following.

- (v) Intercept with a qualified EMS transport agency
- (vi) Freestanding/Closest available ED
- (vii) Specialty capable center

Quality Assurance/Process Improvement

Whenever this guideline is implemented, a thorough root cause analysis must be conducted. This analysis will involve reviewing the call, the availability of transport agency resources, and patient outcomes (if available). The recommendations from this review will be shared with stakeholders to ensure that non-EMS vehicles are used only in extreme cases.

CS-31: Medication Safety

Revised 01/04/2026

Background

Significant risks for incorrect medication administration, including incorrect medication, inappropriate dose, and inappropriate concentration, are inherent anytime medications are drawn and delivered in unmarked syringes. Furthermore, the environment in which EMS medicine is practiced increases the risk of medication errors. This guideline serves as a remedy to reduce risk and improve patient safety.

Guidelines

When medications are drawn into a sterile syringe, mixed into a sterile 0.9% normal saline flush, mixed for IV piggyback, or mixed for infusion, the following steps will be utilized.

(i) The syringe or bag will be labeled with a brightly colored commercially available drug tag with the following information:

1. Drug name
2. Concentration
3. Total dose
4. Total volume
5. Time drawn or mixed

(ii) The label will be affixed to the syringe or bag without obstructing the volume indicators.

(iii) Medications will be labeled one at a time.

(iv) Medications will be labeled during preparation and not before.

When medications are administered to a patient, the following procedures will be followed.

(v) Dose and concentration will be verbally confirmed with at least 1 team member.

(vi) A second team member will confirm the drug, dose, and concentration by examining the medication vial drawn from.

(vii) Volume dose will be confirmed on the available drug calculation application

(viii) Allergies will be confirmed verbally with the patient, or if the patient cannot verbally confirm, with documentation or a reliable person familiar with the patient's medical history.

(ix) Final safety stop before administration when the medication name and dose are verbally announced.

Quality Assurance / Process Improvement

If a medication error is suspected, notify the receiving hospital, the medical director, and operational leadership. Pictures or retention of medication syringes will be gathered to review compliance with clinical standards. All medication errors will be reported and reviewed with the expectation of developing process improvement plans.

CS-32: Physical Restraint

Revised 01/04/2026

Purpose

When considering restraints, prioritize patient-centered ethical principles, including beneficence and respect for autonomy. Restraints should be a last resort, used only to protect the patient's health, safety, and dignity. Follow a stepwise decision-making process: assess the situation, attempt verbal de-escalation and reassurance, and, if unsuccessful, evaluate the patient's condition, available resources, and monitoring needs before considering sedation or physical restraints. Restrain only those who pose a risk of violence or unintentional harm to themselves or others, and only after all other options have been exhausted.

Medical crewmembers may apply restraints as needed, following these guidelines. Consult medical control when possible. Always protect the patient's health, safety, dignity, rights, and well-being. Use the least restrictive method that effectively prevents harm.

Indications:

- Reasonable risk of violent action, unintentionally striking out, or elopement
- Safe access for medical procedures when involuntary patient-interference or resistance is reasonably anticipated
- Prophylactic restraint before the patient becomes involuntarily resistant to medically necessary treatment
- Recovery from medication effects or anticipation of improved patient condition producing combativeness
- To facilitate the evaluation or treatment of combative persons when illness or trauma is suspected to be the cause of combativeness
- Involuntary treatment of persons incompetent to refuse treatment

Procedure

Attempt verbal de-escalation and reassurance before and during restraint. When possible, inform the patient about restraint use. Monitor cardiac, SpO₂, and end-tidal status every 5 minutes until the patient is stable, defined as normal cardiac rhythm*, SpO₂ above 95%, and end-tidal CO₂* between 35 and 45 mmHg. Once stable, adjust monitoring frequency as clinical judgment dictates. Do not restrain patients in the prone position or cover the face, airway, or chest wall. Prefer chemical sedation over physical restraints to maintain a RASS score of -3. Remove restraints as soon as possible.

[Link](#)

8 Adult - Medical

M-04: Behavioral/Agitation

[Go to document](#)

Physical Restraint Devices and Techniques

Use supplemental litter straps over the pelvis and lower extremities to limit movement. Padded commercial extremity restraints are also appropriate. Ensure all restraint methods allow quick release, access for care, airway control, and vital sign monitoring.

Documentation

Document all restraint applications in the patient care record. Include the reason for restraint, specific behaviors or threats, type and duration of restraints, patient response, monitoring and reassessment findings, complications, and all communication with medical control, law enforcement, or patient representatives. Record the time and criteria for removal.

Clear, accurate, and timely documentation is essential for legal, clinical, and quality review purposes.

Refusal to Transport and Alternate Modes of Transport

Decline air medical transport if patients cannot be safely controlled or restrained to ensure crew safety. Use ground transportation if it reduces risk to an acceptable level

and is available. An acceptable level of risk means the safety of crew and patients can be reasonably managed, considering patient agitation, ability to provide continuous monitoring, and availability of necessary medical resources during transit.

If neither air nor ground transport is safe or available, consult medical control for guidance. Consider alternative strategies, such as temporarily stabilizing the patient at the current location until safe transport is possible.

*if available

CS-33: Memorandum of Transfer

Revised 01/04/2026

Standard:

To establish the expectations that EMS transporting crews will review the Memorandum of Transfers (MOT) in order to transfer the patient to the appropriate receiving facility as ordered in the MOT.

Purpose:

A Memorandum of Transfer (MOT) is a medical order authorizing the transfer of a patient's care between one hospital/facility and another. Transport providers will honor the MOT unless a change in patient condition necessitates transport to a closer facility for stabilization.

Application:

1. Ensure that an MOT for every patient being transferred from one hospital to another includes the signature of the sending physician, the name of a receiving physician, and a destination that is an approved transport destination. If the transport providers perceive a conflict with the existing EMS destination policy and the indicated destination, this must be clarified with the sending physician or their designee before transport is initiated.
2. Review the MOT to ensure the intended destination is listed on the MOT. If not indicated, or if the destination changes, the sending facility must modify it prior to transport. The transport providers shall not modify or document on the MOT.
3. The patient is to be transported to the intended destination unless there is a change in the patient's status that can not be managed through existing EMS treatment protocols or through contact with the sending/receiving physician. In such cases, the provider may divert to a closer appropriate facility for immediate stabilization. The reasons for diversion should be thoroughly documented in the PCR.
4. Treat the patient in accordance with the medical orders provided by the transferring physician. If the patient has an acute change outside the orders provided by the transferring physician, providers should consult COGs or consult with OMD. Providers must ensure orders from the transferring physician are within their defined scope of practice and include parameters for titration of medications, and, as required, orders are obtained.

5. A patient with present mental capacity who has not had this capacity removed by a physician or court order and who is not in custody retains the rights of consent and refusal outlined in the Refusal of Treatment/Transport Standard. If the patient wishes to refuse care or alter the prescribed destination, this should be discussed with the sending physician.
6. The mode and level of transport listed on the MOT should not be altered unless discussed with the sending physician or OMD if the patient's condition deteriorates and requires advanced care.
7. The MOT should be scanned and attached to the PCR.

CS-34: Blood Draw

Revised 01/04/2026

Legal

Texas Transportation Code 724.017(a)(5): Paramedics are authorized to perform legal blood draws for evidentiary purposes. These blood draws must be observed by a Texas Peace Officer, who shall immediately take possession of the specimen to ensure the chain of custody is maintained. All legal blood draw equipment must be available, provided by law enforcement, and within date.

Application:

- Legal blood draws can be refused if there is reason to believe that complying with the peace officer's request or order to take the specimen would impair or interfere with the provision of patient care or the performance of other official duties, including removing resources from 911 response per Texas Transportation Code 724.017(c-1)(2).
- Record the requesting officer's name, the patient's name, and the officer's police department affiliation, and a signed consent statement or documentation of the peace officer's suspicion of **Accidents with serious injury/death, DWI with a child passenger, Prior offenses, or Exigent Circumstances per Texas Transportation Code 724.012(a-1)**
- Use only the blood draw supplies provided by the police department.
- Complete and sign any paperwork provided by the police department.
- Prepare the draw site using Betadine (DO NOT USE ALCOHOL). Once access is obtained, draw the blood using the equipment provided by the police officer.
- Complete the Allegiance Mobile Health PCR, ensuring that times are accurately documented.
- Place all supplies used during the procedure into a separate bag. Place the two (2) blood tubes into the second bag provided by the police officer. Provide both bags to the officer.
- Hand the blood tubes to the arresting officer, who will seal them in a chain-of-custody bag. Ensure your name and title are included on the submission form.
- Provide the officer with an incident number.

CS-35: Fire Standby

Revised 01/04/2026

Standard

Allegiance Mobile Health will, at times, be called to provide medical standby at active fire scenes. Medical personnel will be ready to act if a trapped victim or firefighter requires emergency medical resuscitation. They will also support rehabilitation efforts and monitor firefighters' health and safety.

Purpose

To ensure the safety and well-being of all personnel operating at fireground incidents by establishing clear guidelines for the provision of Allegiance Mobile Health coverage.

Procedures:

1. Pre-Incident Preparation:

- a) Allegiance Mobile Health personnel must be trained and familiar with the Incident Command System and fireground hazards.

2. Staging and Deployment:

- b) Units shall stage in a safe location, either specifically assigned by the Incident Commander (IC) or, if not directed, at least 1 hydrant away from the scene address. This ensures clear access for patient transport and egress. The unit should be positioned to allow immediate evacuation of casualties without unnecessary backing or repositioning. Care should be taken not to drive over hoses or to be blocked in by responding apparatus. In non-hydrant areas, EMS personnel should choose a staging location that still provides safe access and egress but also allows room for water shuttle operations; typically, this will be at an intersection closest to the fireground.
- c) Personnel will don safety vests and take a stretcher with a first-in, respiratory, trauma bag, oxygen, cardiac monitor, and report to IC.
- d) Upon arrival, EMS should check in both face-to-face and via radio to ensure the IC is aware of their presence and location on the scene. This dual communication helps IC anticipate and coordinate EMS arrival efficiently.
- e) Personnel will stage equipment either at an area designated by IC or in no assignment, in a position that is upwind and free of tripping hazards, and preferably shaded.

3. On-Scene Operations:

- f) An EMS unit shall be present for the duration of all fireground operations where personnel are at risk and will not clear until released by IC.
- g) If transporting a patient from the scene, a request for a replacement unit should be communicated to dispatch.
- h) EMS personnel will stay out of hot zones, which are areas closest to the fire where the danger is greatest due to heat and other hazards. According to NFPA guidelines, these zones typically extend up to 50 feet from the source of the fire, depending on the size and intensity of the blaze. Patients will be brought to warm zones, located at a safe distance but still within proximity to allow easy access for emergency care. Warm zones generally start beyond the immediate danger and allow EMS personnel to work without entering the direct hazard area. Cold zones, where the command and support operations set up, are located even further to ensure maximum safety.

4. Personnel Rehab and Monitoring:

- i) If the IC requests formal rehabilitation, all firefighters involved in strenuous activity shall undergo medical evaluation during rehabilitation periods, including vital sign assessment and monitoring for signs of heat stress, exhaustion, or other medical issues.
- j) If informal rehab is requested, EMS will identify rehab supplies used by the fire department. EMS personnel will assist with providing rehab intervention to fire personnel and watch for signs of medical issues of firefighter personnel. If an issue is noticed, EMS will notify the IC or Safety Officer of concern and assess the firefighter. Any refusal of transport by a firefighter who meets the criteria for transport should be discussed with IC or the company officer, and the firefighter should advocate for not returning to fireground operations or regular duties until cleared by a physician.

5. Post-Incident Actions:

- k) EMS personnel, specifically those directly involved in the incident, will be required to participate in post-incident debriefings. This ensures that all relevant experiences and safety concerns are shared and addressed. Any concerns regarding fireground safety or EMS operations will be reported to the ODS.

CS-36: Dialysis Transport during Declared Disasters

Revised 04/28/2026

Background:

Texas has a significant population of patients with end-stage renal disease (ESRD) who depend on regular dialysis treatments to survive. During declared disasters—such as hurricanes, floods, or severe winter storms—transportation disruptions can prevent these patients from accessing life-sustaining care. Past events, including Hurricane Harvey and Winter Storm Uri, have highlighted the risks these patients face when transportation infrastructure fails. Recognizing this vulnerability, Texas law mandates prioritization of dialysis patient transport during emergencies to ensure continuity of care and prevent life-threatening complications.

Legal Requirement:

Texas Health and Safety Code § 773.0145 — Prioritization of Dialysis Patients During Disaster

(a) An emergency medical services provider shall ensure that, during a declared state of disaster or local disaster, transportation is prioritized for patients requiring dialysis who are unable to arrange for private transportation and who, if they do not receive dialysis, are at risk for serious health complications or death. (Reference: Texas Health and Safety Code § 773.0145. Added by Acts 2019, 86th Legislature, Chapter 1154 (H.B. 2325), Section 1.)

Procedure:

Providers should ensure that dialysis transports do not override higher-priority calls, such as ProQA Level Charlie, Delta, or Echo responses. Patients should first be assessed for any medical complaints outside their baseline, including shortness of breath, chest pain, fatigue/weakness, nausea, vomiting, or abdominal pain. Patients presenting with symptoms, hypoxia, hypotension, fever, or abnormal EKG findings should be treated according to the appropriate medical Clinical Operating Guideline (COG) and transported to the most appropriate emergency department. If the patient is at their baseline, unable to arrange private transport, and wishes to be transported to an outpatient dialysis center, contact ODS via Pulsara or follow the predetermined dialysis transport recommendation.

3 Universal

U-01: Universal Care

Revised 01/26/2026

System Responder

- Scene / Crew Safety
- PPE
- Appropriate Equipment
- Initial Assessment
- Physical Exam
- Vital Signs at least every 15 min
- Consider:

Link

6 Adult - Respiratory

R-01: Airway, Adult

[Go to document](#)

Link

3 Universal

U-05: Spinal Motion Restriction

[Go to document](#)

- Glucose Assessment
- 12-lead ECG
- Appropriate COG

EMT or higher

- Must be specially credentialed

Link

3 Universal

U-03: IV Access[Go to document](#)

- Appropriate COG

Paramedic

- Cardiac Monitor
- Appropriate COG

Medical Control

- Contact Medical Direction for additional orders if needed

Contact**On-Call Medical Director****Note:** Use Pulsara to contact on-call Medical Direction.

PEARLS

- Appropriate equipment should be at a minimum: a monitor, oxygen, and an ALS response bag.
- The minimum exam for every patient includes vital signs, mental status, a focused exam or rapid assessment, and a pain scale.
- Vital signs should include: blood pressure, pulse, respirations, pulse oximetry (SpO₂), and, when appropriate, temperature, ECG, and EtCO₂.
- For dosing of medications or electrical therapy, an adult is defined as >37 kg.; a pediatric patient is defined as ≤37 kg.
- A Pediatric Weight-based Dosing Tool **MUST** be used for all Pediatric Patients and is recommended for adult patients.

Citations

U-02: Critical Patient

Revised 01/06/2026

All Providers

Link

3 Universal

U-01: Universal Care

[Go to document](#)

- Do not move the patient until appropriate resuscitation COG is completed

System Responder

- Address major bleeding or airway compromise

Link

9 Trauma

T-06: Multisystem Trauma

[Go to document](#)

Link

15 Ped - Trauma

PT-03: Multisystem Trauma

[Go to document](#)

- Supplemental oxygen and ventilatory support

EMT or higher

- Treat hypoxia aggressively

Link

6 Adult - Respiratory

R-01: Airway, Adult

[Go to document](#)

Link

13 Ped - Respiratory

PR-01: Airway, Pediatric

[Go to document](#)

AEMT or Higher

- Treat hypotension aggressively

Link

8 Adult - Medical

M-12: Hypotension

[Go to document](#)

Link

14 Ped - Medical

PM-05: Hypotension

[Go to document](#)

Paramedic

- Treat arrhythmia per the appropriate COG

PEARLS

- Patients meeting ALERT criteria should be transported within 10 minutes of arrival. All other patients should be resuscitated and stabilized for transport.
- PARCA (Post-Arrival Respiratory or Cardiac Arrest) is avoided by addressing hypoxia, hypotension, arrhythmia, or major bleeding rapidly

- ALL PARCA events will be reviewed via the QA committee

Citations

U-03: IV Access

Revised 01/04/2026

System Responder

Link

3 Universal

U-01: Universal Care

[Go to document](#)

EMT / AEMT or higher

◦ Must be specially credentialed

◦ Initiate Peripheral IV or IO*

▪

◦ Administer Normal Saline

▪

Medication

Normal Saline (NS, fluids)

Routes IV / IO **Dose** 30 mL/kg **Max. total dose** 3000 mL

Note:

Paramedic *AEMT* *Adult*

◦ Use Lidocaine 40 mg (Adult) or 0.5 mg/kg (Pedi) over 2 minutes for awake/conscious patients for IO placement.

▪

Medication

Lidocaine (IO placement)

Route IO **Dose** 40 mg **Conc.** Multiple

Note: Over 2 minutes.

Paramedic *AEMT* *Adult*

- **Medication**
Lidocaine (IO placement)
Route IO **Dose** 0.5 mg/kg **Conc.** Multiple
Note: Over 2 minutes.
Paramedic *AEMT* *Pediatric*

Paramedic

- Initiate:
 - Peripheral IV
 - IO
 - External Jugular Vein
 - Must be specially credentialed
 - Femoral Vein
- Administer Fluids / Medication as required

PEARLS

- Consider IO / Femoral Vein access in Cardiac Arrest.
- In Cardiac Arrest, access in order of preference is IV, Humeral IO, Distal Femur, Proximal Tibia.
- Approved IO sites for credentialed EMT are the Distal Femur or the Proximal Tibia.
- Weight-based dosing application **MUST** be used for all Pediatric Patients and is recommended for adult patients.
- Assess for fluid overload before administering large volumes of fluid
- Fluid Overload: Shortness of breath, orthopnea, pitting edema, JVD, Lung US B-lines

Citation

Link

4 Cohort Study

1: Distal femur versus humeral or tibial IO, access in adult out-of-hospital cardiac resuscitation

[Go to document](#)

Link

4 Cohort Study

2: Intraosseous compared to intravenous drug resuscitation in out-of-hospital cardiac arrest

[Go to document](#)

U-04: Deceased Person

Revised 01/06/2026

System Responder

- Scene / Crew Safety
- PPE
- Appropriate Equipment*
- Evaluate for Obvious Death or Valid DNR

Link
2 Clinical Standard Documents
CS-06: Criteria for Death or Withholding Resuscitation
[Go to document](#)

Link
2 Clinical Standard Documents
CS-09: DNR Advanced Directives
[Go to document](#)

- YES = obvious death or valid DNR
 - Discontinue CPR if started
 - Cancel unneeded Responders
 - Reduce all others to Non-Emergent
 - Contact LEO if needed
- NO
 - Initiate CPR

Link
4 Adult - Cardiac Arrest
CA-01: Cardiac Arrest, Adult
[Go to document](#)

Link
11 Ped - Cardiac Arrest
PA-01: Cardiac Arrest, Pediatric
[Go to document](#)

EMT or higher

- If obvious death or a valid DNR
 - Obtain a 4-lead ECG if needed (not required)
 - Document time
- Contact Medical Direction
 - Paramedics can pronounce obvious death or DNR independent of medical direction.

Contact
On-Call Medical Director
Note: Use Pulsara to contact on-call Medical Direction.

PEARLS

- Consider if the scene is a possible crime scene.

Link
2 Clinical Standard Documents
CS-05: Crime Scene
[Go to document](#)

- Anytime a provider feels the need to have LEO on the scene, they should make the request via dispatch.
- ECG is NOT REQUIRED for patients meeting the CS-06 criteria.

Citations

Link

1 Guideline

3: Guidelines for Withholding or Termination of Resuscitation in Prehospital Traumatic Cardiopulmonary Arrest: Joint Position Statement of the National Association of EMS Physicians and the American College of Surgeons Committee on Trauma

[Go to document](#)

U-05: Spinal Motion Restriction

Revised 01/04/2026

System Responder or Higher

o **Any high-risk factor that mandates SMR?**

- ≥ 65 years or
- Dangerous mechanism or
- Paresthesia in the extremities

▫ **YES – SMR Required**

- Apply C-Collar
- Minimize neck/back movement
- Secure to the stretcher in a 30° upright position if tolerated with seat belts.

o **If NO High-Risk factors: Is there any low-risk factor that allows for safe assessment of the range of motion?**

- Simple rear-end MVC or
- Sitting position at the scene or
- Ambulatory at any time or
- Delayed onset of neck pain or
- Absence of midline C-Spine tenderness

▫ **YES – Safe assessment of range of motion allowed**

- Able to Actively Rotate Neck 45° left and right?
 - o **SMR not required**
- Unable to Actively Rotate Neck 45° left and right?
 - o **SMR required**

▫ **NO - Safe assessment of range of motion not allowed**

- **SMR required**

Dangerous Mechanism

- A fall from an elevation of 3 feet
- Axial load to head (diving)
- MVC high speed (65+ mph), rollover, ejection, or bicycle collision
- Simple Rear-end MVC excludes:
 - Pushed into oncoming traffic
 - Hit by a large vehicle
 - Roll over or be hit at high speed

Rule Not Applicable

- Non-trauma cases
- GCS < 15
- Unstable vital signs
- Age < 16 years
- Acute paralysis
- Known vertebral disease
- Previous C-Spine surgery
- Pregnant

PEARLS

- Our goal is to decrease or eliminate the use of the C-collar by using the Canadian C-Spine Rule.
- SMR is NOT required for penetrating trauma unless a focal neurodeficit is present.
- Utilizing the backboard as an extrication device only, and to move the patient, is acceptable. Remove the backboard after the move.
- SMR may be used at the Provider's discretion or intuition.
- Use a draw sheet to transfer the patient from the stretcher at the receiving facility.

Citation

[Link](#)

4 Cohort Study

4: The long spine board does not reduce lateral motion during transport —a randomized healthy volunteer crossover trial.

[Go to document](#)

[Link](#)

4 Cohort Study

5: Implementation of the Modified Canadian C-Spine Rule by Paramedics

[Go to document](#)

U-06: Firefighter Rehab

Revised 01/06/2026

System Responder

- Scene / Crew Safety
- PPE
- Appropriate Equipment*
- Hydration
 - 24 OZ. water and
 - 8 OZ. Sports Drink per hour
- Nutrition
 - 30-60 g Carbohydrates per hour
- Cooling Measures PRN
- Assessment on Entering Rehab
 - Vital Signs* to include spCO (if equipped) at least q 15 min

EMT or higher

- Criteria for Release from Rehab (All must be present)
 - Heart rate \leq 110
 - Tympanic temp $<$ 99°F
 - spO₂ $>$ 94%
 - Resp. rate $<$ 24
 - spCO $<$ 10%
 - Systolic BP 100 - 160 mmHg
 - Diastolic $<$ 100 mmHg
 - No headache, N/V, chest pain, dyspnea
- Criteria for Medical Treatment (Only one may be present)
 - Heart rate $<$ 60 or $>$ 110
 - Tympanic temp of 101°F - 103.9°F
 - spO₂ \leq 94%
 - Resp. rate \geq 30
 - spCO 10% - 20% without AMS

- Systolic BP < 100 mmHg
- Headache, N/V, chest pain, or dyspnea
- o Criteria for Transport to Hospital (Only one may be present)
 - Tympanic temp of > 103.9°F

Link
8 Adult - Medical
M-10: Hyperthermia
[Go to document](#)

- Resp. rate ≥ 30 after 30 min on oxygen
- spCO > 20% or Pregnant > 5%

Link
16 Toxic Exposure
TE-01: Carbon Monoxide
[Go to document](#)

- EtCO₂ <25
 - CONTACT Mutual Aid for Cyanokit

Link
16 Toxic Exposure
TE-02: Cyanide / Hydrogen Sulfide
[Go to document](#)

- Systolic BP < 80 mmHg

Link
8 Adult - Medical
M-12: Hypotension
[Go to document](#)

- Syncope, AMS, refractory N/V, chest pain, dry skin, seizures, respiratory distress

Link
16 Toxic Exposure
TE-02: Cyanide / Hydrogen Sulfide
[Go to document](#)

- Dyspnea after 20 min

Medical Control

- Contact Medical Direction for all FD personnel transports

Contact

On-Call Medical Director

Note: Use Pulsara to contact on-call Medical Direction.

PEARLS

- Firefighters with AMS and Core Temp $>103.9^{\circ}$ F must be cooled via cold water immersion.
- Formal Rehab should be established on events where moderate to heavy activity is expected and environmental temperatures are elevated ($> 90^{\circ}$ F)
- No more than 1.5L of free water without electrolyte replacement

Citation

U-07: Taser Injuries

Revised 01/06/2026

System Responder or higher

- Consider

Link

6 Adult - Respiratory

R-01: Airway, Adult

[Go to document](#)

Link

3 Universal

U-05: Spinal Motion Restriction

[Go to document](#)

Link

8 Adult - Medical

M-03: Altered Mental Status

[Go to document](#)

- Removal of Taser Dart

- Use the Taser Removal tool
- If not available, remove the dart by grabbing firmly and twisting with a firm, pulling motion from the skin
- If the dart is not easily removed, leave it in place and transport to the ED

- Consider:

Link

8 Adult - Medical

M-04: Behavioral/Agitation

[Go to document](#)

Link

5 Adult- Cardiac

C-01: Chest Pain; Suspected Acute Coronary Syndrome

[Go to document](#)

Paramedic

- Chest Pain
 - Interpret the 12-lead EKG

Link

5 Adult- Cardiac

C-01: Chest Pain; Suspected Acute Coronary Syndrome

[Go to document](#)

PEARLS

- 12-Lead ECG **MUST** be obtained on all taser injuries with complaints of chest pain.
- If the patient is restrained, ensure they are **NOT PRONE**; transport them sitting up or in a 30-degree head-up position.
- Use the available removal tool provided by LEO.
- The minimum exam for every patient includes vital signs, mental status, a focused exam or rapid assessment, and a pain scale.
- Vital signs should include: blood pressure, pulse, respirations, pulse oximetry (SpO2), and when appropriate: temperature, ECG, and EtCO2.

Citations

Link

7 Case Report

6: Emergency Medical Services Experience With Barb Removal After Taser Use By Law Enforcement: A Descriptive National Study

[Go to document](#)

Link

8 Expert Opinion

7: Emergency Department Evaluation After Conducted Energy Weapon Use: Review of the Literature for the Clinician

[Go to document](#)

4 Adult - Cardiac Arrest

CA-01: Cardiac Arrest, Adult

Revised 01/06/2026

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

o If **Traumatic Arrest**

Link

9 Trauma

T-01: Trauma Circulatory Arrest

[Go to document](#)

o If **obvious death**

Link

3 Universal

U-04: Deceased Person

[Go to document](#)

o Start **Manual** CPR

CPR Tool

Tempo: 110 compressions per minute

Cycle: 2 minutes

[Reference: CPR Guidelines](#)

- Transition to mechanical CPR

Link
19 Appendices
M: High-Quality Mechanical CPR
[Go to document](#)

- AED Placement: Anterior/Posterior Preferred

EMT or higher

- Must be specially credentialed

- Establish IV/IO

Link
3 Universal
U-03: IV Access
[Go to document](#)

- Supraglottic Airway

Link
6 Adult - Respiratory
R-01: Airway, Adult
[Go to document](#)

- Must be specially credentialed

- Medication
Epinephrine (1:10k, load)
Routes IV / IO **Dose** 0.5 mg **Conc.** 1 mg in 10 mL
⚠ EMT Must be Specially Credentialed for Initial Dose
Note:
Paramedic AEMT EMT Adult

Paramedic

- Airway Procedure

Link
6 Adult - Respiratory
R-01: Airway, Adult
[Go to document](#)

- Appropriate Rhythm-Based Protocol

PEARLS

- Crews should identify roles before arriving at the patient
- EtCO₂ waveform must be used to confirm the airway and assess compression effectiveness
- Follow the specific steps listed in the appendix to transition the patient from manual to mechanical CPR
- Once on mechanical CPR, shocks should be delivered without pauses.
- No more than 10-second pauses are appropriate to assess rhythm or check for pulse. IF NO PULSE AFTER 10 SECONDS, RESUME CPR
- Time to first epinephrine is a quality measure.
- In Cardiac Arrest, the access in order of access preference is IV, Humeral IO, Distal Femur, Proximal tibia

Citations

Link
4 Cohort Study
1: Distal femur versus humeral or tibial IO, access in adult out-of-hospital cardiac resuscitation
[Go to document](#)

Link
4 Cohort Study
2: Intraosseous compared to intravenous drug resuscitation in out-of-hospital cardiac arrest
[Go to document](#)

Link

1 Guideline

13: European Resuscitation Council Guidelines 2021: Cardiac arrest in special circumstances.

[Go to document](#)

Link

4 Cohort Study

19: LUCAS Device Use Associated with Prolonged Pauses during Application and Long Chest Compression Intervals

[Go to document](#)

Link

4 Cohort Study

20: Time to Epinephrine Administration and Survival From Nonshockable Out-of-Hospital Cardiac Arrest Among Children and Adults.

[Go to document](#)

Link

4 Cohort Study

21: Association of Timing of Epinephrine Administration With Outcomes in Adults With Out-of-Hospital Cardiac Arrest

[Go to document](#)

Link

1 Guideline

22: 2022 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science With Treatment Recommendations: Summary From the Basic Life Support; Advanced Life Support; Pediatric Life Support; Neonatal Life Support; Education, Implementation, and Teams; and First Aid Task Forces

[Go to document](#)

Link

4 Cohort Study

23: Post-resuscitation pneumothorax: retrospective analysis of incidence, risk factors and outcome-relevance.

[Go to document](#)

CA-02: Asystole / PEA

Revised 01/28/2026

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

- Manual CPR
- Check the rhythm every 2 minutes

CPR Tool
Tempo: 110 compressions per minute
Cycle: 2 minutes
[Reference: CPR Guidelines](#)

- Consider Correctable Causes

- Hypoxia

Link
6 Adult - Respiratory
R-01: Airway, Adult
[Go to document](#)

- Hypothermia

Link
8 Adult - Medical
M-13: Hypothermia
[Go to document](#)

- Hyperthermia

Link

8 Adult - Medical

M-10: Hyperthermia

[Go to document](#)

▪ Hypoglycemia

Link

8 Adult - Medical

M-03: Altered Mental Status

[Go to document](#)

▪ Hyperkalemia

Link

8 Adult - Medical

M-11: Hyperkalemia

[Go to document](#)

▪ Overdose

Link

8 Adult - Medical

M-16: Overdose / Toxic Ingestion

[Go to document](#)

▪ Tension Pneumothorax

Link

9 Trauma

T-06: Multisystem Trauma

[Go to document](#)

○ If ROSC

Link
4 Adult - Cardiac Arrest
CA-04: Post Resuscitation Care
[Go to document](#)

EMT or higher

- The time to the first epinephrine time should be less than 10 minutes

- | |
|--|
| Medication Epinephrine (1:10k, load) Routes IV / IO Dose 0.5 mg Conc. 1 mg in 10 mL ⚠ EMT Must be Specially Credentialed for Initial Dose Note: <i>Paramedic</i> <i>AEMT</i> <i>EMT</i> <i>Adult</i> |
|--|

Paramedic

- Acidosis

- | |
|---|
| Medication Sodium Bicarbonate Routes IV / IO Dose 1 mEq/kg Conc. 50 mEq in 50 mL Note: <i>Paramedic</i> <i>Pediatric</i> <i>Adult</i> |
|---|

- Epinephrine push or drip

- | |
|--|
| Medication Epinephrine (1:10k) Routes IV / IO Dose 0.5 mg Conc. 1 mg in 10 mL Note: Every 5 minutes For severely acidotic patients consider giving sodium bicarbonate prior to push <i>Paramedic</i> <i>Adult</i> |
|--|

OR (drip can be started following initial push)

- **Medication**
Epinephrine Infusion (Asytole/PEA)
Routes IV / IO **Dose** 1 mcg/kg/min **Max. dose** 100 mcg/min **Conc.** 1 mg/mL
Note:
Paramedic *Pediatric* *Adult*

- No ROSC

Contact
On-Call Medical Director
Note: Use Pulsara to contact on-call Medical Direction.

PEARLS

- Crews should identify roles before arriving at the patient
- A dose of epinephrine may be administered as a bolus before initiating a continuous infusion.
- EtCO₂ waveform should be used to confirm the airway and assess compression
- A single defibrillation at maximum energy setting can be used if the initial rhythm is asystole.
- No more than 10-second pauses are appropriate to assess rhythm or check for pulse. IF NO PULSE AFTER 10 SECONDS, RESUME CPR
- Time to first epinephrine is a quality measure.
- In Cardiac Arrest, access in order of access preference is IV, Humeral IO, Distal Femur, Proximal tibia
- Patients with PEA may be in a low-flow state and have a non-palpable pulse. Correction of metabolic or respiratory acidosis, improved oxygenation, fluid support, and increased vasopressor administration can improve systemic blood pressure.

References

Link

1 Guideline

22: 2022 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science With Treatment Recommendations: Summary From the Basic Life Support; Advanced Life Support; Pediatric Life Support; Neonatal Life Support; Education, Implementation, and Teams; and First Aid Task Forces

[Go to document](#)

Link

7 Case Report

24: Ultrasound Detection of Ventricular Fibrillation Disguised as Asystole.

[Go to document](#)

Link

7 Case Report

25: Apparent asystole: are we missing a lifesaving opportunity?

[Go to document](#)

Link

3 RCT

26: A Randomized Trial of Epinephrine in Out-of-Hospital Cardiac Arrest.

[Go to document](#)

Link

4 Cohort Study

27: Cumulative epinephrine dose during cardiac arrest and neurologic outcome after extracorporeal cardiopulmonary resuscitation.

[Go to document](#)

Link

4 Cohort Study

28: Sodium bicarbonate administration is associated with improved survival in asystolic and PEA Out-of-Hospital cardiac arrest.

[Go to document](#)

Link

3 RCT

29: Effect of calcium in patients with pulseless electrical activity and electrocardiographic characteristics potentially associated with hyperkalemia and ischemia-sub-study of the Calcium for Out-of-hospital Cardiac Arrest (COCA) trial.

[Go to document](#)

Link

3 RCT

30: Effect of calcium vs. placebo on long-term outcomes in patients with out-of-hospital cardiac arrest.

[Go to document](#)

CA-03: Pulseless VF/VT

Revised 01/06/2026

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

- Manual CPR
- Check Rhythm every 2 minutes
- Limit pauses to < 10 seconds
- Pad placement Anterior/Posterior

- **V-fib/V-tach**
 - Defibrillate max energy
 - If the refractory change vector is considered dual sequential defibrillation after 2nd shock

- **Time to Comprehensive Resuscitation Center <30 Min**

Link

19 Appendices

E: Hospital Selection Guide

[Go to document](#)

- **Initiate Transport after the first defibrillation**
- **Call Medical Control for ECMO Alert**

Contact

On-Call Medical Director

Note: Use Pulsara to contact on-call Medical Direction.

- Information that will be needed
 - Total no-flow time (did the patient get bystander CPR)
 - Total CPR time
 - ETA to the hospital
 - Past medical history
 - Any signs of life
 - Agonal respiration
 - Movement

Link
4 Adult - Cardiac Arrest
CA-05: CPR Induced Consciousness
[Go to document](#)

- Pupillary response
- Additional medications may be held per the medical director's discretion

- Time to Comprehensive Resuscitation Center >30 Min

- Treat at the scene

- Consider Correctable Causes

- Hypoxia

Link
6 Adult - Respiratory
R-01: Airway, Adult
[Go to document](#)

- Hypothermia

Link
8 Adult - Medical
M-13: Hypothermia
[Go to document](#)

- Hyperthermia

Link

8 Adult - Medical

M-10: Hyperthermia

[Go to document](#)

▪ Hypoglycemia

Link

8 Adult - Medical

M-03: Altered Mental Status

[Go to document](#)

▪ Hyperkalemia

Link

8 Adult - Medical

M-11: Hyperkalemia

[Go to document](#)

▪ Overdose

Link

8 Adult - Medical

M-16: Overdose / Toxic Ingestion

[Go to document](#)

▪ Tension Pneumothorax

Link

9 Trauma

T-06: Multisystem Trauma

[Go to document](#)

◦ If ROSC

Link

4 Adult - Cardiac Arrest

CA-04: Post Resuscitation Care

[Go to document](#)

EMT or higher

- Time to first epinephrine should be within 10 minutes

- | |
|--|
| Medication Epinephrine (1:10k, load) Routes IV / IO Dose 0.5 mg Conc. 1 mg in 10 mL ⚠ EMT Must be Specially Credentialed for Initial Dose Note: <i>Paramedic</i> <i>AEMT</i> <i>EMT</i> <i>Adult</i> |
|--|

Paramedic

- Acidosis

- | |
|---|
| Medication Sodium Bicarbonate Routes IV / IO Dose 1 mEq/kg Conc. 50 mEq in 50 mL Note: <i>Paramedic</i> <i>Pediatric</i> <i>Adult</i> |
|---|

- Epinephrine **or** epinephrine infusion

- | |
|--|
| Medication Epinephrine (1:10k) Routes IV / IO Dose 0.5 mg Conc. 1 mg in 10 mL Note: Every 5 minutes For severely acidotic patients consider giving sodium bicarbonate prior to push <i>Paramedic</i> <i>Adult</i> |
|--|

OR (drip can be started following initial push)

- Medication**
Epinephrine Infusion (VF/VT)
Routes IV / IO **Dose** 0.5 mcg/kg/min **Max. dose** 50 mcg/min **Conc.** Multiple
Note:

- o Antidysrhythmic

- The goal is to have the initial administration in 8 minutes
 - **Give after the 2nd shock**
 - Hold if moving to ECPR until cleared by OMD

- Medication**
Amiodarone (initial dose)
Routes IV / IO **Dose** 300 mg **Conc.** 150 mg in 3 mL
Note:
Paramedic *Adult*

- Medication**
Amiodarone (repeat dose)
Routes IV / IO **Dose** 150 mg **Conc.** 150 mg in 3 mL
Note:
Paramedic *Adult*

- OR (Can also give if refractory to Amiodarone)

- Medication**
Lidocaine (initial)
Routes IV / IO **Dose** 1 mg/kg **Conc.** 100 mg in 5 mL
Note:
Paramedic *Pediatric* *Adult*

- Medication**
Lidocaine (repeat)
Routes IV / IO **Dose** 0.5 mg/kg **Conc.** 100 mg in 5 mL
Note:
Paramedic *Adult*

- o No ROSC

- **Contact**
On-Call Medical Director
Note: Use Pulsara to contact on-call Medical Direction.

PEARLS

- Patients with an initial rhythm of v-fib/v-tach should be assessed for the time to be transported to a comprehensive resuscitation center after 1st shock.
- If the patient has a palpable pulse, with mechanical CPR, withhold further medications if calling for ECMO Alert Authorization.
- After 2 unsuccessful defibrillation attempts, vector change, or if 2 cardiac monitors are available, dual **sequence** defibrillation should be attempted.
- Crews should identify roles before arriving at the patient
- EtCO2 waveform must be used to confirm the airway and assess compression
- Once on mechanical CPR, shocks should be delivered while CPR is continued
- No more than 10-second pauses are appropriate for assessing rhythm or checking for pulse. IF NO PULSE AFTER 10 SECONDS, RESUME CPR
- Time to first epinephrine is a quality measure. Time to antidysrhythmic should be within 8 minutes of arrival.
- In Cardiac Arrest, access in order of access preference is IV, Humeral IO, Distal Femur, Proximal tibia

Citations

Link
1 Guideline

22: 2022 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science With Treatment Recommendations: Summary From the Basic Life Support; Advanced Life Support; Pediatric Life Support; Neonatal Life Support; Education, Implementation, and Teams; and First Aid Task Forces

[Go to document](#)

Link

3 RCT

26: A Randomized Trial of Epinephrine in Out-of-Hospital Cardiac Arrest.

[Go to document](#)

Link

4 Cohort Study

27: Cumulative epinephrine dose during cardiac arrest and neurologic outcome after extracorporeal cardiopulmonary resuscitation.

[Go to document](#)

Link

4 Cohort Study

31: Promising candidates for extracorporeal cardiopulmonary resuscitation for out-of-hospital cardiac arrest

[Go to document](#)

Link

3 RCT

32: Survival by time-to-administration of amiodarone, lidocaine, or placebo in shock-refractory out-of-hospital cardiac arrest.

[Go to document](#)

Link

4 Cohort Study

33: Coronary Artery Disease in Patients With Out-of-Hospital Refractory Ventricular Fibrillation Cardiac Arrest.

[Go to document](#)

Link

3 RCT

34: Advanced reperfusion strategies for patients with out-of-hospital cardiac arrest and refractory ventricular fibrillation (ARREST): a phase 2, single centre, open-label, randomised controlled trial.

[Go to document](#)

Link

4 Cohort Study

35: Defibrillation Strategies for Refractory Ventricular Fibrillation.

[Go to document](#)

CA-04: Post Resuscitation Care

Revised 01/06/2026

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

◦ **Slow Down: stabilize, then initiate transport**

Link

3 Universal

U-02: Critical Patient

[Go to document](#)

◦ Confirm BP/EKG, Airway, and Access

◦ Goals

Do not move until goals are reached

- SpO2 \geq 90% (Consider PEEP)
- MAP \geq 65
- EtCO2 35-45
- Consider hypotension

Link

8 Adult - Medical

M-12: Hypotension

[Go to document](#)

- Head of bed to 30 Degrees
- Transport to a Resuscitation Center

Link

19 Appendices

E: Hospital Selection Guide

[Go to document](#)

Paramedic

- Post V-Fib / V-Tach Arrest

| |
|--|
| <p>Medication Amiodarone (maintenance) Routes IV / IO Dose 1 mg/min Conc. 150 mg in 100 mL Note: <i>Paramedic</i> <i>Adult</i></p> |
|--|

- If consciousness is interfering with safe transport

| |
|---|
| <p>Medication Ketamine (Sedation) Routes IV / IO Dose 1–2 mg/kg Max. total dose 500 mg Conc. Multiple ⚠ Patient may not be prone and must have continuous monitoring Note: For patients over 65 years old, cut the initial dose of sedation in half. <i>Paramedic</i> <i>Adult</i></p> |
|---|

PEARLS

- With patients requiring vasopressor support or signs of decreased EF on US, consider bypassing to a Comprehensive Resuscitation Center.
- Norepinephrine is the preferred post-arrest vasopressor.
- A patient with signs of STEMI should also have STEMI Alert Activation but should prioritize a Resuscitation center over PCI.
- There is an increased risk of rearrest with **hypotension or hypoxia**

Citations

[Link](#)

4 Cohort Study

36: Epinephrine versus norepinephrine in cardiac arrest patients with post-resuscitation shock.

[Go to document](#)

[Link](#)

4 Cohort Study

37: Association of prehospital hypotension depth and dose with survival following out-of-hospital cardiac arrest.

[Go to document](#)

[Link](#)

4 Cohort Study

38: Prehospital Administration of Norepinephrine and Epinephrine for Shock after Resuscitation from Cardiac Arrest.

[Go to document](#)

[Link](#)

2 Meta-Analysis

39: Cardiac arrest centres for patients with non-traumatic cardiac arrest: A systematic review.

[Go to document](#)

[Link](#)

4 Cohort Study

40: Association of prehospital post-resuscitation peripheral oxygen saturation with survival following out-of-hospital cardiac arrest.

[Go to document](#)

CA-05: CPR Induced Consciousness

Revised 01/06/2026

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

- Confirm on next pulse check, continued pulselessness.

Paramedic

- Consciousness interfering with resuscitation (any below is a YES)
 - Pulling at lines
 - Reaching for the airway
 - Trying to push away rescuers
 - Trying to sit up

- YES – interfering with resuscitation

- | |
|---|
| Medication |
| Ketamine (Sedation) |
| Routes IV / IO Dose 1–2 mg/kg Max. total dose 500 mg Conc. Multiple |
| ⚠ Patient may not be prone and must have continuous monitoring |
| Note: For patients over 65 years old, cut the initial dose of sedation in half. |
| <i>Paramedic</i> <i>Adult</i> |

- NO – not interfering with resuscitation

▪

Medication**Ketamine (not interfering with resus)****Routes** IV / IO **Dose** 0.5 mg/kg **Max. total dose** 500 mg **Conc.** 50 mg/mL**Note:***Paramedic* *Adult*

PEARLS

- Patients with consciousness have a higher chance of survival
- Patients with PEA may have a low-flow state and a non-palpable pulse. Correction of metabolic or respiratory acidosis, improved oxygenation, fluid support, and increased vasopressor administration can improve systemic blood pressure

Citations

Link

8 Expert Opinion

41: Development of an international prehospital CPR-induced consciousness guideline:[Go to document](#)

5 Adult- Cardiac

C-01: Chest Pain; Suspected Acute Coronary Syndrome

Revised 04/20/2026

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

- **Medication**
Aspirin (ASA)
Route PO **Dose** 324 mg
Note: Four (4) 81 mg tablet
Adult AEMT EMT Paramedic System Responder

- Oxygen to maintain SpO2 >94

EMT or higher

- Obtain a 12-lead EKG within **5 minutes** of first medical contact

Paramedic

- Interpret the 12-Lead EKG
- **If STEMI is noted (1mm of elevation in 2 or more leads with ACS Symptoms)**
 - Notify the receiving hospital
 - If an Inferior STEMI
 - IVF Bolus to maintain SBP >100

- | |
|---|
| Medication Normal Saline (NS, fluids) Routes IV / IO Dose 30 mL/kg Max. total dose 3000 mL Note: Adult AEMT Paramedic |
|---|

- Use caution with Nitroglycerin

- | |
|---|
| Medication Nitroglycerin (NTG) Route SL Dose 0.4 mg ⚠ Hold in patients who used Viagra (sildenafil), Lavitra (vardenafil) or Cialis (tadalafil) in the last 48 hrs Note: q5 minutes if SBP >100 or patient is pain free. Adult Paramedic |
|---|

- Pain >7

| |
|--|
| Link 8 Adult - Medical M-17: Pain Management Go to document |
|--|

PEARLS

- ***EKG must be obtained in 5 minutes if the patient complains of chest pain/pressure, shortness of breath, nausea, sweating, lightheadedness, or dizziness.***
- STEMI can involve: EKG should be repeated every 5-10 minutes.
- Aspirin administration is a key performance indicator.
- Patients with QRS duration >120, meeting STEMI criteria, or asymptomatic patients with STEMI criteria should have a medical direction consult before declaring a STEMI.

Citations

Link

1 Guideline

42: 2014 AHA/ACC Guideline for the Management of Patients With Non-ST-Elevation Acute Coronary Syndromes: Executive Summary

[Go to document](#)

C-02: Bradycardia

Revised 02/08/2026

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

- Evaluate for an underlying cause. Consider:

Link
8 Adult - Medical
M-16: Overdose / Toxic Ingestion
[Go to document](#)

Link
8 Adult - Medical
M-11: Hyperkalemia
[Go to document](#)

Paramedic

Symptomatic

- 12-lead for evidence of a high degree of heart block?
◦ **NO** evidence of a high degree of heart

- | |
|---|
| Medication Atropine Routes IV / IO Dose 0.5 mg Conc. 1 mg in 10 mL Note: Repeat every 5 minutes if responsive <i>Paramedic</i> <i>Adult</i> |
|---|

• If no response:

- | |
|--|
| Medication Epinephrine Push Dose (1:100k) Routes IV / IO Dose 5–20 mcg Conc. 10 mcg/mL Note: Every 2-3 minutes to maintain MAP >65 Mix by diluting 1ml of epinephrine 1:10 000 in 9 mL of normal saline <i>Paramedic</i> <i>Adult</i> |
|--|

Transition to infusion if responsive to push dose

- | |
|--|
| Medication Epinephrine Infusion Routes IV / IO Dose 0.1–1 mcg/kg/min Conc. 1 mg in 1 mL Note: Titrate to MAP of 65 (Normal SBP for Peds) For Dial-a-Flow, use the Pump Calculation <i>Paramedic</i> <i>Pediatric</i> <i>Adult</i> |
|--|

▫ If no response to push dose epinephrine or Evidence of a high degree heart block

• Transcutaneous pacing 80 bpm

| |
|--|
| Link 8 Adult - Medical M-18: Procedural Sedation Go to document |
|--|

• Confirm mechanical capture with palpation and SpO2 waveform

PEARLS

- EKG must be obtained in 5 minutes if the patient complains of chest pain/pressure, shortness of breath, nausea, sweating, lightheadedness, or dizziness
- **Symptomatic** include hypotension, altered mental status, lightheadedness, chest pain, and shortness of breath
- Consider hyperkalemia as a cause of wide complex bradycardia. Consider Calcium Channel or Beta Blockers as a cause in the right clinical setting.
- Use ultrasound if available to confirm mechanical capture via vascular or cardiac ultrasound.

- Consider vasopressor support if mechanical capture and the patient remain hypotensive.
- Responsive refers to an increase in heart rate and blood pressure.

References

Link

1 Guideline

43: 2018 ACC/AHA/HRS Guideline on the Evaluation and Management of Patients With Bradycardia and Cardiac Conduction Delay: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Rhythm Society.

[Go to document](#)

Link

7 Case Report

44: Cardiac Ultrasound to Confirm Mechanical Capture in Emergency Transcutaneous Pacing: A Case Report.

[Go to document](#)

C-03: Atrial Fibrillation with RVR

Revised 01/06/2026

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

Paramedic

- If QRS >120 msec or Hx of WPW

Link

5 Adult- Cardiac

C-05: Wide Complex Tachycardia (Pulse)

[Go to document](#)

- Evaluate for underlying causes. Consider:

- Dehydration

Link

8 Adult - Medical

M-12: Hypotension

[Go to document](#)

- Overdose

Link

8 Adult - Medical

M-16: Overdose / Toxic Ingestion

[Go to document](#)

- Pain

Link
8 Adult - Medical
M-17: Pain Management
[Go to document](#)

- Sepsis

Link
8 Adult - Medical
M-20: Sepsis
[Go to document](#)

- **If AMS or Hypotension (Unstable)**

- Synchronized Cardioversion: 50 J ->100 J-->150 J--> 200 J

- Pads should be placed anterior/posterior

- Consider:

Link
8 Adult - Medical
M-18: Procedural Sedation
[Go to document](#)

- If refractory, try metoprolol *or* diltiazem

- | |
|--|
| Medication |
| Metoprolol (Lopressor) |
| Routes IV / IO Dose 5 mg Conc. Multiple |
| Note: Every 5 minutes till HR <120. Max 15 mg. |
| <i>Paramedic</i> <i>Adult</i> |

OR

- Medication
Diltiazem (initial dose) (Cardizem)
Routes IV / IO **Dose** 0.25 mg/kg **Max. dose** 25 mg **Conc.** 25 mg in 5 mL
Note: Till HR <120
Paramedic *Adult*

Wait 15 minutes between doses

- Medication
Diltiazem (repeat dose) (cardizem)
Routes IV / IO **Dose** 0.35 mg/kg **Max. dose** 35 mg **Conc.** 25 mg in 5 mL
Note: Till HR <120
Paramedic *Adult*

○ If no AMS / hypotension (Stable)

- Medication
Magnesium Sulfate
Routes IV / IO **Dose** 2 g **Conc.** 2 g in 100 mL **Give over** 10 minutes
Note:
Paramedic *Adult*

▪ Metoprolol *or* diltiazem

- Medication
Metoprolol (Lopressor)
Routes IV / IO **Dose** 5 mg **Conc.** Multiple
Note: Every 5 minutes till HR <120. Max 15 mg.
Paramedic *Adult*

OR

- Medication
Diltiazem (repeat dose) (cardizem)
Routes IV / IO **Dose** 0.35 mg/kg **Max. dose** 35 mg **Conc.** 25 mg in 5 mL
Note: Till HR <120
Paramedic *Adult*

Wait 15 minutes between doses

- Medication
Diltiazem (initial dose) (Cardizem)
Routes IV / IO **Dose** 0.25 mg/kg **Max. dose** 25 mg **Conc.** 25 mg in 5 mL
Note: Till HR <120
Paramedic *Adult*

Medical Control

Contact
On-Call Medical Director
Note: Use Pulsara to contact on-call Medical Direction.

Medication
Amiodarone (loading)
Routes IV / IO **Dose** 150 mg **Conc.** 150 mg in 100 mL **Give over** 10 minutes
Note:
Medical Control *Adult*

Medication
Amiodarone (maintenance)
Routes IV / IO **Dose** 1 mg/min **Conc.** 150 mg in 100 mL
Note:
Paramedic *Adult*

PEARLS

- o EKG must be obtained in 5 minutes if the patient complains of chest pain/pressure, shortness of breath, nausea, sweating, lightheadedness, or dizziness
- o A 12-lead should follow any intervention or rhythm change
- o RVR is defined as HR greater than 120

Citations

Link

4 Cohort Study

45: Comparison of sustained rate control in atrial fibrillation with rapid ventricular rate: Metoprolol vs. Diltiazem

[Go to document](#)

Link

1 Guideline

46: 2023 ACC/AHA/ACCP/HRS Guideline for the Diagnosis and Management of Atrial Fibrillation: A Report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines.

[Go to document](#)

Link

4 Cohort Study

47: Acute rate control with metoprolol versus diltiazem in atrial fibrillation with heart failure with reduced ejection fraction

[Go to document](#)

Link

2 Meta-Analysis

48: Anteriolateral versus anterior–posterior electrodes in external cardioversion of atrial fibrillation: A systematic review and meta-analysis of clinical trials.

[Go to document](#)

Link

4 Cohort Study

49: Transthoracic Cardioversion of Atrial Fibrillation: Comparison of Rectilinear Biphasic Versus Damped Sine Wave Monophasic Shocks.

[Go to document](#)

Link

3 RCT

50: A Randomized Controlled Trial of Magnesium Sulfate, in Addition to Usual Care, for Rate Control in Atrial Fibrillation.

[Go to document](#)

C-04: Supraventricular Tachycardia (SVT)

Revised 01/06/2026

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

Paramedics

- **If QRS >120 msec or Hx of WPW**

Link

5 Adult- Cardiac

C-05: Wide Complex Tachycardia (Pulse)

[Go to document](#)

- **Consider the underlying causes and treat first**

- Dehydration

Link

8 Adult - Medical

M-12: Hypotension

[Go to document](#)

- Overdose

Link
8 Adult - Medical
M-16: Overdose / Toxic Ingestion
[Go to document](#)

▪ Pain

Link
8 Adult - Medical
M-17: Pain Management
[Go to document](#)

▪ Sepsis

Link
8 Adult - Medical
M-20: Sepsis
[Go to document](#)

○ **If AMS / hypotension (Symptomatic)**

- Synchronized Cardioversion: 50 J -->100 J-->150 J--> 200 J'
 - Place pads anterior/posterior
 - Consider Procedural Sedation (M-19)

Link
8 Adult - Medical
M-18: Procedural Sedation
[Go to document](#)

- If refractory, adenosine **or** diltiazem

- Medication
Adenosine (adenocard)
Route IV **Dose** 12 mg **Conc.** Multiple
Note: Rapid IV push, diluted in 10ml. Repeat 1 time.
Paramedic *Adult*

OR

- Medication
Diltiazem (initial dose) (Cardizem)
Routes IV / IO **Dose** 0.25 mg/kg **Max. dose** 25 mg **Conc.** 25 mg in 5 mL
Note: Till HR <120
Paramedic *Adult*

Wait at least 15 minutes

- Medication
Diltiazem (repeat dose) (cardizem)
Routes IV / IO **Dose** 0.35 mg/kg **Max. dose** 35 mg **Conc.** 25 mg in 5 mL
Note: Till HR <120
Paramedic *Adult*

- If still refractory, contact medical control

- **No AMS / hypotension**

- Modified Vagal Maneuver
 - Semi-Recumbent blow for **15** sec into a 10 ml syringe
 - Move to supine with legs elevated to 45 degrees
 - Hold position for **15** sec
 - Return to the Semi-Recumbent position
- If no conversion, adenosine **or** diltiazem (Preferred)

- Medication
Adenosine (adenocard)
Route IV **Dose** 12 mg **Conc.** Multiple
Note: Rapid IV push, diluted in 10ml. Repeat 1 time.
Paramedic *Adult*

OR

- Medication
Diltiazem (initial dose) (Cardizem)
Routes IV / IO **Dose** 0.25 mg/kg **Max. dose** 25 mg **Conc.** 25 mg in 5 mL
Note: Till HR <120
Paramedic *Adult*

Wait at least 15 minutes

□

Medication**Diltiazem (repeat dose)** (cardizem)**Routes** IV / IO **Dose** 0.35 mg/kg **Max. dose** 35 mg **Conc.** 25 mg in 5 mL**Note:** Till HR <120*Paramedic* *Adult*

Medical Control

Contact**On-Call Medical Director****Note:** Use Pulsara to contact on-call Medical Direction.

▪

Medication**Metoprolol****Route** IV **Dose** 5 mg **Conc.** Multiple**Note:** Every 5 minutes till HR <120. Max 15 mg.*Medical Control* *Adult***OR**

▪

Medication**Amiodarone (loading)****Routes** IV / IO **Dose** 150 mg **Conc.** 150 mg in 100 mL **Give over**
10 minutes**Note:***Medical Control* *Adult*

▪

Medication**Amiodarone (maintenance)****Routes** IV / IO **Dose** 1 mg/min **Conc.** 150 mg in 100 mL**Note:***Paramedic* *Adult*

PEARLS

- EKG must be obtained in 5 minutes if the patient complains of chest pain/pressure, shortness of breath, nausea, sweating, lightheadedness, or dizziness
- A 12-lead should follow any intervention or rhythm change
- Call OLMD if the rhythm is refractory to the initial medication

References

Link

4 Cohort Study

49: Transthoracic Cardioversion of Atrial Fibrillation: Comparison of Rectilinear Biphasic Versus Damped Sine Wave Monophasic Shocks.

[Go to document](#)

Link

3 RCT

51: Intravenous diltiazem for termination of reentrant supraventricular tachycardia: a placebo-controlled, randomized, double-blind, multicenter study.

[Go to document](#)

Link

1 Guideline

52: Guideline for the Management of Adult Patients With Supraventricular Tachycardia

[Go to document](#)

Link

2 Meta-Analysis

53: Modified Valsalva maneuver for treatment of supraventricular tachycardias: A Meta-analysis.

[Go to document](#)

Link

7 Case Report

54: Synchronized Cardioversion Performed During Cold Water Immersion of a Heatstroke Patient

[Go to document](#)

Link

3 RCT

55: Postural modification to the standard Valsalva manoeuvre for emergency treatment of supraventricular tachycardias (REVERT): a randomised controlled trial.

[Go to document](#)

C-05: Wide Complex Tachycardia (Pulse)

Revised 01/06/2026

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

Paramedic

- o If QRS <120 msec

Link
5 Adult- Cardiac
C-04: Supraventricular Tachycardia (SVT)
[Go to document](#)

- o Evaluate for underlying causes

- Dehydration

Link
8 Adult - Medical
M-12: Hypotension
[Go to document](#)

- Overdose

Link
8 Adult - Medical
M-16: Overdose / Toxic Ingestion
[Go to document](#)

- Pain

Link
8 Adult - Medical
M-17: Pain Management
[Go to document](#)

- Sepsis

Link
8 Adult - Medical
M-20: Sepsis
[Go to document](#)

- **If AMS or hypotension**

- Synchronized Cardioversion 50 J -->100 J-->150 J--> 200 J

- Place pads Anterior/Posterior
 - Consider

Link
8 Adult - Medical
M-18: Procedural Sedation
[Go to document](#)

- If refractory

- | |
|--|
| Medication |
| Amiodarone (loading) |
| Routes IV / IO Dose 150 mg Conc. 150 mg in 100 mL Give over 10 minutes |
| Note: |
| <i>Medical Control</i> <i>Adult</i> |

▫

Medication

Amiodarone (maintenance)**Routes** IV / IO **Dose** 1 mg/min **Conc.** 150 mg in 100 mL**Note:***Paramedic* *Adult*

▫ Torsades de Pointes

•

Medication

Magnesium Sulfate**Routes** IV / IO **Dose** 2 g **Conc.** 2 g in 100 mL **Give over** 10 minutes**Note:***Paramedic* *Adult*○ **No AMS / hypotension**

▫

Medication

Amiodarone (loading)**Routes** IV / IO **Dose** 150 mg **Conc.** 150 mg in 100 mL **Give over** 10 minutes**Note:***Medical Control* *Adult*

▫

Medication

Amiodarone (maintenance)**Routes** IV / IO **Dose** 1 mg/min **Conc.** 150 mg in 100 mL**Note:***Paramedic* *Adult*

▫ torsades de points

•

Medication

Magnesium Sulfate**Routes** IV / IO **Dose** 2 g **Conc.** 2 g in 100 mL **Give over** 10 minutes**Note:***Paramedic* *Adult*

PEARLS

- EKG must be obtained in 5 minutes if the patient complains of chest pain/pressure, shortness of breath, nausea, sweating, lightheadedness, or dizziness
- Prolonged QTc (>480 msec) increases the risk of Torsades de Pointes. Avoid QT-prolonging medications.
- Call Medical Direction for recommendations for repeat doses of Amiodarone if no conversion after 150 mg.
- A 12-lead should follow any intervention or rhythm change

Citations

Link

1 Guideline

56: 2017 AHA/ACC/HRS Guideline for Management of Patients With Ventricular Arrhythmias and the Prevention of Sudden Cardiac Death: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Rhythm Society

[Go to document](#)

6 Adult - Respiratory

R-01: Airway, Adult

Revised 01/26/2026

Assess Airway / Breathing

- Respiratory rate & effort
- Pulse oximetry
- EtCO₂ monitoring
- **Adequate**
 - Supplemental Oxygen PRN

Inadequate Airway or Breathing

Fundamental Maneuvers

- Oxygen PRN
- Elevate head 30°
- Open Airway/Suction
- Insert NPA/OPA
- Consider BVM
 - Add PEEP to improve oxygenation
- **Successful**
 - **All Responders:** Continue BVM or move to definitive airway
- **Becomes Inadequate**
 - Restart **fundamental maneuvers**

Obstruction Suspected?

- **All Responders:** Fundamental foreign body airway dislodgment
- **AEMT or higher:** Video / direct laryngoscopy with forceps removal
 - **Paramedic:** If unable to visualize, consider intubation to the right mainstem

Definitive Airway

- **EMT or higher:** Supraglottic airway
- **Paramedic:** Intubation if the gag reflex is not intact
 - **Intact Gag reflex:**

◦ Must be specially credentialed

Link
6 Adult - Respiratory
R-05: Medication Assisted Intubation (MAI)
[Go to document](#)

- Unsuccessful attempts

Link
6 Adult - Respiratory
R-02: Airway, Failed, Adult
[Go to document](#)

PEARLS

- Waveform capnography (EtCO₂) & pulse oximetry are **Mandatory** with all methods of advanced airways.
- Failure to perform EtCO₂ may result in dec credentialing.
- Use of a Bougie should be standard practice with continuous suctioning, apneic oxygenation, and head-up positioning.
- If difficult intubation is anticipated, consider early use of SGA and aggressive suctioning.
- The use of Inline Viral filters is highly recommended.
- Secure an advanced airway with a tube holder or an appropriate device and document the depth at the lips.
- Avoid lying patients in the supine position, elevate the head 30°

Citations

Link

1 Guideline

8: Evidence-Based Guideline for Prehospital Airway Management

[Go to document](#)

R-02: Airway, Failed, Adult

Revised 02/05/2026

All Responders

- 2 Failed Attempts or Anatomy Precludes Intubation
 - BVM with good chest rise; SpO₂ >90%; EtCO₂ Waveform?
 - **YES – All providers:**
 - OPA/NPA
 - BVM Ventilation
 - **NO – Paramedic:**
 - 1 Additional Attempt by a more experienced provider
- Facial trauma or obstruction preventing BVM or SGA?
 - **YES**
 - **Paramedic:** surgical airway
 - **NO – EMT or higher:**
 - Insert SGA
 - Is SpO₂ >90%; Is there EtCO₂ Waveform?
 - **NO**
 - **Paramedic:** surgical airway
 - **YES**
 - **EMT or higher:** maintain oxygenation and hemodynamics

PEARLS

- The default for a failed airway is fundamental airway management with BVM
- Waveform capnography (EtCO₂) & pulse oximetry are **Mandatory** with all methods of advanced airways.
- Failure to perform EtCO₂ may result in dec credentialing.
- Fundamental airway maneuvers are preferred for pediatric patients
- Failed intubation attempts require repositioning and airway clearance.

- If severe facial trauma suggests that airway attempts will be unsuccessful, an early surgical airway is appropriate.

Citations

Link

1 Guideline

9: Prehospital Surgical Airway Management: An NAEMSP Position Statement and Resource Document.

[Go to document](#)

R-03: Pulmonary Edema

Revised 01/06/2026

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

- Support airway

EMT or higher

-

Medication

Nitroglycerin (assist) (ntg)

Route SL **Dose** 0.4 mg

Note: q 4 minutes if SBP > 100

Paramedic *AEMT* *EMT* *Adult*

- CPAP 5-15 cm H₂O PEEP
- Acquire a 12-lead EKG

AEMT or higher

- Systolic BP >180 mmHG

-

Medication

Nitroglycerin (ntg)

Route SL **Dose** 0.4–0.8 mg

Note: q 4 min if SBP >100

Paramedic *AEMT* *Adult*

Paramedic

○ If BiPAP available

- Initial settings IPAP: 10 cm H₂O EPAP: 5 cm H₂O
- Titrate as needed

○ Interpret EKG

- Activate STEMI Alert if Appropriate

○ Anxiolysis treatment

- | |
|---|
| <p>Medication Ketamine Routes IV / IO Dose 0.25 mg/kg Max. dose 25 mg Conc. 50 mg/mL Note: <i>Paramedic</i> <i>Adult</i></p> |
|---|

OR

- | |
|---|
| <p>Medication Midazolam (versed) Routes IV / IO Dose 2.5–5 mg Conc. 5 mg/mL Note: <i>Paramedic</i> <i>Adult</i></p> |
|---|

PEARLS

- Early non-invasive ventilation can reduce the need for advanced airway maneuvers.
- Increase pressure every 2-5 minutes until the patient shows signs of improved work of breathing, such as decreased accessory muscle use, decreased respiratory rate, and improved mentation.
- The goal of SBP control is 140 mmHg.
- Avoid nitroglycerin in patients using PDE5-I such as Viagra or Cialis
- Evaluate for STEMI early; if complaining of chest pain, give ASA
- Consider Ultrasound early to assess for B-lines and Reduced Ejection Fraction

Citations

Link

7 Case Report

10: Safety of prehospital intravenous bolus dose nitroglycerin in patients with acute pulmonary edema: A 4-year review.

[Go to document](#)

Link

4 Cohort Study

11: Feasibility, Effectiveness and Safety of Prehospital Intravenous Bolus Dose Nitroglycerin in Patients with Acute Pulmonary Edema

[Go to document](#)

R-04: Respiratory Distress

Revised 01/06/2026

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

- Support Airway
- Rales or Signs of Pulmonary Edema?

Link
6 Adult - Respiratory
R-03: Pulmonary Edema
[Go to document](#)

EMT or higher

- Wheezing

- | |
|---|
| Medication Albuterol MDI Route Spray Dose 4 puffs Note: <i>Paramedic</i> <i>AEMT</i> <i>EMT</i> <i>Adult</i> |
|---|

OR

- | |
|--|
| Medication Albuterol Route Nebulized Dose 5 mg Conc. Multiple Note: <i>Paramedic</i> <i>AEMT</i> <i>EMT</i> <i>Adult</i> |
|--|

- Consider CPAP 5-15 cm H2O
- Acquire 12-lead

○ Stridor

- Consider Foreign Body

- | |
|--|
| Medication Epinephrine (1:1k) Route IM Dose 0.5 mg Conc. 1 mg/mL Note: <i>Paramedic</i> <i>AEMT</i> <i>Adult</i> |
|--|

- | |
|---|
| Medication Epinephrine (1:1k) Route Nebulized Dose 3 mg Conc. 1 mg/mL Note: Diluted with 2 ml NS <i>Paramedic</i> <i>AEMT</i> <i>Pediatric</i> <i>Adult</i> |
|---|

- Consider CPAP 5-15 cm H2O
- Acquire 12-lead

AEMT or higher

○ Wheezing

- Add Ipratropium to the nebulized albuterol

- | |
|--|
| Medication Ipratropium Bromide (atrovent) Route Nebulized Dose 0.5 mg Conc. 0.5 mg in 2.5 mL Note: Add to albuterol nebulizer. <i>Paramedic</i> <i>AEMT</i> <i>Adult</i> |
|--|

- **Severe Symptoms**

- Medication
Epinephrine (1:1k)
Route IM **Dose** 0.5 mg **Conc.** 1 mg/mL
Note:
Paramedic *AEMT* *Adult*

Paramedic

◦ Wheezing

▪ If BiPAP available

- Initial settings IPAP: 10 cm H₂O EPAP: 5 cm H₂O
- Titrate as needed

- Medication
Dexamethasone (Decadron)
Routes IV / IO / IM / PO **Dose** 10–12 mg **Conc.** Multiple
Note:
Paramedic *Adult*

▪ Severe symptoms

- Medication
Magnesium Sulfate
Routes IV / IO **Dose** 2 g **Conc.** 2 g in 100 mL **Give over** 10 minutes
Note:
Paramedic *Adult*

◦ Stridor

- Medication
Dexamethasone (Decadron)
Routes IV / IO / IM / PO **Dose** 10–12 mg **Conc.** Multiple
Note:
Paramedic *Adult*

- Anxiolysis treatment

- | |
|---|
| Medication |
| Ketamine |
| Routes IV / IO Dose 0.25 mg/kg Max. dose 25 mg Conc. 50 mg/mL |
| Note: |
| <i>Paramedic</i> <i>Adult</i> |

OR

- | |
|---|
| Medication |
| Midazolam (versed) |
| Routes IV / IO Dose 2.5–5 mg Conc. 5 mg/mL |
| Note: |
| <i>Paramedic</i> <i>Adult</i> |

PEARLS

- Early non-invasive ventilation can reduce the need for advanced airway maneuvers.
- Consider pneumonia and pneumothorax as potentially life-threatening causes of respiratory distress.
- Consider ultrasound early to assess for B-lines and lung-slide
- Consider bilateral pleural decompression and Ketamine in the event of arrest or peri-arrest of a patient with asthma/COPD exacerbation
- Bronchodilator administration is a quality measure for patients with wheezing.

Citations

Link

2 Meta-Analysis

12: Epinephrine (adrenaline) compared to selective beta-2-agonist in adults or children with acute asthma: a systematic review and meta-analysis

[Go to document](#)

Link

1 Guideline

13: European Resuscitation Council Guidelines 2021: Cardiac arrest in special circumstances.

[Go to document](#)

Link

1 Guideline

14: EAACI guidelines: Anaphylaxis

[Go to document](#)

Link

8 Expert Opinion

15: Pneumothorax and asthma.

[Go to document](#)

R-05: Medication Assisted Intubation (MAI)

Revised 02/05/2026

Paramedic

Link
3 Universal
U-01: Universal Care
[Go to document](#)

o 2 credentialed provider agreement to procedure is indicated and appropriate

- **NO - Abort procedure**
- YES – Complete P Checklist

Link
19 Appendices
P: P Checklist
[Go to document](#)

o SpO2 >94% and MAP >65

- **NO – Abort procedure**
- YES – Sedation

Medication
Etomidate
Routes IV / IO **Dose** 0.3 mg/kg **Max. dose** 30 mg **Conc.** 40 mg in 20 mL
Note:

OR

Medication
Ketamine
Routes IV / IO Dose 1–2 mg/kg Conc. 50 mg/mL
Note:
Paramedic *Pediatric* *Adult*

- o 3 Minute Pause
- o SpO2 >94% and MAP >65

- **NO – Abort procedure**

- **YES – Paralytic**

Medication
Rocuronium
Routes IV / IO Dose 1 mg/kg Conc. Multiple
Note:
Paramedic *Adult*

- Secure airway

- o Post-intubation Sedation

- **Bolus**

- Pick the agent most appropriate for the patient

-

Medication
Fentanyl
Routes IV / IO Dose 0.5 mcg/kg Conc. 50 mcg/mL
Note: PRN Every 30 minutes to maintain RASS -3
Paramedic *Adult*

- **Medication**
Midazolam (versed)
Routes IV / IO / IM **Dose** 5 mg **Conc.** 5 mg/mL
Note: Every 1 hour to maintain RASS -3
Paramedic *Adult*

OR

- **Medication**
Ketamine
Routes IV / IO **Dose** 1–2 mg/kg **Max. total dose** 500 mg **Conc.** 100 mg/mL
Note: Every 30 minutes to maintain RASS -3
Paramedic *Adult*

○ Prepare for Hypotension

Link

8 Adult - Medical

M-12: Hypotension

[Go to document](#)

- Head of Bed at 30 degrees
- Place an oral gastric tube and decompress the stomach

PEARLS

- If the airway can be secured with basic airway maneuvers, continue with basic maneuvers
- Inappropriate continuation down the algorithm past HARD STOPS. This can lead to loss of privileges and de-credentialing
- The checklist must be used and documented

Citations

Link

1 Guideline

16: Prehospital Drug Assisted Airway Management: An NAEMSP Position Statement and Resource Document.

[Go to document](#)

Link

4 Cohort Study

17: Prevalence and Predictors of Post-Intubation Hypotension in Prehospital Trauma Care.

[Go to document](#)

Link

7 Case Report

18: Push-Dose Pressors During Peri-intubation Hypotension in the Emergency Department: A Case Series

[Go to document](#)

7 Ventilator

V-01: Ventilator Setup

Revised 01/04/2026

Procedure

- Calculate Ideal Body Weight
- Select Mode
 - Apneic – Volume Control
 - Respiratory effort present – Synchronized intermittent mandatory ventilation (SIMV)
- Tidal Volume: 6-8 ml/kg
 - Titrate to EtCO₂ of 35-45
 - Increase to lower
 - Decrease to raise
- Min Rate: 10-15 bpm
 - Titrate to EtCO₂ of 35-45
 - Increase to lower
 - Decrease to raise
- FiO₂ 100%
 - Titrate to maintain SpO₂ >94
 - Increase to raise
- PEEP: 5-10 cmH₂O
 - Titrate to maintain SpO₂ >94
 - Increase to raise

PEARLS

- Titratable parameters
 - Ventilation: Adjust rate or volume
 - Oxygenation: Adjust FiO_2 or PEEP
- If the patient has sudden hypoxia or alarms are triggered, remove the patient from the vent and provide manual respirations while the ventilator is being troubleshooted.
- If the patient was noted to have tachypnea before ventilator intervention, set the rate to match the patient's tachypnea regardless of EtCO_2 .

V-02: Ventilator Alarm

Revised 01/06/2026

DOPES

- Dislodgement
- Obstruction
- Pneumothorax
- Equipment Issue
- Stacking (Auto-PEEP)

Alarm / Patient Decompensation

o DOTTs

- Disconnect from the ventilator
- Oxygenate with BVM, being sure to use PEEP and recruitment maneuvers
- Tube Evaluation/Suction
- Tweak Ventilator Settings
- Sonogram

Link

US-01: Lung Ultrasound

[Go to document](#)

o Evaluate Ppeak/Pplat

▪ High Ppeak/High Pplat

- Right mainstem
 - Pull back the tube
- Pneumothorax
 - Needle Decompression/Thoracotomy (credentialed)

Pulmonary Edema[Link](#)

6 Adult - Respiratory

R-03: Pulmonary Edema[Go to document](#) Auto-PEEP

- Increase I rate
- Increase E time
- Decrease the TV (Tidal Volume)

▪ Low Ppeak ET too shallow

- Visualize the tube at the cords

 Cuff Leak

- Evaluate cuff pressure
- Change out the ET tube as needed

▪ High Ppeak/Normal Pplat Kink in the circuit ET too small Bronchospasms[Link](#)

6 Adult - Respiratory

R-04: Respiratory Distress[Go to document](#)

PEARLS

- High Peak Pressure 40 cmH₂O
- High Plateau 30 cmH₂O
- Ppeak - Pplat = >10 (resistance) <10 (Compliance)
- Patients who are dyssynchronous with the ventilator should have increased sedation

- Suspected Auto PEEP - Disconnect from the ventilator and forcefully exhale the chest
- I (Inspiration) E (Expiration), TV (Tidal Volume)
- DOTTS refers to the procedure to evaluate alarm/decompensation
- DOPES refers to a potential cause for alarm/decompensation

V-03: BiPAP

Revised 01/04/2026

Procedure

- Ensure Proper Mask Fitting & Patient Coaching

- Initial BiPAP Settings
 - IPAP: 10
 - EPAP: 5
 - IPAP/EPAP Differential should be no less than 5
 - Rise Time: 2
 - FiO₂: Start at 40-60%, Titrate to Maintain SpO₂ 94-99%

- Adjustment to BiPAP Application
 - Continued Dyspnea:
 - Raise IPAP by 2-4 (Max 20)
 - Worsening SpO₂:
 - Increase FiO₂
 - Increase EPAP
 - Worsening EtCO₂:
 - Increase IPAP by 2-4 (Max 20)
 - Patient with CHF/Pulmonary edema:
 - Increase EPAP
 - Patient with Obstructive pathology
 - Decrease Rise Time
 - Comfort Settings adjust to match the patient's work of breathing:
 - Rise Time

- Cycle Off: (generally 40%)
- Ti Time (generally 1.0)

PEARLS

- Obstructive disease processes tend to prefer short Rise (1), Short Ti (0.8-1), and short cycle off (25-40%)
- Patients with neuromuscular and restrictive diseases tend to prefer longer Rise, Ti, and cycle-off times.
- Generally, patients should have sufficient respiratory drive to maintain airway patency for CPAP or BiPAP; however, they may have depressed mental status but must be closely monitored. Have a low threshold to switch to BVM.

V-04: Tracheostomy Management

Revised 01/06/2026



Tracheostomy Tube (www.practicalslpinfo.com)

Patient with Tracheostomy

- What is the reason for the Tracheostomy?
 - Laryngectomy, tracheomalacia, glottic mass?
 - No upper airway approach- must use tracheostomy for management.
 - Respiratory failure, neurologic issues
 - An upper airway approach is possible

Respiratory Distress

- Remove from the ventilator if present and give rescue breaths via BVM with PEEP
- Remove inner cannula, speaking valve, humidifying device, and evaluate for patientcy

- Inflate cuff
 - If no cuff- place exchange with BAC tube
- Confirm placement of tracheostomy
 - EtCO2 waveform?
 - If absent, probe with a bougie- if passes, tube is patent, re-evaluate
 - If bougie does not pass, prepare for a definitive airway
 - An upper airway approach is possible

Link

6 Adult - Respiratory

R-01: Airway, Adult[Go to document](#)**Link**

6 Adult - Respiratory

R-04: Respiratory Distress[Go to document](#)**Link**

6 Adult - Respiratory

R-05: Medication Assisted Intubation (MAI)[Go to document](#)

- Upper airway approach not possible
 - Pull tracheotomy, use BAC tube to attempt reintroduction
 - Unable to pass

Contact**On-Call Medical Director****Note:** Use Pulsara to contact on-call Medical Direction.

- Deep Suctioning
- Evaluate the underlying cause

Link

6 Adult - Respiratory

R-04: Respiratory Distress

[Go to document](#)

Link

6 Adult - Respiratory

R-03: Pulmonary Edema

[Go to document](#)

Bleeding from Tracheostomy

- Evaluate for local bleeding

Link

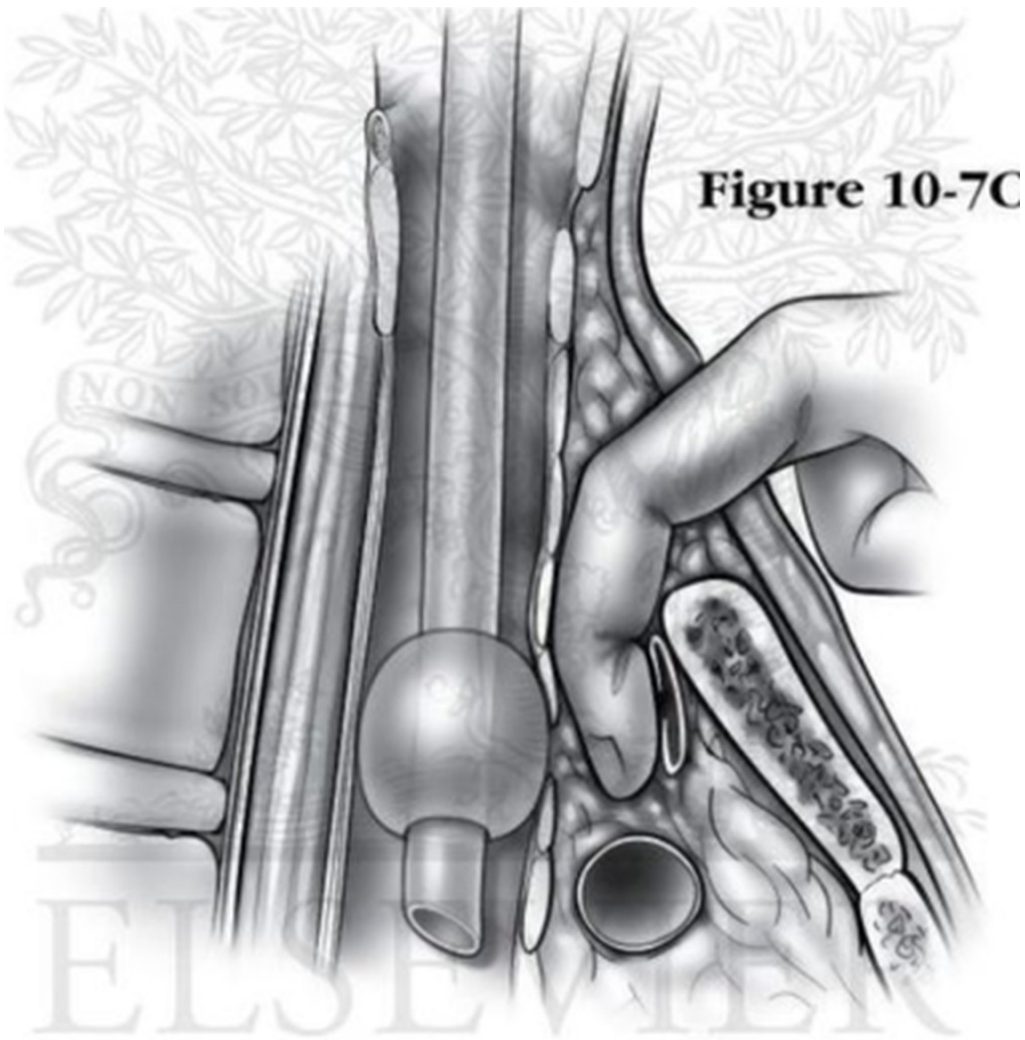
9 Trauma

T-09: Bleeding Vascular Bed

[Go to document](#)

- Brisk Bleeding

- Consider Tracheoinnominate artery fistula (TIF) until proven otherwise
 - Hyperinflate the cuff (85% successful), up to 50 cc to tamponade bleeding
 - If hyperinflation fails, withdraw the tube while placing pressure against the anterior trachea
 - Apply digital pressure of the innominate artery against the manubrium from inside the tracheostomy tract



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- ETT from above (as long as there is no laryngectomy or mass)

Link
6 Adult - Respiratory
R-05: Medication Assisted Intubation (MAI)
[Go to document](#)

- Consider a bleeding tumor if it is consistent with the history

- **Medication**
Tranexamic Acid (TXA)
Route Nebulized **Dose** 500 mg **Conc.** 1 g in 10 mL
Note:

Pearls

- Most Tracheoinnominate artery fistula (TIF) patients present within the first 3 weeks after tracheostomy
- Tracheoinnominate artery fistula (TIF) may be preceded by hours to days with a small-volume "sentinel bleed."
- Most issues with tracheostomy can be solved by removing the inner cannula

Citations

Link

1 Guideline

167: Multidisciplinary guidelines for the management of tracheostomy and laryngectomy airway emergencies

[Go to document](#)

8 Adult - Medical

M-01: Abdominal Pain

Revised 01/06/2026

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

o Nausea / Vomiting

Link

8 Adult - Medical

M-14: Nausea / Vomiting

[Go to document](#)

o Signs of infection

Link

8 Adult - Medical

M-20: Sepsis

[Go to document](#)

o Consider pain management

Link

8 Adult - Medical

M-17: Pain Management

[Go to document](#)

EMT or higher

- 12-lead EKG

Link

5 Adult- Cardiac

C-01: Chest Pain; Suspected Acute Coronary Syndrome

[Go to document](#)

PEARLS

- Abdominal pain in women of childbearing age should be treated as an ectopic pregnancy until proven otherwise.
- The diagnosis of abdominal aneurysm should be considered with abdominal pain in patients over 50 y/o.
- Mesenteric ischemia presents with severe pain with limited exam findings. Risk factors include age >60, atrial fibrillation, CHF, atherosclerosis, hypertension, and a history of tobacco use.
- A 12-lead EKG should be obtained on anyone with abdominal pain.

Citations

M-02: Allergic Reaction

Revised 01/04/2026

Mild Reaction

Itchy/runny nose; sneezing; itchy mouth; a few hives, mild itch; mild nausea, discomfort

- o EMT or higher

- | |
|---|
| Medication Dexamethasone Route PO Dose 10–12 mg Conc. Multiple Note: <i>Paramedic</i> <i>AEMT</i> <i>EMT</i> <i>Adult</i> |
|---|

- | |
|--|
| Medication Diphenhydramine (benadryl) Route PO Dose 25–50 mg Note: <i>Paramedic</i> <i>AEMT</i> <i>EMT</i> <i>Adult</i> |
|--|

- o AEMT or higher

- If not administered PO

- | |
|--|
| Medication Diphenhydramine (benadryl) Routes IV / IO / IM Dose 25–50 mg Conc. 50 mg/mL Note: <i>Paramedic</i> <i>AEMT</i> <i>Adult</i> |
|--|

- o Paramedic

- If not administered PO

- | |
|--|
| Medication |
| Dexamethasone (Decadron) |
| Routes IV / IO / IM / PO Dose 10–12 mg Conc. Multiple |
| Note: |
| <i>Paramedic</i> <i>Adult</i> |

Moderate / Severe Reaction

Moderate: Hives, swelling of the lips, eyes, and skin; tightening of the throat or "my throat feels weird."

Severe (Respiratory Distress): Hives and swelling, significant swelling to lips, tongue, or eyes; increased tightness of the throat, hoarse voice; vomiting, severe cramps, or diarrhea

All patients with Moderate/Severe symptoms should also receive the treatments provided for Mild reactions.

o System Responders

- | |
|--------------------------------------|
| Medication |
| Epinephrine Auto-injector |
| Route IM Dose 0.3 mg |
| Note: |
| <i>System Responder</i> <i>Adult</i> |

o EMT or higher

- If the auto-injector is not used

- | |
|---|
| Medication |
| Epinephrine (1:1k) |
| Route IM Dose 0.5 mg Conc. 1 mg/mL |
| Note: |
| <i>Paramedic</i> <i>AEMT</i> <i>EMT</i> <i>Adult</i> |

- Consider CPAP 5 cm - 15 cm H2O PEEP

- | |
|--|
| Medication Albuterol Route Nebulized Dose 5 mg Conc. 2.5 mg in 3 mL Note: Continuous PRN. |
|--|

○ AEMT or higher

- | |
|--|
| Medication Normal Saline (NS, fluids) Routes IV / IO Dose 30 mL/kg Max. total dose 3000 mL Note: <i>Paramedic</i> <i>AEMT</i> <i>Adult</i> |
|--|

- Maintain SBP 100 mmHg

Anaphylactic Shock

Respiratory distress with wheezing, repetitive coughing, difficulty swallowing, hypotension with signs of poor perfusion.

Give all the medications for Severe Reaction

○ Paramedic

- | |
|--|
| Medication Epinephrine Push Dose (1:100k) Routes IV / IO Dose 5–20 mcg Conc. 10 mcg/mL Note: Every 2-3 minutes to maintain MAP >65 Mix by diluting 1ml of epinephrine 1:10 000 in 9 mL of normal saline <i>Paramedic</i> <i>Adult</i> |
|--|

▪

Medication**Epinephrine Infusion****Routes** IV / IO **Dose** 0.1–1 mcg/kg/min **Conc.** 1 mg in 1 mL**Note:** Titrate to MAP of 65 (Normal SBP for Peds)

For Dial-a-Flow, use the Pump Calculation

*Paramedic**Pediatric**Adult*

PEARLS

- Epinephrine should be administered whenever there is an allergic reaction and evidence of involvement of 2 or more organ systems.
- Remove the cause of the allergic reaction.

Citations

Link

1 Guideline

14: EAACI guidelines: Anaphylaxis[Go to document](#)**Link**

1 Guideline

57: Anaphylaxis: A 2023 practice parameter update[Go to document](#)

M-03: Altered Mental Status

Revised 01/06/2026

Differential for Altered Mental Status

| TABLE 13.1 Mnemonic for Altered Mental Status | |
|---|--|
| A | Alcohol or Drug Intoxication; Atypical migraine (confusional migraine) |
| E | Electrolytes, Environment (hyper/hypothermia), Endocrinopathy, Encephalopathy (Wernicke), Epilepsy |
| I | Infection (meningitis, encephalitis, sepsis) |
| O | Overdose, Oxygen (hypoxia, pulmonary embolism) |
| U | Uremia |
| T | Trauma, Tumor |
| I | Insulin (hypoglycemia, DKA, HHS) |
| P | Poisons, Psychosis |
| S | Stroke, Status epilepticus (petit mal) |

DKA, Diabetic ketoacidosis; *HHS*, hyperosmolar hyperglycemic state.

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

- Consider SMR

Link
3 Universal
U-05: Spinal Motion Restriction
[Go to document](#)

- Support Ventilations

- Glucose Assessment

- If Glucose <60 and not obtunded

- | |
|--|
| Medication Oral Glucose Route PO Dose 15 g ⚠ Must not be obtunded. Note: <i>System Responder</i> <i>Paramedic</i> <i>AEMT</i> <i>EMT</i> <i>Adult</i> |
|--|

- If no return to baseline, reassess glucose

- If Glucose 60-300

- Consider toxic ingestion

- | |
|---|
| Link 8 Adult - Medical M-16: Overdose / Toxic Ingestion Go to document |
|---|

- Consider other causes

- Head Trauma

- | |
|--|
| Link 9 Trauma T-05: Traumatic Brain Injury Go to document |
|--|

- ACS

- | |
|---|
| Link 5 Adult- Cardiac C-01: Chest Pain; Suspected Acute Coronary Syndrome Go to document |
|---|

- Stroke

Link
8 Adult - Medical
M-21: Stroke
[Go to document](#)

- Hypoxia

Link
6 Adult - Respiratory
R-01: Airway, Adult
[Go to document](#)

- Sepsis

Link
8 Adult - Medical
M-20: Sepsis
[Go to document](#)

- Seizure

Link
8 Adult - Medical
M-19: Seizure
[Go to document](#)

AEMT or higher

- If Glucose <60 and Obtunded

- | |
|--|
| Medication |
| Dextrose 10 (D10) |
| Routes IV / IO Dose 25 g Conc. Multiple |
| Note: Titrate to effect, max 25g. |
| <i>Paramedic</i> <i>AEMT</i> <i>Adult</i> |

- If no IV access is possible, place an IO
- If no return to baseline, reassess glucose and repeat treatments

o If Glucose >300

- | |
|--|
| Medication Normal Saline (NS, fluids) Routes IV / IO Dose 30 mL/kg Max. total dose 3000 mL Note: <i>Paramedic</i> <i>AEMT</i> <i>Adult</i> |
|--|

- Obtain EKG and EtCO2

Paramedic

o Glucose > 300

- 12-Lead ECG Interpretation

PEARLS

- o Patients on oral diabetic medication must have an MD consult before refusing transport.
- o Be aware that AMS may be a presenting sign of toxic environments.
- o It is safer to assume hypoglycemia. When in doubt, treat with glucose.
- o Beware of patients appearing to have behavioral issues or appearing intoxicated; they may actually be hypoglycemic.
- o Repeat blood glucose checks in patients with hypoglycemia and those taking oral antidiabetic medications, as glucose levels can drop rapidly.
- o An EtCO <25 with glucose >300 may suggest DKA.
- o A patient with hypoglycemia should eat and have means for checking levels before being allowed to refuse transport.

| |
|---|
| Score <u>Calculate score Glasgow Coma Scale (GCS) - Adult</u> |
|---|

Citations

Link

4 Cohort Study

58: Diagnostic value of end tidal capnography in patients with hyperglycemia in the emergency department

[Go to document](#)

Link

4 Cohort Study

59: Patient and Prehospital Predictors of Hospital Admission for Patients With and Without Histories of Diabetes Treated by Paramedics for Hypoglycemia: A Health Record Review Study

[Go to document](#)

Link

4 Cohort Study

60: A Comparison of 10% Dextrose and 50% Dextrose for the Treatment of Hypoglycemia in the Prehospital Setting

[Go to document](#)

M-04: Behavioral/Agitation

Revised 01/07/2026

Richmond Agitation-Sedation Scale

| Target RASS Value | RASS Description |
|-------------------|---|
| +4 | Combative Combative, Violent, Immediate Danger to Staff |
| +3 | Very Agitated Pulls or Removes Tube(s) or Catheter(s); Aggressive |
| +2 | Agitated Frequent non-Purposeful Movement, Fights Ventilator |
| +1 | Restless Anxious, Apprehensive but Movements are not Aggressive or Vigorous |
| 0 | Alert and Calm |
| -1 | Drowsy Not Fully Alert, but has Sustained Awakening to Voice (Eye Opening & Contact >10sec) |
| -2 | Light Sedation Briefly Awakens to Voice (Eye Opening & Contact <10sec) |
| -3 | Moderate Sedation Movements or Eye Opening to Voice (BUT NO Eye Contact) |
| -4 | Deep Sedation No Response to Voice, BUT has Movement or Eye Opening to Physical Stimulation |
| -5 | Unarousable No Response to Voice or Physical Stimulation |



Mild (RASS+1-2)

- Follows commands
- Irritable
- Pressured Speech
- Redirectable

Moderate (RASS +3)

- Threatening behavior
- Intermittently redirectable
- Motor restlessness/agitation

Severe (RASS +4)

Violence

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

o Consider:

- Toxic Ingestion

Link
8 Adult - Medical
M-16: Overdose / Toxic Ingestion
[Go to document](#)

- AMS

Link
8 Adult - Medical
M-03: Altered Mental Status
[Go to document](#)

- Head Trauma

- o

Link
9 Trauma
T-05: Traumatic Brain Injury
[Go to document](#)

o De-escalate

- Address fear
- Remove agitating factors or people
- Reinforce safety
- Address basic needs such as food or water
- Provide responsible options

Agree to disagree

o Check Glucose

Link
8 Adult - Medical
M-03: Altered Mental Status
[Go to document](#)

o Consider LE Nav

▪ Excluding:

- Known or suspected toxic ingestion
- Trauma, such as lacerations needing repair or swelling of joints
- Significant Medical Comorbidities
- Inability to perform Activities of Daily Living (use of wheelchair or required re

Abnormal Vitals

- HR >120
- SBP <90
- RR >30
- Glucose <60 or >300

Paramedic

o Refractory to de-escalation

o Mild

▪ **Medication**
Droperidol (mild)
Routes IM / IV / IO **Dose** 1.25–5 mg **Conc.** Multiple
⚠ Patient may not be prone and must have continuous monitoring
Note: For patients over 65 years old, cut the initial dose of sedation in half.
Paramedic *Adult*

o Moderate

- **Medication**
Droperidol (moderate)
Routes IM / IV / IO **Dose** 5–10 mg **Conc.** Multiple
⚠ Patient may not be prone and must have continuous monitoring
Note: For patients over 65 years old, cut the initial dose of sedation in half.
Paramedic *Adult*

OR

- **Medication**
Midazolam (versed)
Routes IM / IV / IO **Dose** 2.5–10 mg **Conc.** 5 mg/mL
⚠ Patient may not be prone and must have continuous monitoring
Note: For patients over 65 years old, cut the initial dose of sedation in half.
Paramedic *Adult*

o Severe

- **Medication**
Ketamine
Route IM **Dose** 5 mg/kg **Max. total dose** 500 mg **Conc.** 50 mg/mL
⚠ IM DOSE Patient may not be prone and must have continuous monitoring
Note: For patients over 65 years old, cut the initial dose of sedation in half.
Paramedic *Adult*

OR

- **Medication**
Ketamine (Sedation)
Routes IV / IO **Dose** 1–2 mg/kg **Max. total dose** 500 mg **Conc.** Multiple
⚠ Patient may not be prone and must have continuous monitoring
Note: For patients over 65 years old, cut the initial dose of sedation in half.
Paramedic *Adult*

- o Contact Medical Direction if Ketamine is given or an additional dose is needed.

Contact**On-Call Medical Director**

Note: Use Pulsara to contact on-call Medical Direction.

- Avoid physical restraints by maintaining RASS -3
 - Continuous EKG, SpO2, and ETCO2 Monitoring
- Obtain a 12-LEAD EKG once able

PEARLS

- NEVER cover the face or allow the patient to be in the prone position for sedation or physical restraint

Link

2 Clinical Standard Documents

CS-32: Physical Restraint

[Go to document](#)

- If working with law enforcement, sedation should be considered independently by the provider, and clear communication on the use of physical restraints should be established for administering the sedation dose. Documentation of de-escalation attempts is required.
- Sedation can be safely given IM through clothing
- For patients aged 65 or older, cut the initial sedation dose in half.
- Evaluate for the medical cause of the behavioral presentation.
- Documentation of de-escalation activities before sedation administration is required.
- RASS level will be recorded before sedation administration and at 5- and 15-minutes following administration.
- Medical Control required for clearance LE Nav if any of the following: HR>120, SBP <90, RR>30, or Glucose <60 or >300

Citations

Link

4 Cohort Study

61: Emergency medical services professional behaviors with violent encounters: A prospective study using standardized simulated scenarios

[Go to document](#)

Link

8 Expert Opinion

62: Clinical Policy: Critical Issues in the Evaluation and Management of Adult Out-of-Hospital or Emergency Department Patients Presenting With Severe Agitation

[Go to document](#)

Link

3 RCT

63: Adverse events following emergent prehospital sedation of patients with behavioral emergencies: A retrospective cohort study

[Go to document](#)

Link

8 Expert Opinion

64: Consensus Statement of the National Association of EMS Physicians International Association of Fire Chiefs and the International Association of Chiefs of Police: Best Practices for Collaboration Between Law Enforcement and Emergency Medical Services During Acute Behavioral Emergencies

[Go to document](#)

M-05: Bites & Envenomations

Revised 01/06/2026

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

- o Insect Bite

- Carefully remove the stinger
- Apply an ice pack
- Minimize Movement
- Remove constricting objects

- o Snake Bite

- Splint the limb and elevate it above the heart
- NO ICE
- Remove constricting objects
- Mark the leading edge of swelling and tenderness every 15 mins
- Contact Poison Control

Contact
Poison Control
Phones: Phone: 1-800-222-1222
[Services](#)

- o Consider:

Link
8 Adult - Medical
M-17: Pain Management
[Go to document](#)

Link
8 Adult - Medical
M-02: Allergic Reaction
[Go to document](#)

Paramedic

- Suspected black widow bite

(i)

Medication
Midazolam (Versed)
Routes IM / IV / IO **Dose** 2.5–5 mg **Conc.** 5 mg/mL
Note: Repeat every 15 minutes until relief. Maintain SBP > 100
Paramedic *Adult*

PEARLS

- Human bites have a high risk of infection and should be transported for anaerobic coverage antibiotic.
- All animal bites pose a risk of rabies and infection and should be reported to animal control if refused care.
- For snake bites, recommend opioid pain management over NSAIDs
- The most common venomous snake bites are from pit vipers (rattlesnake, copperhead, water moccasin).
- Coral snake bites may not have initial symptoms but should be monitored in the hospital for symptom development.
- Do NOT handle Snakes, dead or alive, and attempt to transport with the patient to the hospital.
- Contact Poison Control for additional guidance at 1-800-222-1222

- If signs of infection, swelling, pain, redness, fever, or drainage are present, consider sepsis.

Citations

Link

1 Guideline

57: Anaphylaxis: A 2023 practice parameter update

[Go to document](#)

Link

1 Guideline

65: Unified treatment algorithm for the management of crotaline snakebite in the United States: results of an evidence-informed consensus workshop

[Go to document](#)

M-06: Drowning

Revised 01/06/2026

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

o Traumatic Mechanism

Link

3 Universal

U-05: Spinal Motion Restriction

[Go to document](#)

o Apnea

Link

6 Adult - Respiratory

R-01: Airway, Adult

[Go to document](#)

▪ **DO NOT SUCTION FOAMING SECRETIONS**

▪ **Manage Cardiac Arrest**

Link

4 Adult - Cardiac Arrest

CA-01: Cardiac Arrest, Adult

[Go to document](#)

◦ Respiratory Distress

- Supplemental Oxygen to maintain SpO2 >94%
- CPAP 5-15 cm H2O PEEP

PEARLS

- Drowning is the process of respiratory impairment resulting from submersion or immersion in liquid. Three possible outcomes from drowning are fatal drowning and nonfatal drowning with or without injury.
- The priority of drowning management is oxygenation and ventilation.
- Caution should be taken to avoid becoming a victim; practice reach, throw, row, and go only if properly equipped and trained.
- If the patient requires an advanced airway, PEEP should be added if a pulse is present.

Citations

Link
1 Guideline

66: 024 American Heart Association and American Academy of Pediatrics Focused Update on Special Circumstances: Resuscitation Following Drowning: An Update to the American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care

[Go to document](#)

Link
1 Guideline

67: Wilderness Medical Society Clinical Practice Guidelines for the Treatment and Prevention of Drowning: 2024 Update

[Go to document](#)

M-07: Epistaxis

Revised 01/06/2026

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

- If significant trauma, go to the appropriate trauma protocol

- No active bleeding
 - Tilt head forward
 - Position of comfort
 - Ice pack for pain

- Active bleeding
 - Compress the bridge of the nose with direct pressure
 - Tilt head forward
 - Position of comfort
 - Ice pack for pain

- If bleeding is controlled, consider:

Link

9 Trauma

T-07: Hemorrhagic Shock

[Go to document](#)

Link

8 Adult - Medical

M-14: Nausea / Vomiting

[Go to document](#)

EMT or higher

- If the initial measure does not control bleeding
 - Insert Tranexamic Acid impregnated gauze into the affected nostril

•

Medication

Tranexamic Acid (TXA)

Route Transdermal **Dose** 500 mg **Max. dose** 2 g **Conc.** 1 g in 10 mL

⚠ **Do not leave in place if not transporting**

Note:

PEARLS

- Transport sitting up if possible
- If the patient refuses transport, all gauze must be removed from the nostril before EMS departure.
- Posterior bleeding is possible; always examine the posterior pharynx for blood loss.
- The causal relationship between epistaxis and hypertension is not well established. There are no current recommendations for the acute management of hypertension for patients with epistaxis and hypertension.

References

Link

2 Meta-Analysis

68: A. Efficacy of topical tranexamic acid in epistaxis: A systematic review and meta-analysis.

[Go to document](#)

Link

1 Guideline

166: Clinical Practice Guideline: Nosebleed (Epistaxis)

[Go to document](#)

M-08: Eye Complaint

Revised 01/06/2026

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

o No injury

- Visual Acuity
- Evaluate Pupils
- Neuro Exam
- Screen for chemical exposure

o Injury

- Cover the unaffected Eye
- If displaced from the socket, cover with soaked gauze
- Burn, chemical, or blunt trauma mechanism
 - Irrigate with NS
- Penetrating or major trauma mechanism
 - Stabilize the impaled object and cover the affected eye with an eye shield
 - Do not remove the object
 - Assess Visual Acuity

o Consider:

Link
8 Adult - Medical
M-14: Nausea / Vomiting
[Go to document](#)

Link
8 Adult - Medical
M-17: Pain Management
[Go to document](#)

Paramedic

- Burn, chemical, or blunt trauma mechanism
 - Test bilateral eye pH

- | |
|--|
| Medication |
| Lidocaine 2% Continuous Irrigation |
| Route Eye Drops Dose 100 mg Conc. Multiple |
| Note: Deliver via Morgan Lens Mix 50 mg in 500 ml of Normal Saline |
| <i>Paramedic</i> <i>Adult</i> |

PEARLS

- Remove contact lenses when possible. If adherent to the globe, do not force. Irrigation may assist in removal.
- Consider the respiratory involvement of any facial burns (chemical or thermal).
- Eye injuries should be transported to hospitals with ophthalmology and facial trauma capabilities.
- A pupillary defect may suggest globe rupture.
- Diplopia may suggest nerve, muscle, globe, or lens injury.

Citations

M-09: Fever / Infection Control

Revised 01/06/2026

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

- Consider appropriate precautions
- Measure Temp
- Consider:

Link

8 Adult - Medical

M-20: Sepsis

[Go to document](#)

Link

8 Adult - Medical

M-10: Hyperthermia

[Go to document](#)

EMT or higher

- >100.4°F

- Medication
Acetaminophen
Route PO Dose Age-weight based Min. dose 325 mg Max. dose 1000 mg
Note:
Paramedic *AEMT* *EMT* *Adult*

- Medication
Acetaminophen (>70 kg)
Route PO Dose 1000 mg
Note:
Paramedic *AEMT* *EMT* *Adult*

o Consider:

Link
8 Adult - Medical
M-20: Sepsis
[Go to document](#)

Link
8 Adult - Medical
M-10: Hyperthermia
[Go to document](#)

Paramedic

o >100.4°F

- Medication
Acetaminophen
Routes IV / IO Dose 15 mg/kg Max. dose 1 g Conc. 10 mg/mL
Note:
Paramedic *Adult*

- **Medication**
Ketorolac (Toradol)
Routes IV / IO / IM **Dose** 15 mg **Conc.** 30 mg/mL
⚠ **Contraindicated in potential head injuries.**
Note:
Paramedic *Adult*

◦ Consider:

Link
8 Adult - Medical
M-20: Sepsis
[Go to document](#)

Link
8 Adult - Medical
M-10: Hyperthermia
[Go to document](#)

PEARLS

- Consider environmental exposure as a cause for fever. Antipyretics are contraindicated in heat stroke.
- IV Acetaminophen IV is preferred to PO for patients with a history of liver failure.
- Contact Precautions: Gown, gloves, eye protection. Recommended for MRSA, scabies, and zoster.
- Droplet Precautions: Surgical mask, gloves, eye protection. Recommended for Flu, meningitis, mumps, Strep. A patient with a potentially infectious rash should have these precautions.
- Airborne Precautions: N95, Gloves, Eye protection. Recommended in the initial phase of the outbreak or found to be highly contagious: tuberculosis, measles, chickenpox, and disseminated herpes zoster.

Citations

M-10: Hyperthermia

Revised 01/06/2026

- All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

- Remove from the heat source
- No altered mental status or altered mental status with rectal temperature $<103.9^{\circ}\text{F}$
 - Cold packs to the groin and axilla
- Altered mental status with rectal temperature $>103.9^{\circ}\text{F}$
 - **TEMP** Bag Cold Water Immersion
 - After **10** minutes, reassess rectal temperature
 - If $>101.5^{\circ}\text{F}$, continue cold water immersion
 - Repeat rectal temperature measurement every **10** minutes until rectal temperature $<101.5^{\circ}\text{F}$
 - If repeat rectal temp $<101.5^{\circ}\text{F}$
 - Cold packs to the groin and axilla
- Transport the patient once:
 - Achieves rectal temperature of 101.5°F
or
 - Returns to mental status baseline
or
 - Total cooling time exceeds 20 minutes

Paramedic

- If shivering

-

Medication**Midazolam** (versed)**Routes** IV / IO / IM **Dose** 5 mg **Conc.** 5 mg/mL**Note:***Paramedic* *Adult*

- If hypotensive, early vasopressor support is recommended

Link

8 Adult - Medical

M-12: Hypotension[Go to document](#)

PEARLS

- Discontinue Cold Water Immersion if the patient returns to mental status baseline and has a rectal temperature $<101.5^{\circ}\text{F}$
- Patients < 6 yrs old require a medical control consult before cold water immersion
- Drugs that may contribute the hyperthermia. Tricyclic antidepressants, phenothiazines, anticholinergics, and alcohol
- Sympathomimetic drugs (cocaine, methamphetamine) may elevate body temperature
- Utilize cold IVF when available
- Seizures, change in personality, mild confusion, ataxia, and frank coma are all signs of heat stroke
- Antipyretics are contraindicated in elevated body temperature secondary to environmental exposure

Citations

Link

7 Case Report

54: Synchronized Cardioversion Performed During Cold Water Immersion of a Heatstroke Patient

[Go to document](#)

Link

8 Expert Opinion

69: Consensus Statement- Prehospital Care of Exertional Heat Stroke

[Go to document](#)

Link

8 Expert Opinion

70: National Athletic Trainers' Association Position Statement: Exertional Heat Illnesses

[Go to document](#)

Link

2 Meta-Analysis

71: Comparison of Rectal and Aural Core Body Temperature Thermometry in Hyperthermic, Exercising Individuals: A Meta-Analysis

[Go to document](#)

Link

7 Case Report

72: Out-of-Hospital Cold Water Immersion for Classic (Non-Exertional) Heat Stroke Guided by Real-Time Core Temperature Monitoring: A Case Series

[Go to document](#)

Link

3 RCT

73: Tarp-Assisted Cooling for Exertional Heat Stroke Treatment in Wildland Firefighting

[Go to document](#)

Link

7 Case Report

74: Immersive Cooling in the Prehospital Setting for Heat Stroke: A Case Report.

[Go to document](#)

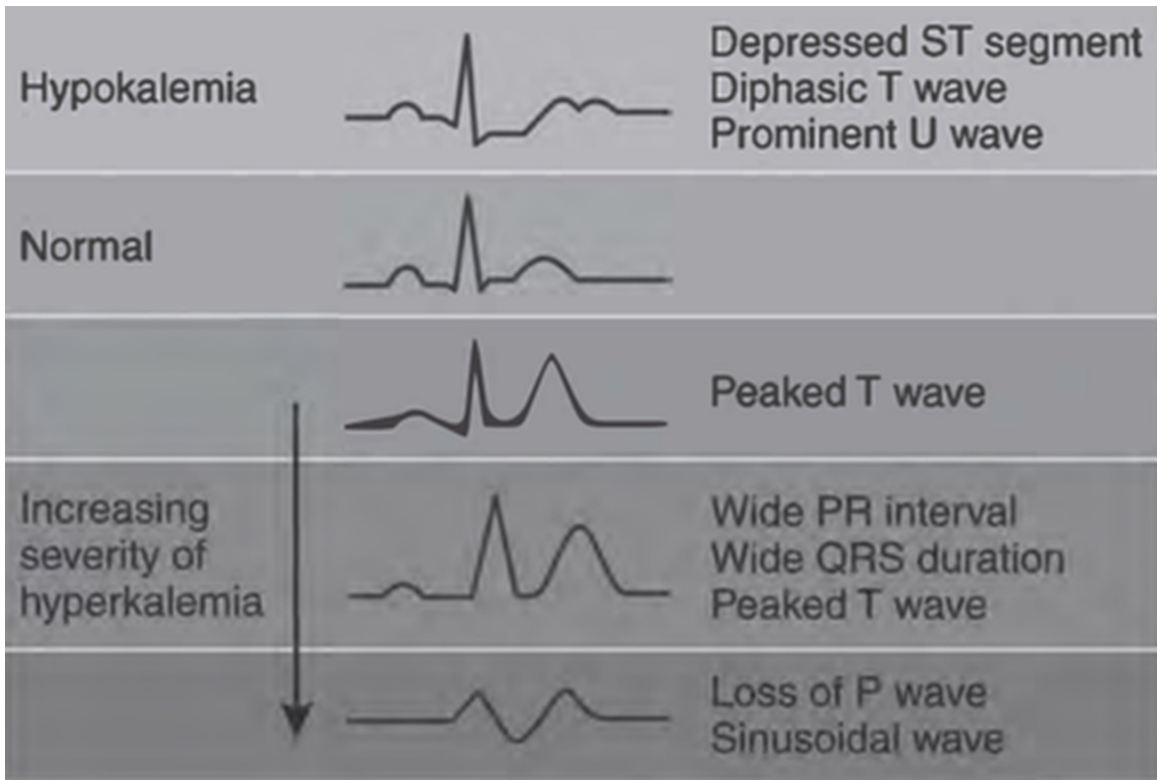
M-11: Hyperkalemia

Revised 01/06/2026

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

Paramedic



- o History suggests risk of renal failure or Wide Complex QRS with PR widening.
 - Calcium chloride **or** calcium gluconate

◦

Medication

Calcium Chloride**Routes** IV / IO **Dose** 1 g **Conc.** Multiple⚠ **Not recommended in Cardiac Arrest****Note:** Should have a well-established large-bore IV or IO

Paramedic Adult

◦

Medication

Calcium Gluconate**Routes** IV / IO **Dose** 3 g **Conc.** Multiple⚠ **Not recommended in Cardiac Arrest****Note:**

Paramedic Adult

▪

Medication

Albuterol (Hyperkalemia)**Route** Nebulized **Dose** 20 mg **Conc.** Multiple**Note:**

Paramedic Adult

▪

Medication

Sodium Bicarbonate**Routes** IV / IO **Dose** 1 mEq/kg **Conc.** 50 mEq in 50 mL**Note:**

Paramedic Pediatric Adult

- Repeat EKG. Goal QRS <120 msec.
- Repeat treatment if QRS widens.

PEARLS

- Patients with suspected hyperkalemia should have continuous cardiac monitoring.
- Causes of hyperkalemia include crush injuries, patients with prolonged immobility, sepsis, severe dehydration, chronic renal disease, renal toxic drug use such as NSAIDs, blood pressure medication, and some diuretics.

- Albuterol may have to be administered in 2 or more nebulized treatments to reach the dose.

References

Link

3 RCT

29: Effect of calcium in patients with pulseless electrical activity and electrocardiographic characteristics potentially associated with hyperkalemia and ischemia-sub-study of the Calcium for Out-of-hospital Cardiac Arrest (COCA) trial.

[Go to document](#)

Link

3 RCT

30: Effect of calcium vs. placebo on long-term outcomes in patients with out-of-hospital cardiac arrest.

[Go to document](#)

Link

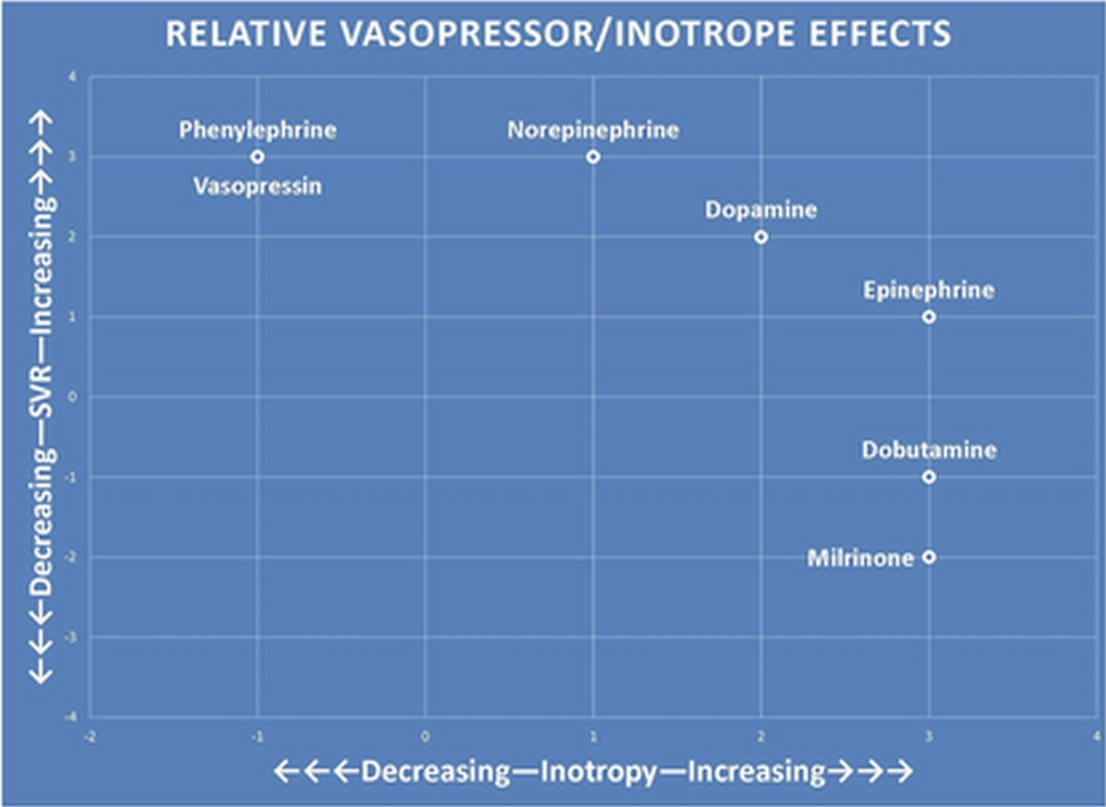
8 Expert Opinion

75: Acute hyperkalemia in the emergency department: a summary from a Kidney Disease: Improving Global Outcomes conference

[Go to document](#)

M-12: Hypotension

Revised 02/04/2026



All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

- The suspected cause is trauma
 - Appropriate trauma protocol

Link
9 Trauma
T-06: Multisystem Trauma
[Go to document](#)

- The suspected cause is cardiac
 - Appropriate cardiac protocol
 - Evaluate fluid status
 - Norepinephrine is recommended as a first-line vasopressor
- The suspected cause is bleeding

Link
9 Trauma
T-07: Hemorrhagic Shock
[Go to document](#)

AEMT or higher

- Hypo/euvolemic fluid status

- | |
|---|
| Medication |
| Normal Saline (NS, fluids) |
| Routes IV / IO Dose 30 mL/kg Max. total dose 3000 mL |
| Note: |
| Paramedic AEMT Adult |

Paramedic

- Hypervolemic fluid status
 - **Push-dose**

- ◻ **Medication**
Epinephrine Push Dose (1:100k)
Routes IV / IO **Dose** 5–20 mcg **Conc.** 10 mcg/mL
Note: Every 2-3 minutes to maintain MAP >65
Mix by diluting 1ml of epinephrine 1:10 000 in 9 mL of normal saline
Paramedic *Adult*

▪ Infusions

- ◻ **Medication**
Norepinephrine (Levophed)
Routes IV / IO **Dose** 0.1–2 mcg/kg/min **Conc.** Multiple
Note: Titrate to MAP >65 (Normal SBP for Peds)
For Dial-a-Flow, use the Pump Calculation
Paramedic *Pediatric* *Adult*

alternative

- ◻ **Medication**
Epinephrine Infusion
Routes IV / IO **Dose** 0.1–1 mcg/kg/min **Conc.** 1 mg in 1 mL
Note: Titrate to MAP of 65 (Normal SBP for Peds)
For Dial-a-Flow, use the Pump Calculation
Paramedic *Pediatric* *Adult*

◦ Hypo/euvolemic fluid status

- **Medication**
Normal Saline (NS, fluids)
Routes IV / IO **Dose** 30 mL/kg **Max. total dose** 3000 mL
Note:
Paramedic *AEMT* *Adult*

Plus

- **Push-dose**

- Medication**
Epinephrine Push Dose (1:100k)
Routes IV / IO **Dose** 5–20 mcg **Conc.** 10 mcg/mL
Note: Every 2-3 minutes to maintain MAP >65
Mix by diluting 1ml of epinephrine 1:10 000 in 9 mL of normal saline

Paramedic *Adult*

▪ Infusions

- Medication**
Norepinephrine (Levophed)
Routes IV / IO **Dose** 0.1–2 mcg/kg/min **Conc.** Multiple
Note: Titrate to MAP >65 (Normal SBP for Peds)
For Dial-a-Flow, use the Pump Calculation

Paramedic *Pediatric* *Adult*

alternative

- Medication**
Epinephrine Infusion
Routes IV / IO **Dose** 0.1–1 mcg/kg/min **Conc.** 1 mg in 1 mL
Note: Titrate to MAP of 65 (Normal SBP for Peds)
For Dial-a-Flow, use the Pump Calculation

Paramedic *Pediatric* *Adult*

PEARLS

- Hypotension is SBP <90 and/or MAP <65
- A bolus may be given to bridge to infusion
- Fluid bolus and vasopressor support can be given at the same time. If the patient is fluid responsive, vasopressors can be titrated off.
- Norepinephrine is the preferred vasopressor drip; however, push dose epinephrine can be used as a bridge to drip.
- Signs of hypervolemia include rales, JVD, hepatic congestion, and pitting lower extremity edema

Primary Vasoactive Medications

| Medication | Adult Dosing | Ped Dosing | Receptor | Notes |
|----------------|----------------|-------------------|-------------------|---|
| EPiNEPHrine | 2–10 mcg/min | 0.05–1 mcg/kg/min | Alpha 1 Beta 1 | <ul style="list-style-type: none"> ↑ heart rate, ↑ contractility, ↑ vasoconstriction Alternate Adult dosing 0.1-0.5 mcg/kg/min |
| Norepinephrine | 2–35 mcg/min | 0.05–2 mcg/kg/min | Alpha 1 Beta 1 | <ul style="list-style-type: none"> Vasoconstriction with small amount of beta 1 effects Alternately in adults 0.05-2 mcg/kg/min |
| Vasopressin | 0.04 units/min | NA for shock | V1 | <ul style="list-style-type: none"> May be used as a second agent |

Secondary Vasoactive Medications

| Medication | Adult Dosing | Ped Dosing | Receptor | Notes |
|---------------|-----------------|------------------|----------------|--|
| DOpamine | 5–20 mcg/kg/min | 5–20 mcg/kg/min | Beta 1 Alpha 1 | <ul style="list-style-type: none"> Moderate doses mainly increase heart rate & contractility High doses mainly cause isolated Alpha 1 vasoconstriction |
| DOBUtamine | 5–20 mcg/kg/min | 5–20 mcg/kg/min | Beta 1 Beta 2 | <ul style="list-style-type: none"> Increased cardiac output Vasodilation may lower blood pressure |
| Phenylephrine | 100–180 mcg/min | 0.1–3 mcg/kg/min | Alpha 1 | <ul style="list-style-type: none"> Typical steady state maintenance 40-60 mcg/min An alpha 1 drug that causes isolated vasoconstriction |

Citations

Link
 7 Case Report
18: Push-Dose Pressors During Peri-intubation Hypotension in the Emergency Department: A Case Series
[Go to document](#)

Link
 4 Cohort Study
36: Epinephrine versus norepinephrine in cardiac arrest patients with post-resuscitation shock.
[Go to document](#)

Link
 1 Guideline
76: Surviving Sepsis Campaign: International Guidelines for Management of Sepsis and Septic Shock: 2016
[Go to document](#)

[Link](#)

8 Expert Opinion

77: The Third International Consensus Definitions for Sepsis and Septic Shock (Sepsis-3)

[Go to document](#)

[Link](#)

4 Cohort Study

78: The safety and efficacy of push dose vasopressors in critically ill adults

[Go to document](#)

[Link](#)

4 Cohort Study

79: Prehospital Fluid Administration for Suspected Sepsis in a Large EMS System: Opportunities to Improve Goal Fluid Delivery

[Go to document](#)

[Link](#)

4 Cohort Study

80: Prehospital hemodynamic optimisation is associated with a 30-day mortality decrease in patients with septic shock

[Go to document](#)

M-13: Hypothermia

Revised 01/06/2026

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

- Remove Wet Clothing

- Temperature >95° F (>35° C)
 - Blankets
 - Warm liquids if PO tolerant
 - Appropriate Protocol

- Temperature <95° F (<35° C)
 - Handle gently
 - Assess pulse for 1 (one) full minute
 - If pulseless, start CPR

CPR Tool
Tempo: 110 compressions per minute
Cycle: 2 minutes
[Reference: CPR Guidelines](#)

Link
4 Adult - Cardiac Arrest
CA-01: Cardiac Arrest, Adult
[Go to document](#)

AEMT or higher

- Temperature <95° F (<35° C), with pulse **or** PEA/Asystole
 - Warm IV fluids

Paramedic

- Pulseless VF/VT
 - Defibrillate
 - Warm at least 2° F before each additional shock
 - Consider early transport to a Comprehensive Resuscitation Center

PEARLS

- Follow normal Cardiac Arrest protocol once the temperature is > 86°F
- Extremes of age are more susceptible (young and old)
- <88° F (31° C) shivering may stop, and V-fib is a common cause of death. Handling patients gently reduced the risk of lethal rhythms.
- Prehospital rewarming is limited; therefore, transport should be a priority.
- Consider using a blood warmer to warm IVF.
- Bradycardia should be treated with warming measures in the setting of environmental hypothermia.

Citations

Link

1 Guideline

81: Wilderness Medical Society Clinical Practice Guidelines for the Out-of-Hospital Evaluation and Treatment of Accidental Hypothermia

[Go to document](#)

M-14: Nausea / Vomiting

Revised 01/06/2026

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

- Glucose Assessment

Link
8 Adult - Medical
M-03: Altered Mental Status
[Go to document](#)

- Alcohol Wipe: 2-4 Squares Inhaled
 - Hold the isopropyl alcohol swabs 1-2 cm under the nose while the patient inhales deeply through the nose until symptoms are relieved.

EMT or higher

- If refractory after alcohol wipe

- | |
|---|
| Medication Ondansetron (Zofran) Routes PO / ODT Dose 4 mg Note: <i>Paramedic</i> <i>AEMT</i> <i>EMT</i> <i>Adult</i> |
|---|

AEMT or higher

- If PO Ondansetron not given

- Medication
Ondansetron (Zofran)
Routes IV / IO / IM **Dose** 4–8 mg **Conc.** Multiple
Note:
Paramedic *AEMT* *Adult*

Paramedic

- If refractory after PO or IV/IO/IM Ondansetron

- Medication
Droperidol
Routes IV / IO / IM **Dose** 1.25–2.5 mg **Conc.** Multiple
⚠ Do not administer if QTc > 480 msec
Note:
Paramedic *Adult*

PEARLS

- Consider the underlying causes of nausea, including ACS, vertigo secondary to stroke, metabolic disorders, including DKA, toxic ingestion, sepsis, pancreatitis, and bowel obstruction.

Citations

Link

3 RCT

82: Isopropyl Alcohol Nasal Inhalation for Nausea in the Emergency Department: A Randomized Controlled Trial

[Go to document](#)

M-16: Overdose / Toxic Ingestion

Revised 01/06/2026

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

Dystonic Reaction

Medication

Diphenhydramine (benadryl)

Route PO **Dose** 25–50 mg

Note:

Paramedic *AEMT* *Adult*

OR

Medication

Diphenhydramine (benadryl)

Routes IV / IO / IM **Dose** 25–50 mg **Conc.** 50 mg/mL

Note:

Paramedic *AEMT* *Adult*

Cyclic Antidepressant or Salicylate Overdose

Medication

Sodium Bicarbonate

Routes IV / IO **Dose** 1 mEq/kg **Conc.** 50 mEq in 50 mL

Note:

Paramedic *Pediatric* *Adult*

Calcium Channel Blocker/Beta Blocker Overdose

Medication**Calcium Chloride****Routes** IV / IO **Dose** 1 g **Conc.** Multiple**⚠ Not recommended in Cardiac Arrest****Note:** Should have a well-established large-bore IV or IO*Paramedic* *Adult***OR****Medication****Calcium Gluconate****Routes** IV / IO **Dose** 3 g **Conc.** Multiple**⚠ Not recommended in Cardiac Arrest****Note:***Paramedic* *Adult*

Organophosphate Overdose

Medication**Atropine****Routes** IV / IO **Dose** 2 mg **Conc.** Multiple**Note:** Repeat every 5 minutes until bronchial secretions dry.*Paramedic* *Adult*

Simulant/Sympathomimetic

Medication**Midazolam** (versed)**Routes** IM / IV / IO **Dose** 2.5–10 mg **Conc.** 5 mg/mL**⚠ Patient may not be prone and must have continuous monitoring****Note:** For patients over 65 years old, cut the initial dose of sedation in half.*Paramedic* *Adult*

Consider:

Link

8 Adult - Medical

M-03: Altered Mental Status[Go to document](#)**Link**

5 Adult- Cardiac

C-01: Chest Pain; Suspected Acute Coronary Syndrome[Go to document](#)

Opioid

All providers: ventilate for at least 2 minutes

Link

6 Adult - Respiratory

R-01: Airway, Adult[Go to document](#)**Medication****Naloxone** (narcan)**Route** IN **Dose** 1–4 mg **Conc.** Multiple**Note:** May repeat every 2-5 minutes.*Paramedic* *AEMT* *EMT* *Adult*

Medication**Naloxone** (narcan)**Routes** IV / IO / IM **Dose** 0.4–1 mg **Conc.** Multiple**Note:** May repeat every 3-5 minutes.*Paramedic* *Adult*

Consider other causes:

Link

8 Adult - Medical

M-03: Altered Mental Status[Go to document](#)

Prepare for:

Link

8 Adult - Medical

M-14: Nausea / Vomiting[Go to document](#)

Contact poison control:

Contact**Poison Control****Phones:** Phone: 1-800-222-1222

PEARLS

- Patients with suspected opioid overdose should be offered transport to start medication-assisted therapy in the ED.
- Do not rely on patient-reported history to rule out ingestion, especially in suicidal patients.
- MD must be contacted for refusals of opioid overdoses that are not related to illicit IV injection (i.e., pills).
- Nasal Narcan kits can be distributed to those refusing overdose treatment

Citations

Link

1 Guideline

85: Evidence-Based Guidelines for EMS Administration of Naloxone

[Go to document](#)

Link

4 Cohort Study

86: No Deaths Associated with Patient Refusal of Transport After Naloxone-Reversed Opioid Overdose

[Go to document](#)

Link

1 Guideline

87: 2023 American Heart Association Focused Update on the Management of Patients With Cardiac Arrest or Life-Threatening Toxicity Due to Poisoning: An Update to the American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care

[Go to document](#)

M-17: Pain Management

Revised 01/06/2026

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

Pain Score <7

EMT or higher

Medication
Acetaminophen
Route PO **Dose** Age-weight based **Min. dose** 325 mg **Max. dose** 1000 mg
Note:
Paramedic *AEMT* *EMT* *Adult*

Medication
Ibuprofen
Route PO **Dose** 600 mg **Max. dose** 600 mg
Note:
⚠ **Must be >6 months old, not to be used in head trauma.**

Paramedic

Medication

Ketorolac (Toradol)**Routes** IV / IO / IM **Dose** 15 mg **Conc.** 30 mg/mL**⚠ Contraindicated in potential head injuries.****Note:**

Paramedic Adult

Medication

Acetaminophen**Routes** IV / IO **Dose** 15 mg/kg **Max. total dose** 1000 mg**Note:** If PO intolerant

Paramedic Adult

Pain Score >7

Paramedic

Medication

Fentanyl**Routes** IV / IM / IN / IO **Dose** 1 mcg/kg **Max. total dose** 300 mcg **Conc.** 50 mcg/mL**Note:** Repeat every 5 minutes until relieved or max dose
Dosed to 65 years or older should be cut by 50 %

Paramedic Pediatric Adult

If refractory

Medication

Ketamine (Pain)**Routes** IV / IO **Dose** 0.25 mg/kg **Conc.** 50 mg/mL **Give over** 15 minutes**Note:**

Paramedic Pediatric Adult

alternative

Medication**Ketamine****Route** IN **Dose** 0.5 mg/kg **Conc.** 50 mg/mL**Note:** Max 1 ml per naris*Paramedic* *Pediatric* *Adult***Continuous Pulse Ox and EtCO2****Document vitals and pain score after administration**

PEARLS

- For patients over 65, reduce the fentanyl and droperidol dose by 50%
- A lower dose of droperidol should be used in IV form
- Vitals will be documented 5 minutes following pain medication administration.
- Multimodal pain management can be employed for severe pain (addition of acetaminophen and/or NSAIDs)
- Avoid opioids for headaches.

Citations

Link

4 Cohort Study

88: Disparities in Prehospital Non-Traumatic Pain Management[Go to document](#)**Link**

4 Cohort Study

89: Prehospital Pain Management: Disparity By Age and Race[Go to document](#)**Link**

1 Guideline

90: Evidence-Based Guidelines for Prehospital Pain Management: Recommendation[Go to document](#)

Link

2 Meta-Analysis

91: What is the Evidence for Using Intranasal Medicine in the Prehospital Setting? A Systematic Review

[Go to document](#)

M-18: Procedural Sedation

Revised 01/06/2026

Paramedic

Link
3 Universal
U-01: Universal Care
[Go to document](#)

STOP: 2 credentialed provider agreement

- **NO – Abort Procedure**
- YES – Complete P Checklist

Link
19 Appendices
P: P Checklist
[Go to document](#)

◦ SpO2 >94% and MAP >65

- **NO - Abort Procedure**
- YES - Sedation

Medication
Etomidate
Routes IV / IO **Dose** 0.1 mg/kg **Max. dose** 30 mg **Conc.** Multiple
Note:
Paramedic *Adult*

and

Medication
Fentanyl
Routes IV / IO **Dose** 1 mcg/kg **Max. total dose** 300 mg **Conc.** 50 mcg/mL
Note: Repeat every 5 minutes until relieved or max dose
Round to the nearest 25 mcg
Those 65 years or older should have dose cut by 50 %

or

Medication
Ketamine (Sedation)
Routes IV / IO **Dose** 1–2 mg/kg **Max. total dose** 500 mg **Conc.** Multiple
⚠ Patient may not be prone and must have continuous monitoring
Note: For patients over 65 years old, cut the initial dose of sedation in half.
Paramedic *Adult*

◦ Vitals every 2.5 minutes: SpO2 > 94% and MAP >65

▪ **NO – Abort Procedure**

◦ If aborting the procedure:

- Fundamental Airway Maneuvers
- Consider SGA
- Treat Hypotension

Link
8 Adult - Medical
M-12: Hypotension
[Go to document](#)

PEARLS

- If the procedure can continue without sedation, proceed without sedation
- Inappropriate continuation down the algorithm past HARD STOPS can lead to loss of privileges and de-credentialing
- The checklist must be used and documented

Citations

M-19: Seizure

Revised 01/06/2026

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

○ Is the patient pregnant?

Link

10 Obstetric/Neonate

OB-03: Eclampsia

[Go to document](#)

○ Are they actively seizing?

▪ Fundamental Airway Management

Link

6 Adult - Respiratory

R-01: Airway, Adult

[Go to document](#)

▪ **Vagus nerve stimulator?**

- Place the magnet for 60 seconds, and may repeat 3x
- If the seizure stops, move to postictal care
- If the seizure continues, administer benzodiazepines

○ No active seizure

▪ Postictal care

Link

8 Adult - Medical

M-03: Altered Mental Status

[Go to document](#)

Paramedic

o Patient actively seizing

▪ First line

o

Medication

Midazolam (Versed)

Routes IV / IO / IM **Dose** 5–10 mg **Conc.** 5 mg/mL

Note:

Paramedic Adult

▪ Second line (refractory 5 minutes)

o

Medication

Midazolam (Versed)

Routes IV / IO / IM **Dose** 5–10 mg **Conc.** 5 mg/mL

Note:

Paramedic Adult

▪ Third line (refractory 5 minutes)

o

Medication

Ketamine

Routes IV / IO **Dose** 1–2 mg/kg **Conc.** 50 mg/mL

Note:

Paramedic Pediatric Adult

▪ Consider

Link
8 Adult - Medical
M-03: Altered Mental Status
[Go to document](#)

PEARLS

- Patient seizing following home abortive dose should receive 2nd line treatment from EMS.
- Status epileptics is two or more successive seizures without a period of consciousness.
- Always consider the underlying cause of seizure, including medication non-compliance, intracranial process, metabolic dysfunction, trauma, withdrawal of alcohol or benzodiazepines.
- Airway monitoring is crucial.
- Patients must return to baseline before refusal can be obtained. Patients who refuse transport must be informed and documented that they are not to drive, swim, operate machinery, or use an open flame until cleared by a physician.

References

Link
4 Cohort Study
92: When Should You Test for and Treat Hypoglycemia in Prehospital Seizure Patients
[Go to document](#)

Link
3 RCT
93: Evaluation of the Use of Ketamine in Prehospital Seizure Management: A Retrospective Review of the ESO Database
[Go to document](#)

Link

1 Guideline

94: Evidence-Based Guideline: Treatment of Convulsive Status Epilepticus in Children and Adults: Report of the Guideline Committee of the American Epilepsy Society

[Go to document](#)

Link

3 RCT

95: Randomized Trial of Three Anticonvulsant Medications for Status Epilepticus.

[Go to document](#)

Link

4 Cohort Study

96: Effectiveness of Ketamine As a Rescue Drug for Patients Experiencing Benzodiazepine-Resistant Status Epilepticus in the Prehospital Setting

[Go to document](#)

Link

3 RCT

97: Intramuscular versus Intravenous Therapy for Prehospital Status Epilepticus

[Go to document](#)

M-20: Sepsis

Revised 01/06/2026

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

- o **Criteria**

- Suspected Infection AND
AND (At Least 2)
 - Altered mental status (Any GCS <15)
 - Respiratory Rate 20/min.
 - Heart Rate > 90 bpm
 - Systolic BP 100 mmHg
- Plus
 - EtCO2 ≤30 mmHg?

- If the patient does not meet the criteria: Supportive care, consider:

Link
8 Adult - Medical
M-09: Fever / Infection Control
[Go to document](#)

- If the patient meets sepsis criteria: Initiate sepsis alert

AEMT or higher

- Medication
Normal Saline (NS, fluids)
Routes IV / IO **Dose** 30 mL/kg **Max. total dose** 3000 mL
Note:
Paramedic *AEMT* *Adult*

Paramedic

- Meets Sepsis Alert criteria

- Medication
Ceftriaxone
Route IV **Dose** 2 g
Note: Slow IVP
Mix 1 g with 9.6 ml NS
Mix 2 g with 19.2 ml NS
Paramedic *Adult*

- Consider hypotension

Link
8 Adult - Medical
M-12: Hypotension
[Go to document](#)

PEARLS

- These patients should be transported to a comprehensive facility capable of facilitating early goal-directed therapy for sepsis.
- Administration of effective intravenous antimicrobials within the first hour of recognition of septic shock and severe sepsis without septic shock is the goal of therapy.
- Ensure documentation of the dose and time of antibiotics is communicated with the receiving hospital.

- If the patient has been hospitalized in the last 30 days, lives in an SNF, has previous resistance to Rocephin, or is on chemotherapy/immunosuppressive use, Cefepime.

Citations

Link

1 Guideline

76: Surviving Sepsis Campaign: International Guidelines for Management of Sepsis and Septic Shock: 2016

[Go to document](#)

Link

4 Cohort Study

79: Prehospital Fluid Administration for Suspected Sepsis in a Large EMS System: Opportunities to Improve Goal Fluid Delivery

[Go to document](#)

Link

4 Cohort Study

80: Prehospital hemodynamic optimisation is associated with a 30-day mortality decrease in patients with septic shock

[Go to document](#)

Link

4 Cohort Study

98: A prehospital screening tool utilizing end-tidal carbon dioxide predicts sepsis and severe sepsis

[Go to document](#)

Link

4 Cohort Study

99: Prehospital sepsis alert notification decreases time to initiation of CMS sepsis core measures

[Go to document](#)

Link

4 Cohort Study

**100: Prehospital Antibiotics Improve Morbidity and Mortality of
Emergency Medical Service Patients with Sepsis**

[Go to document](#)

M-21: Stroke

Revised 01/06/2026

BEFAST Stroke Screen

- Balance
- Eyes
- Facial Droop
- Arm Drift / Weakness
- Speech difficulty

VAN Large Vessel Occlusion

- Arm Drift / Weakness (Required)
- Vision Deficit
- Aphasia
- Neglect

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

- Stroke screen
 - Negative
 - Appropriate COG
 - Positive
 - Glucose <60 or >600

Link
 8 Adult - Medical
M-03: Altered Mental Status
[Go to document](#)

- Last Known Normal <6 hrs
 - STROKE ALERT: Closest appropriate [Stroke Center](#)
- Last Known Normal 6-24 hrs
 - VAN Assessment Positive
 - STROKE ALERT: Closest [Comprehensive or Advanced Stroke Center](#)
 - VAN Assessment Negative
 - Appropriate COG

Paramedic

- Unknown Stroke Type or known Ischemic Stroke
 - SBP >220 or DBP >110

- | |
|---|
| Medication |
| Labetalol |
| Routes IV / IO Dose 20 mg Conc. 200 mg in 40 mL |
| Note: Slow IV/IO push q 3-5 mins until SBP <220 and DBP <110 |
| Paramedic Adult |

Maintenance

- | |
|--|
| Medication |
| Labetalol (Drip) |
| Routes IO / IV Dose 0.5–8 mg/min Conc. 20 mg/mL |
| Note: Maintain SBP <140 |

PEARLS

- 12-lead EKG should be obtained on all suspected stroke patients
- Patients with arm drift should be evaluated for LVO & considered for a comprehensive or advanced stroke center, even if < 6 hrs since last known normal
- The last known well must be documented and included in Pulsara Activation
- Always consider airway management in stroke patients. Treat nausea early. The head of the bed should be at 30 degrees during transport
- Vision Deficit refers to fixed gaze, report of visual field cuts, double vision, or loss of vision.
- Aphasia refers to the inability to form correct words when talking or the inability to understand words (unable to repeat short sentences)
- Neglect refers to the inability to feel both sides of the body or the inability to recognize one side of the body.
- There are many mimics of Stroke. When in doubt, call a stroke alert if it falls within the time frame.

Citations

Link

4 Cohort Study

101: Paramedic utilization of Vision, Aphasia, Neglect (VAN) stroke severity scale in the prehospital setting predicts emergent large vessel occlusion stroke

[Go to document](#)

Link

1 Guideline

102: Recommendations for Regional Stroke Destination Plans in Rural, Suburban, and Urban Communities From the Prehospital Stroke System of Care Consensus Conference: A Consensus Statement From the American Academy of Neurology, American Heart Association/American Stroke Association, American Society of Neuroradiology, National Association of EMS Physicians, National Association of State EMS Officials, Society of NeuroInterventional Surgery, and Society of Vascular and Interventional Neurology: Endorsed by the Neurocritical Care Society

[Go to document](#)

M-22: Syncope

Revised 01/06/2026

All Providers

[Link](#)

3 Universal

U-01: Universal Care

[Go to document](#)

[Link](#)

3 Universal

U-05: Spinal Motion Restriction

[Go to document](#)

EMT or higher

- Glucose
 - <60

[Link](#)

8 Adult - Medical

M-03: Altered Mental Status

[Go to document](#)

AEMT or higher

- Volume status
 - Hypovolemic

◦

Medication**Normal Saline** (NS, fluids)**Routes** IV / IO **Dose** 30 mL/kg **Max. total dose** 3000 mL**Note:***Paramedic* *AEMT* *Adult*

Paramedic

- 12-lead EKG to assess for high-risk syncope

High Risk Syncope (any one suggests high risk)

- No Prodromic Symptoms
- History of CAD
- History of HF
- History of heart valve disease
- QRS >120 msec
- QTc >480 msec
- Axis Deviation <-30 or >100
- SBP <90 or >180

PEARLS

- High-risk Syncope should have medical direction clearance before refusal
- Consider the Lift Assist Checklist for syncope without injury
- >25% syncope in geriatrics is cardiac in nature
- Seizure and potential internal hemorrhage should be considered possible causes for syncope.
- Pulmonary embolism is a commonly missed cause of syncope and should be considered, especially if EKG evidence of right heart strain

Citations

Link

4 Cohort Study

103: Multicenter Emergency Department Validation of the Canadian Syncope Risk Score

[Go to document](#)

9 Trauma

T-01: Trauma Circulatory Arrest

Revised 01/06/2026

MATCH

Emphasis on MAT

- Massive Hemorrhage**
 - Direct pressure & TQ
 - Pelvic Binder, Junctional TQ
- Airway**
 - Supraglottic Airway
- Tension**
 - Must be specially credentialed
 - Bilateral Chest Decompression
- Circulation**
 - Consider Blood/TXA
- Hypothermia / Head Injury**
 - Keep the patient warm

[Link](#)
9 Trauma
T-06: Multisystem Trauma
[Go to document](#)

[Link](#)
9 Trauma
T-05: Traumatic Brain Injury
[Go to document](#)

- Consider warm NS
 - Allow permissive hypotension (SBP goal 80)

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

o Obvious Signs of Death

Link
2 Clinical Standard Documents
CS-06: Criteria for Death or Withholding Resuscitation
[Go to document](#)

o Signs of Life

- Breathing, agonal respiration
- Electrical activity
- Corneal reflex
- Pupillary response to light
- Witness arrest < 5 min from a reliable source

o Blunt

- Assess for **Signs of Life?**
 - If NO signs of life, Contact Medical Direction for a termination order

Contact
On-Call Medical Director
Note: Use Pulsara to contact on-call Medical Direction.

- If there are Signs of Life
 - Complete MAT of MATCH

- After MAT, then reassess for **Signs of Life**
 - If NO Signs of Life, contact Medical Direction for a termination order

Contact

On-Call Medical Director

Note: Use Pulsara to contact on-call Medical Direction.

- **If there are Signs of Life**
 - Transition to transport (< 3 min)
 - Complete CH of MATCH during transport
 - If ROSC

Link

19 Appendices

C: Cardiac Arrest / ROSC Checklist

[Go to document](#)

- Consider Blood Admin

Link

9 Trauma

T-06: Multisystem Trauma

[Go to document](#)

- Penetrating

- [Complete MAT of MATCH](#)
- After MAT, assess for **Signs of Life**
 - If NO **Signs of Life**, contact Medical Direction for a termination order

Contact

On-Call Medical Director

Note: Use Pulsara to contact on-call Medical Direction.

- **If there are Signs of Life**
 - Transition to transport (< 3 min)
 - Complete CH of MATCH during transport
 - ROSC

Link

19 Appendices

C: Cardiac Arrest / ROSC Checklist

[Go to document](#)

- Consider Blood Administration

Link

9 Trauma

T-07: Hemorrhagic Shock

[Go to document](#)

PEARLS

- Focus on MAT in MATCH (i.e., blood & warming are lower priority - after transport)
- Consider ceasing resuscitation in patients who remain in asystole with no further rhythm change after interventions and/or CPR.
- CPR should be initiated only if there are signs of life or electrical activity, and after the Massive Hemorrhage, Airway, and Respiration (MHAAR) principles have been addressed.
- Finger thoracostomy, if credentialed, is the preferred method for chest decompression if no ROSC after needle pleural decompression
- The preferred location for needle decompression is the anterior lateral
- The routine use of ACLS medications is NOT recommended unless a medical cause of arrest is suspected. May consider epinephrine in instances of isolated head trauma.
- Use Ultrasound to confirm asystole if no other signs of life are seen. If any heart movement is seen, continue MATCH and transport.

Citations

Link

1 Guideline

3: Guidelines for Withholding or Termination of Resuscitation in Prehospital Traumatic Cardiopulmonary Arrest: Joint Position Statement of the National Association of EMS Physicians and the American College of Surgeons Committee on Trauma

[Go to document](#)

Link

1 Guideline

13: European Resuscitation Council Guidelines 2021: Cardiac arrest in special circumstances.

[Go to document](#)

Link

3 RCT

108: Prehospital predictors for return of spontaneous circulation in traumatic cardiac arrest

[Go to document](#)

Link

4 Cohort Study

109: Death on the battlefield (2001–2011): Implications for the future of combat casualty care

[Go to document](#)

Link

4 Cohort Study

110: Outcomes of traumatic hemorrhagic shock and the epidemiology of preventable death from injury

[Go to document](#)

Link

7 Case Report

111: Outcome in 757 severely injured patients with traumatic cardiorespiratory arrest

[Go to document](#)

Link

4 Cohort Study

112: Characterization of fatal blunt injuries using postmortem computed tomography

[Go to document](#)

Link

4 Cohort Study

113: Traumatic Cardiac Arrest: Who Are the Survivors?

[Go to document](#)

Link

1 Guideline

114: Prehospital Trauma Compendium: Prehospital Management of Adults with Traumatic Out-of-Hospital Circulatory Arrest – A Joint Position Statement and Resource Document of NAEMSP, ACS-COT, and ACEP

[Go to document](#)

T-02: Burns

Revised 01/06/2026

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

Link

6 Adult - Respiratory

R-01: Airway, Adult

[Go to document](#)

- Stop the Burning Process
- Remove rings, bracelets, & constricting items

◦ **THERMAL**

- Apply cool, running water to a burn injury less than 10% BSA for 20 minutes, within the first 3 hours.
- Cover with a dry sheet or dressings

Link

8 Adult - Medical

M-17: Pain Management

[Go to document](#)

Link

16 Toxic Exposure

TE-01: Carbon Monoxide

[Go to document](#)

Link

16 Toxic Exposure

TE-02: Cyanide / Hydrogen Sulfide

[Go to document](#)

○ **CHEMICAL**

- Remove clothing
- Expose area
- Brush off any dry chemicals/powder
- Eye Involvement?

Link

8 Adult - Medical

M-08: Eye Complaint

[Go to document](#)

- Continuously flush the area with Normal Saline or Water

Link

8 Adult - Medical

M-17: Pain Management

[Go to document](#)

AEMT or higher

○ **THERMAL**

- NS IV/IO per Rule of Tens
- 10 ml/hr. X % TBSA (add 100 ml/hr for every 10 kg > 80 kg)

PEARLS

- Evaluate BSA (Use chart or use patient's hand (1% BSA))
- Critical Burns must be transported to a burn center:
 - 15% BSA 2nd and 3rd Degree Burns for Patients > 16 years of age;

- 10% BSA 2nd and 3rd Degree Burns for Patients less than or equal to 16 years of age;
 - Burns to the face, hands, feet, over joints, or to the groin
- Minor Burns: < 5% BSA 2nd and 3rd Degree Burns not complicated by airway compromise or trauma.
- Treat potential CO exposure with 100% oxygen.
- Be aware of hypothermia.
- Triage in a lightning strike should prioritize treatment of those in cardiac arrest, as they are likely to be in a shockable rhythm.
- Lightning and high voltage injuries should also have an EKG performed

Citations

Link

1 Guideline

115: ISBI Practice Guidelines for Burn Care

[Go to document](#)

Link

1 Guideline

116: American Burn Association Guidelines on the Management of Acute Pain in the Adult Burn Patient: A Review of the Literature, a Compilation of Expert Opinion, and Next Steps

[Go to document](#)

T-03: Crush Injury

Revised 01/06/2026

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

- Remove constricting jewelry or clothing
- Contact Medical Control

Contact
On-Call Medical Director
Note: Use Pulsara to contact on-call Medical Direction.

- **Temporary Extremity Entrapment**

- EKG for signs of Hyperkalemia

Link
8 Adult - Medical
M-11: Hyperkalemia
[Go to document](#)

- Pain Management

Link
8 Adult - Medical
M-17: Pain Management
[Go to document](#)

- **Prolonged Crush (>4 Hr)**

- EKG for signs of Hyperkalemia

Link
8 Adult - Medical
M-11: Hyperkalemia
[Go to document](#)

- Pain Management

Link
8 Adult - Medical
M-17: Pain Management
[Go to document](#)

AEMT or higher

- **Prolonged Crush (>4 Hr)**

- During Extrication

- Medication
Normal Saline (during extrication)
Routes IV / IO **Dose** 1.5 L/h
Note: Add 50meq of sodium bicarbonate into each 1 L of NS
Paramedic *AEMT* *Adult*

- Following Extrication

- Medication
Normal Saline (following extrication)
Routes IV / IO **Dose** 500 mL/hr
Note: Add 50meq of sodium bicarbonate into each 1 L of NS
Paramedic *AEMT* *Adult*

- Paramedic

- **Temporary Extremity Entrapment**

- At the Time of reperfusion

-

Medication

Sodium Bicarbonate

Routes IV / IO **Dose** 1 mEq/kg **Conc.** 50 mEq in 50 mL

Note:

Paramedic

Pediatric

Adult

PEARLS

- Hydration should commence before extrication if possible
- Generally, symptoms develop when compressed for 4-6 hours.
- Signs of compartment syndrome include pain out of proportion, pallor, paresthesia, and pulselessness.
- Cardiac monitoring is required due to electrolyte disturbances that can develop.
- If dust is present, nebulized saline can be used.

Citations

Link

1 Guideline

117: Prehospital Trauma Compendium: Management of the Entrapped Patient – a Position Statement and Resource Document of NAEMSP

[Go to document](#)

Link

8 Expert Opinion

118: Consensus Statement On The Early Management Of Crush Injury And Prevention Of Crush Syndrome.

[Go to document](#)

T-04: Extremity Trauma

Revised 01/06/2026

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

- Control any significant hemorrhage
 - Expedite Transport
- Multisystem Trauma
 - Expedite Transport
- Remove constricting jewelry or clothing
- Assess pulses
- Assess for open fracture
- Splint
- Consider Pain Management

Link

8 Adult - Medical

M-17: Pain Management

[Go to document](#)

EMT or higher

- Pulse absent
 - **1** attempt to reduce to anatomical position

Paramedic

- Pulse absent

- Consider procedural sedation for reduction

Link
8 Adult - Medical
M-18: Procedural Sedation
[Go to document](#)

- 1 attempt to reduce to anatomical position

- **Open fracture**

- | |
|---|
| Medication Ceftriaxone Route IV Dose 2 g Note: Slow IVP Mix 1 g with 9.6 ml NS Mix 2 g with 19.2 ml NS <i>Paramedic</i> <i>Adult</i> |
|---|

PEARLS

- If sedation and pain medications are unavailable for a pulseless extremity, one attempt at reduction can be made.
- Reduction of the extremity should be done by applying traction, followed by moving in the direction of injury, followed by returning to the anatomical location.
- Transport, especially in patients meeting trauma alert criteria, should not be delayed to reduce or splint injuries.
- IV acetaminophen is excellent at reducing the need for opioid medications for patients with orthopedic complaints.

Citations

T-05: Traumatic Brain Injury

Revised 01/06/2026

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

- o No isolated head injury

- MATCH assessment Multiple System

Link
9 Trauma
T-06: Multisystem Trauma
[Go to document](#)

- o Isolated Head Injury

- Motor GCS >4
 - Standard Care
- Motor GCS ≤4
 - Elevate the head of the bed 30%
 - Airway Maintain SpO2 >90%
 - Airway Compromise

Link
6 Adult - Respiratory
R-01: Airway, Adult
[Go to document](#)

-
- Blood Pressure: Goal >120 SBP

Link

8 Adult - Medical

M-12: Hypotension

[Go to document](#)

Link

9 Trauma

T-07: Hemorrhagic Shock

[Go to document](#)

-
- Ventilation: Maintain EtCO
- ₂
- 35-45

Link

6 Adult - Respiratory

R-01: Airway, Adult

[Go to document](#)

-
- Glucose Maintain BGL >60

- <60

Link

8 Adult - Medical

M-03: Altered Mental Status

[Go to document](#)

-
- Seizure

Link

8 Adult - Medical

M-19: Seizure

[Go to document](#)

-
- Nausea / Vomiting

[Link](#)
8 Adult - Medical
M-14: Nausea / Vomiting
[Go to document](#)

AEMT or higher

- SBP <90 mmHg

- | |
|--|
| Medication |
| Normal Saline (NS, fluids) |
| Routes IV / IO Dose 1000 mL Max. total dose 1000 mL |
| ⚠ Max crystalloid fluids for trauma is 1 L |
| Note: |

Paramedic

- SBP < 90 mmHg
 - Consider pressure support

| |
|---|
| Link 8 Adult - Medical M-12: Hypotension Go to document |
|---|

| |
|--|
| Link 9 Trauma T-07: Hemorrhagic Shock Go to document |
|--|

PEARLS

- Signs of Cushing's Response include widened pulse pressure, bradycardia, and an irregular respiratory rate.
- Be sure to document a full initial GCS and on transfer of care.
- Patients with reported LOC, age >65, or on any reported antiplatelet or anticoagulant therapy, who have nausea or vomiting, or seizures, are at increased risk of a clinically significant traumatic brain injury, even from minor trauma.

Citations

Link

1 Guideline

119: EMS Treatment Guidelines in Major Traumatic Brain Injury With Positive Pressure Ventilation

[Go to document](#)

Link

4 Cohort Study

120: Body Temperature after EMS Transport: Association with Traumatic Brain Injury Outcomes

[Go to document](#)

Link

3 RCT

121: Optimal Out-of-Hospital Blood Pressure in Major Traumatic Brain Injury: A Challenge to the Current Understanding of Hypotension

[Go to document](#)

Link

3 RCT

122: Association of Statewide Implementation of the Prehospital Traumatic Brain Injury Treatment Guidelines With Patient Survival Following Traumatic Brain Injury: The Excellence in Prehospital Injury Care (EPIC) Study

[Go to document](#)

Link

5 Case-Control

165: Assessment of Coma and Impaired Consciousness

[Go to document](#)

T-06: Multisystem Trauma

Revised 01/06/2026

MATCH

Emphasis on MAT

- Massive Hemorrhage
 - Direct pressure & TQ
 - Pelvic Binder, Junctional TQ
- Airway
 - Supraglottic Airway
- Tension Pneumo / Hemo
 - Bilateral Chest Decompression
 - Bilateral Thoracostomy
- Circulation
 - Consider Blood/TXA

Link
9 Trauma
T-07: Hemorrhagic Shock
[Go to document](#)

- Hypothermia / Head Injury
 - Keep the patient warm

Link
9 Trauma
T-05: Traumatic Brain Injury
[Go to document](#)

- Consider warm NS

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

- MATCH Assessment
- Limit Scene Time to <10 minutes

○ Massive Hemorrhage

- Extremity Bleeding: Apply a tourniquet 2 inches proximal to the wound
- Junctional Bleeding: Pack wound with gauze or hemostatic packing
- Blunt Trauma with Shock Index>1 or AMS
 - Pelvic Binder

○ Airway

- Maintain SPO2 >90%

Link

6 Adult - Respiratory

R-01: Airway, Adult

[Go to document](#)

○ Tension

- Suggested by the potential for chest wall trauma with hypotension
- If a penetrating chest injury with spontaneous breathing
 - Apply Chest Seal

EMT or higher

○ Tension Pneumothorax Suspected

Must be specially credentialed

- Needle Pleural Decompression

AEMT or higher

- **Circulation**

- NS IV/IO goal SBP 80
- Hemorrhagic Shock

Link
9 Trauma
T-07: Hemorrhagic Shock
[Go to document](#)

- Hypothermia / Head Injury

- Cover the patient and create a warm environment
- Head Trauma

Link
9 Trauma
T-05: Traumatic Brain Injury
[Go to document](#)

- Extremity Trauma

Link
9 Trauma
T-04: Extremity Trauma
[Go to document](#)

Paramedic

- Massive facial or airway trauma

Link

6 Adult - Respiratory

R-02: Airway, Failed, Adult

[Go to document](#)

o Tension Pneumothorax Suspected

Must be specially credentialed

- No improvement after needle pleural decompression = Thoracostomy

PEARLS

- o Fundamental skills of MAT should be completed before transport
- o When a pelvic binder is applied for suspected pelvic trauma, tape toes so they are pointed medially.
- o "Chest" is considered from the angle of the mandible to the umbilicus.
- o Transport to the appropriate facility based on Red/Blue Criteria. Documentation of Alert activation is a quality measure.

Citations

Link

4 Cohort Study

109: Death on the battlefield (2001–2011): Implications for the future of combat casualty care

[Go to document](#)

Link

4 Cohort Study

110: Outcomes of traumatic hemorrhagic shock and the epidemiology of preventable death from injury

[Go to document](#)

Link

7 Case Report

111: Outcome in 757 severely injured patients with traumatic cardiorespiratory arrest

[Go to document](#)

Link

4 Cohort Study

123: A Pilot Study to Assess Urban, Fire-Based Paramedic Accuracy in Identification of Anatomical Landmarks Necessary for Cricothyrotomy and Needle Chest Decompression Using Live Patient Models

[Go to document](#)

T-07: Hemorrhagic Shock

Revised 01/06/2026

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

- MOI suggests multisystem trauma
 - Call for whole blood early
- Age 5 or younger
 - Consult OMD for Recommendation

Contact
On-Call Medical Director
Note: Use Pulsara to contact on-call Medical Direction.

- Have Weight / Color Ready
- Inclusion Criteria (One Required)
 - SBP <70 mmHg
 - SBP <90 & HR > 110
 - SI >1.2
 - EtCO2 <25
 - Age >65: SI >1
- No criteria met
 - Monitor for Deterioration

AEMT or higher

- Inclusion criteria met?

- Medication
Tranexamic Acid (TXA)
Routes IV / IO Dose 2 g Conc. Multiple
⚠ **Not Recommended in bleeding >3hrs or GI bleeds**
Note:
Paramedic AEMT Adult

Paramedic

◦ Inclusion criteria met?

- Medication
Whole Blood
Routes IV / IO Dose 1 units
Note:
Paramedic Adult

- Medication
Whole Blood
Routes IV / IO Dose 10–20 mL/kg Max. total dose 500 mL
Note:
Paramedic Pediatric

▪ More than 1 unit of blood product given

- Medication
Calcium Gluconate
Routes IV / IO Dose 3 g Conc. Multiple
⚠ **Not recommended in Cardiac Arrest**
Note:
Paramedic Adult

OR

- **Medication**
Calcium Chloride
Routes IV / IO **Dose** 1 g **Conc.** Multiple
⚠ Not recommended in Cardiac Arrest
Note: Should have a well-established large-bore IV or IO
Paramedic *Adult*

◦ Suspected upper GI bleed?

- **Medication**
Ceftriaxone
Route IV **Dose** 2 g
Note: Slow IVP
Mix 1 g with 9.6 ml NS
Mix 2 g with 19.2 ml NS
Paramedic *Adult*

STOP Transfusion, if there are Signs of a Transfusion Reaction

- Shortness of breath
- Hives
- Wheezing
- Hypotension

Link
8 Adult - Medical
M-02: Allergic Reaction
[Go to document](#)

PEARLS

- SI is calculated by HR/SBP
- TXA can be given in the same line as blood, if only one access is available, and should be given, stop transfusion, flush line, push TXA, flush line again.

- In the event of a transfusion reaction, disconnect all blood tubing. Provide bags and tubing to the receiving facility and notify OMD.
- Warm Blood is preferred.
- If more than one unit is on hand and the patient's SBP <80 or EtCO₂ <25 after 1 unit, additional units can be administered.
- Pediatric dose for whole blood is 10-20 ml/kg.

Citations

Link

1 Guideline

104: Clinical Management Guidelines for Obstetrician-Gynecologists

[Go to document](#)

Link

4 Cohort Study

109: Death on the battlefield (2001–2011): Implications for the future of combat casualty care

[Go to document](#)

Link

4 Cohort Study

110: Outcomes of traumatic hemorrhagic shock and the epidemiology of preventable death from injury

[Go to document](#)

Link

4 Cohort Study

124: Shock index as a predictor for short-term mortality in helicopter emergency medical services: A registry study

[Go to document](#)

[Link](#)

4 Cohort Study

125: The impact of prehospital whole blood on hemorrhaging trauma patients: A multi-center retrospective study

[Go to document](#)

[Link](#)

4 Cohort Study

126: Prehospital whole blood reduces early mortality in patients with hemorrhagic shock

[Go to document](#)

[Link](#)

4 Cohort Study

127: Prehospital end-tidal carbon dioxide predicts hemorrhagic shock upon emergency department arrival

[Go to document](#)

[Link](#)

4 Cohort Study

130: The Use of Whole Blood Transfusion During Non-Traumatic Resuscitation

[Go to document](#)

[Link](#)

4 Cohort Study

131: Prehospital Transfusion for Gastrointestinal Bleeding

[Go to document](#)

[Link](#)

4 Cohort Study

132: Efficacy and Safety of Whole Blood Transfusion in Non-Trauma Patients

[Go to document](#)

[Link](#)

4 Cohort Study

133: Whole Blood Resuscitation and Association with Survival in Injured Patients with an Elevated Probability of Mortality

[Go to document](#)

[Link](#)

4 Cohort Study

134: Prehospital end-tidal CO₂ as an early marker for transfusion requirement in trauma patients

[Go to document](#)

[Link](#)

8 Expert Opinion

135: Prehospital Hemorrhage Control and Treatment by Clinicians: A Joint Position Statement

[Go to document](#)

[Link](#)

1 Guideline

136: Prehospital Trauma Compendium: Transfusion of Blood Products in Trauma – A Position Statement and Resource Document of NAEMSP

[Go to document](#)

T-08: Ground Level Falls/Lift Assist

Revised 01/06/2026

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

o Was the patient intended to be in the position they were found in? (ie, the person needs help getting into bed due to the lift being broken, no new weakness)

- YES - Provide assistance as needed. Assess for fall risk
-

Score
[Calculate score Lift Assist/Ground Level Fall Checklist](#)

Link
19 Appendices
L: Lift Assist Checklist
[Go to document](#)

o High Risk Features (1 or More positive findings on the Lift Assist Checklist)

- NO – Primary Care Provider Letter Fall Risk Reduction
- YES – Recommend Transport
 - Refusal
 - Contact On-duty Supervisor
 - Give the PCP form
 - Evaluate fall risk

- Provide fall reduction activities

PEARLS

- Ground-level falls are the most common cause of traumatic morbidity and mortality for those over 65.
- Bring assistive devices within reach.
- Any reported fall, patient not in the intended position, or new inability to ambulate or transfer should prompt early transport requests to facilitate prompt transport.
- The PCP form should be provided to each encounter.
- Patients with reported LOC, age >65, or on any reported antiplatelet or anticoagulant therapy, who have nausea or vomiting, or seizures, are at increased risk of a clinically significant traumatic brain injury even from minor trauma.

Citations

Link
4 Cohort Study
137: A Descriptive Study of the “Lift-Assist” Call
[Go to document](#)

Link
4 Cohort Study
138: Morbidity and Mortality Associated with Prehospital “Lift-assist” Calls
[Go to document](#)

T-09: Bleeding Vascular Bed

Revised 01/06/2026

All Responders

- Penetrating trauma

[Link](#)

9 Trauma

T-06: Multisystem Trauma

[Go to document](#)

- Open fracture

[Link](#)

9 Trauma

T-04: Extremity Trauma

[Go to document](#)

- Direct Pressure

- Attempt to find the bleeding source
- Use hemostatic gauze, if available
- Apply direct pressure for 5 minutes
- If bleeding is controlled, apply a pressure dressing
- Continue to evaluate for continued bleeding

[Link](#)

9 Trauma

T-07: Hemorrhagic Shock

[Go to document](#)

Paramedics

- Continued bleeding despite direct pressure

▪

Medication**Tranexamic Acid (TXA)****Route** Transdermal **Dose** 500 mg **Conc.** 1 g in 10 mL**Note:** Soak 500mg of TXA on Gauze and apply to wound

- Apply direct pressure for at least 10 minutes
- If bleeding is controlled, apply a pressure dressing

PEARLS

- Point pressure with a finger is the best way to control bleeding.
- Use of a bottle cap to control fistula bleeding has been shown to be effective,
- Avoid bulky dressings, as they can lead to significant blood loss before recognition of a bleed through.

Citations

10 Obstetric/Neonate

OB-01: Childbirth / Labor

Revised 01/06/2026

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

o Active Labor

▪ Consider:

Link

10 Obstetric/Neonate

OB-02: Vaginal Bleeding

[Go to document](#)

Link

10 Obstetric/Neonate

OB-03: Eclampsia

[Go to document](#)

▪ Visually inspect for crowning

▫ If no crowning, monitor and reassess

▫ If crowning

• Priority symptoms, expedite transport, and notify OB

<36 weeks

Abnormal Presentation

- Severe Vaginal bleeding
- Multiple presentation
- >36 weeks
 - Childbirth procedure

Score
[Calculate score APGAR](#)

- Prolapsed Cord
 - Place in the knee/chest position
 - Push on the infants' presenting parts
- Neonate

Link
10 Obstetric/Neonate
OB-04: Newborn / Neonate
[Go to document](#)

▪ Consider:

Link
8 Adult - Medical
M-12: Hypotension
[Go to document](#)

Link
9 Trauma
T-07: Hemorrhagic Shock
[Go to document](#)

PEARLS

- Document the time of delivery and record APGAR at 1- and 5-minutes following birth.

- Allow the neonate to nurse if stable and massage the uterine fundus to reduce postpartum hemorrhage.
- Vaginal lacerations should be controlled with direct pressure.
- Always have a chaperone present when examining a patient's perineum

Citations

OB-02: Vaginal Bleeding

Revised 01/06/2026

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

o Active labor

Link

10 Obstetric/Neonate

OB-01: Childbirth / Labor

[Go to document](#)

o Postpartum hemorrhage

- Fundal Massage
- Encourage Breastfeeding
- Consider:

Link

8 Adult - Medical

M-12: Hypotension

[Go to document](#)

Link

9 Trauma

T-07: Hemorrhagic Shock

[Go to document](#)

o Abnormal Uterine Bleeding

- Do not pack the vagina
- Document # of pad/tampon use
- Consider

Link

8 Adult - Medical

M-12: Hypotension

[Go to document](#)

Link

9 Trauma

T-07: Hemorrhagic Shock

[Go to document](#)

PEARLS

- o Always have a chaperone present when examining a patient's perineum
- o Vaginal lacerations should be controlled with direct pressure.
- o Postpartum hemorrhage is defined as >1 L blood loss or >500 ml with signs and symptoms.
- o Patients >20 weeks should be transported in the left lateral position.

Citations

Link

1 Guideline

104: Clinical Management Guidelines for Obstetrician-Gynecologists

[Go to document](#)

OB-03: Eclampsia

Revised 01/06/2026

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

- Evaluate: >20 weeks of Gestation to 6-8 weeks postpartum

Paramedic

- Hypertension: SBP >160

-

Medication

Labetalol (first dose)

Routes IV / IO **Dose** 20 mg **Conc.** Multiple

Note: Slow IV/IO push.

Paramedic Adult

- After 10 minutes, is SBP >140

-

Medication

Labetalol (second dose)

Routes IV / IO **Dose** 40 mg **Conc.** Multiple

Note: Slow IV/IO push.

Paramedic Adult

- After 10 minutes, is SBP >140

- **Medication**
Labetalol (third dose)
Routes IV / IO **Dose** 80 mg **Conc.** Multiple
Note: Slow IV/IO push.
Paramedic *Adult*

○ Seizure

- **Medication**
Magnesium Sulfate
Routes IV / IO **Dose** 4 g **Conc.** Multiple
Note: Slow IV/IO push
Paramedic *Adult*

or

- **Medication**
Magnesium Sulfate
Route IM **Dose** 8 g **Conc.** Multiple
Note: 4g in each leg
Paramedic *Adult*

- Treat hypertension as above, in addition to Magnesium
- Refractory or pre-existing Seizure Disorder

Link
8 Adult - Medical
M-19: Seizure
[Go to document](#)

PEARLS

- The patient must have continuous cardiac monitoring
- Patients with seizures from eclampsia are different from pregnant patients with known seizure disorders and should be prioritized for magnesium administration.

- Be sure to differentiate with your history whether your patient has known seizures and is on seizure medication (or is non-compliant with seizure meds), OR if she has developed hypertension during pregnancy and does not have a history of seizures.
- A woman may have pre-eclampsia or eclampsia up to 6-8 weeks AFTER delivery

Citations

Link

1 Guideline

105: Emergent Therapy for Acute-Onset, Severe Hypertension During Pregnancy and the Postpartum Period

[Go to document](#)

Link

2 Meta-Analysis

106: Drugs for the treatment of very high blood pressure during pregnancy

[Go to document](#)

OB-04: Newborn / Neonate

Revised 01/06/2026

II Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

- Stimulate
 - Vigorously dry
 - Keep warm
 - Suction mouth and nose
- No Respirations to stimulation
 - BVM with Oxygen
 - Aggressive Suctioning
- After BVM Support for 30 seconds
 - HR <60
 - CPR

CPR Tool

Tempo: 110 compressions per minute

Cycle: 2 minutes

[Reference: CPR Guidelines](#)

- Reassess HR
- HR 60-100

- BVM with oxygen supplementation for 30 seconds at 40-60 BPM
- Reassess HR
 - HR <100 start CPR

CPR Tool
Tempo: 110 compressions per minute
Cycle: 2 minutes
Reference: [CPR Guidelines](#)

- HR >100
 - Monitor
 - 5-minute APGAR

Score
[Calculate score APGAR](#)

- Continue O2 if <8

▪ **HR >100**

- Monitor
- 5-minute APGAR

Score
[Calculate score APGAR](#)

- Continue O2 if <8

◦ **Glucose <50**

- **Medication**
Dextrose 10% (newborn to 3kg) (D10)
Routes IV / IO **Dose** 2–4 mL/kg
Note:
Paramedic *AEMT* *Pediatric*

PEARLS

- If power suction is used, do not exceed 100 mmHg
- CPR in neonates is 120 compressions/min with a ratio of 3:1
- Keep neonates warm, consider the use of a clean plastic bag if dry towels are not available
- Mothers who have sedation or narcotics prior to birth may lead to neonatal sedation. Contact OLMD before administering Narcan, as it can lead to seizures for the neonate
- After delivery, keep the newborn at the level of the mother's pelvis until the umbilical cord stops pulsating.
- ACOG defines delayed cord clamping as 30-60 seconds following birth.

Citations

Link

1 Guideline

107: Neonatal Life Support: 2020 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science With Treatment Recommendations

[Go to document](#)

11 Ped - Cardiac Arrest

PA-01: Cardiac Arrest, Pediatric

Revised 01/06/2026

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

o If traumatic arrest

Link

9 Trauma

T-01: Trauma Circulatory Arrest

[Go to document](#)

o If an obvious death

Link

3 Universal

U-04: Deceased Person

[Go to document](#)

o Start Manual CPR

CPR Tool

Tempo: 110 compressions per minute

Cycle: 2 minutes

[Reference: CPR Guidelines](#)

- AED Placement
 - Anterior/Posterior Preferred

EMT or higher

- Must be specially credentialed

- Establish IV/IO

Link
3 Universal
U-03: IV Access
[Go to document](#)

- Supraglottic Airway

Link
13 Ped - Respiratory
PR-01: Airway, Pediatric
[Go to document](#)

Reference
[Reference Pediatric Airway Size](#)

Paramedic

- Airway Procedure

Link
13 Ped - Respiratory
PR-01: Airway, Pediatric
[Go to document](#)

Reference
[Reference Pediatric Airway Size](#)

- Appropriate Rhythm-Based Protocol

PEARLS

- Crews should identify roles before arrival at the patient's
- Afford pediatric patients the same high-quality resuscitation as adults, resuscitation where they are found, and prevent delays
- EtCO2 waveform should be used to confirm the airway and assess compression
- No more than 10-second pauses are appropriate for determining rhythm or checking for pulse. IF NO PULSE AFTER 10 SECONDS, RESUME CPR
- Time to first epinephrine is a quality measure.
- In Cardiac Arrest, access in order of access preference is IV, Humeral IO, Distal Femur, Proximal tibia
- A Pediatric Weight-based Dosing Tool MUST be used for all Pediatric Patients and is recommended for adult patients.

Citations

Link
4 Cohort Study
20: Time to Epinephrine Administration and Survival From Nonshockable Out-of-Hospital Cardiac Arrest Among Children and Adults.
[Go to document](#)

Link
1 Guideline
22: 2022 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science With Treatment Recommendations: Summary From the Basic Life Support; Advanced Life Support; Pediatric Life Support; Neonatal Life Support; Education, Implementation, and Teams; and First Aid Task Forces
[Go to document](#)

Link

1 Guideline

139: Part 4: Pediatric Basic and Advanced Life Support: 2020 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care

[Go to document](#)

Link

2 Meta-Analysis

141: Pediatric timing of epinephrine doses: A systematic review

[Go to document](#)

Link

4 Cohort Study

163: Early On-Scene Management of Pediatric Out-of-Hospital Cardiac Arrest Can Result in Improved Likelihood for Neurologically Intact Survival

[Go to document](#)

PA-02: Asystole / PEA

Revised 01/06/2026

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

- Manual CPR
- Check rhythm every 2 minutes

CPR Tool

Tempo: 110 compressions per minute

Cycle: 2 minutes

Reference: [CPR Guidelines](#)

◦ Consider Correctable Causes

▪ Hypoxia

Link

13 Ped - Respiratory

PR-01: Airway, Pediatric

[Go to document](#)

▪ Hypothermia

Link

8 Adult - Medical

M-13: Hypothermia

[Go to document](#)

▪ Hyperthermia

Link

8 Adult - Medical

M-10: Hyperthermia

[Go to document](#)

▪ Hypoglycemia

Link

14 Ped - Medical

PM-02: Altered Mental Status

[Go to document](#)

▪ Hyperkalemia

Link

8 Adult - Medical

M-11: Hyperkalemia

[Go to document](#)

▪ Overdose

Link

14 Ped - Medical

PM-02: Altered Mental Status

[Go to document](#)

▪ Tension Pneumothorax

Link

15 Ped - Trauma

PT-03: Multisystem Trauma

[Go to document](#)

○ If ROSC

Link
11 Ped - Cardiac Arrest
PA-04: Post Resuscitation Care
[Go to document](#)

AEMT or higher

- Medication
Normal Saline (NS, fluids)
Routes IV / IO **Dose** 20 mL/kg
Note:
Paramedic *AEMT* *Pediatric*

Paramedic

- The time to first epinephrine should be less than 10 minutes
- Acidosis

- Medication
Sodium Bicarbonate
Routes IV / IO **Dose** 1 mEq/kg **Conc.** 50 mEq in 50 mL
Note:
Paramedic *Pediatric* *Adult*

- Epinephrine

- Medication
Epinephrine (1:10k)
Routes IV / IO **Dose** 0.01 mg/kg **Max. dose** 0.5 mg **Conc.** 1 mg in 10 mL
Note: every 5 mins.
Paramedic *Pediatric*

OR (drip can be started following initial push)

- **Medication**
Epinephrine Infusion (Asytrole/PEA)
Routes IV / IO **Dose** 1 mcg/kg/min **Max. dose** 100 mcg/min **Conc.** 1 mg/mL
Note:
Paramedic *Pediatric* *Adult*

- If no ROSC

Contact
On-Call Medical Director
Note: Use Pulsara to contact on-call Medical Direction.

PEARLS

- Crews should identify roles before arrival at the patient's side. Look up weight-based volumes prior to arrival based on age.
- A dose of epinephrine may be given as a bolus before initiating the drip.
- EtCO₂ waveform should be used to confirm the airway and assess compression
- A single defibrillation at maximum energy setting can be used if the initial rhythm is asystole.
- No more than 10-second pauses are appropriate for assessing rhythm or checking for pulse. IF NO PULSE AFTER 10 SECONDS, RESUME CPR
- Time to first epinephrine is a quality measure.
- In Cardiac Arrest, access in order of access preference is IV, Humeral IO, Distal Femur, Proximal tibia.
- Patients with PEA may be in a low-flow state and have a non-palpable pulse. Correction of metabolic or respiratory acidosis, improved oxygenation, fluid support, and increased pressor administration can improve systemic blood pressure.
- A pediatric weight-based dosing tool must be used for all Pediatric Patients and is recommended for adult patients.

Citations

Link

1 Guideline

22: 2022 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science With Treatment Recommendations: Summary From the Basic Life Support; Advanced Life Support; Pediatric Life Support; Neonatal Life Support; Education, Implementation, and Teams; and First Aid Task Forces

[Go to document](#)

Link

1 Guideline

139: Part 4: Pediatric Basic and Advanced Life Support: 2020 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care

[Go to document](#)

Link

2 Meta-Analysis

141: Pediatric timing of epinephrine doses: A systematic review

[Go to document](#)

Link

4 Cohort Study

163: Early On-Scene Management of Pediatric Out-of-Hospital Cardiac Arrest Can Result in Improved Likelihood for Neurologically Intact Survival

[Go to document](#)

PA-03: Pulseless Ventricular Fibrillation / Ventricular Tachycardia

Revised 01/06/2026

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

- o Check Rhythm every 2 minutes
- o V-fib / V-tach
 - Defibrillate

Medication
Defibrillation
Route Transdermal **Dose** 2–4 j/kg **Max. dose** 360 j
Note: Start at 2 j/kg and increase to 4 j/kg on subsequent

- o If refractory, change vector after the 2nd shock
- o Consider Correctable Causes

- Hypoxia

Link
13 Ped - Respiratory
PR-01: Airway, Pediatric
[Go to document](#)

- Hypothermia

Link

8 Adult - Medical

M-13: Hypothermia

[Go to document](#)

- Hyperthermia

Link

8 Adult - Medical

M-10: Hyperthermia

[Go to document](#)

- Hypoglycemia

Link

14 Ped - Medical

PM-02: Altered Mental Status

[Go to document](#)

- Hyperkalemia

Link

8 Adult - Medical

M-11: Hyperkalemia

[Go to document](#)

- Overdose

Link

14 Ped - Medical

PM-02: Altered Mental Status

[Go to document](#)

- Tension Pneumothorax

Link

15 Ped - Trauma

PT-03: Multisystem Trauma

[Go to document](#)

- o If ROSC

Link

11 Ped - Cardiac Arrest

PA-04: Post Resuscitation Care

[Go to document](#)

Paramedic

- o Acidosis

-

Medication

Sodium Bicarbonate

Routes IV / IO **Dose** 1 mEq/kg **Conc.** 50 mEq in 50 mL

Note:

Paramedic

Pediatric

Adult

- o Epinephrine

-

Medication

Epinephrine (1:10k)

Routes IV / IO **Dose** 0.01 mg/kg **Max. dose** 0.5 mg **Conc.** 1 mg in 10 mL

Note: every 5 mins.

Paramedic

Pediatric

OR (may give bolus prior to starting infusion)

-

Medication

Epinephrine Infusion (VF/VT)

Routes IV / IO **Dose** 0.5 mcg/kg/min **Max. dose** 50 mcg/min **Conc.**
Multiple

Note:

- o Antidysrhythmic

- Medication
Amiodarone (Initial)
Routes IV / IO **Dose** 5 mg/kg **Max. dose** 300 mg **Conc.** 50 mg/mL
Note:

Repeat

- Medication
Amiodarone (Repeat)
Routes IV / IO **Dose** 5 mg/kg **Max. dose** 150 mg **Conc.** Multiple **Give over** 10 minutes
Note:
Paramedic *Pediatric*

OR

- Medication
Lidocaine (initial)
Routes IV / IO **Dose** 1 mg/kg **Conc.** 100 mg in 5 mL
Note:
Paramedic *Pediatric* *Adult*

Repeat

- Medication
Lidocaine (repeat)
Routes IV / IO **Dose** 0.5 mg/kg **Conc.** 100 mg in 5 mL
Note:
Paramedic *Adult*

PEARLS

- Crews should identify roles before arrival at the patient
- A dose of epinephrine may be administered as a bolus before initiating a continuous infusion.
- EtCO₂ waveform should be used to confirm the airway and assess compression
- A single defibrillation at maximum energy can be used if the initial rhythm is asystole.

- No more than 10-second pauses are appropriate for assessing rhythm or checking for pulse. IF NO PULSE AFTER 10 SECONDS, RESUME CPR
- Time to first epinephrine is a quality measure.
- In Cardiac Arrest, access in order of access preference is IV, Humeral IO, Distal Femur, Proximal tibia.
- The goal for antidysrhythmic administration is <10 minutes
- A Pediatric Weight-based Dosing Tool MUST be used for all Pediatric Patients and is recommended for adult patients.

Citations

Link

1 Guideline

22: 2022 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science With Treatment Recommendations: Summary From the Basic Life Support; Advanced Life Support; Pediatric Life Support; Neonatal Life Support; Education, Implementation, and Teams; and First Aid Task Forces

[Go to document](#)

Link

1 Guideline

139: Part 4: Pediatric Basic and Advanced Life Support: 2020 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care

[Go to document](#)

Link

4 Cohort Study

163: Early On-Scene Management of Pediatric Out-of-Hospital Cardiac Arrest Can Result in Improved Likelihood for Neurologically Intact Survival

[Go to document](#)

PA-04: Post Resuscitation Care

Revised 01/06/2026

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

- **Slow Down**
- Check BP/EKG
- Confirm Airway and Access
- Goals
 - SpO2 >90% (Consider PEEP)
 - Normal SBP for age

Reference
[Reference Pediatric & Adult Vital Signs](#)

- EtCO2 35-45

Link
14 Ped - Medical
PM-05: Hypotension
[Go to document](#)

- Head Bed to 30 Degrees
- Transport to the closest pediatric center

Paramedic

- If Consciousness is interfering with safe transport

▪

Medication

Ketamine**Routes** IV / IO **Dose** 1–2 mg/kg **Conc.** 50 mg/mL**Note:**

Paramedic

Pediatric

Adult

PEARLS

- Norepinephrine is the preferred post-arrest pressor
- EtCO₂ waveform should be used to confirm the airway and assess compression
- There is an increased risk of rearrest with hypotension or hypoxia.
- A Pediatric Weight-based Dosing Tool **MUST** be used for all Pediatric Patients and is recommended for adult patients.

Citations

Link

1 Guideline

139: Part 4: Pediatric Basic and Advanced Life Support: 2020 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care

[Go to document](#)

12 Ped - Cardiac

PC-01: Bradycardia

Revised 01/06/2026

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

- If no signs of poor perfusion, low BP, or respiratory distress
 - Monitor
 - Ensure the patient is warm

- If HR <60 with poor perfusion despite airway interventions

Link

11 Ped - Cardiac Arrest

PA-01: Cardiac Arrest, Pediatric

[Go to document](#)

AEMT or higher

- Signs of poor perfusion, low BP, or respiratory distress and HR > 60

- **Medication**
Normal Saline (NS, fluids)
Routes IV / IO **Dose** 20 mL/kg
Note: May repeat x1
Paramedic *AEMT* *Pediatric*

Paramedic

- **Medication**
Epinephrine (1:10k)
Routes IV / IO **Dose** 0.01 mg/kg **Conc.** 1 mg in 10 mL
Note: q 3-5 mins
Paramedic *Pediatric*

○ If refractory

- **Medication**
Atropine
Routes IV / IO **Dose** 0.02 mg/kg **Max. dose** 1 mg **Conc.** Multiple
Note: May repeat x1
Paramedic *Pediatric*

○ If refractory to atropine

- Contact Medical Control

Contact
On-Call Medical Director
Note: Use Pulsara to contact on-call Medical Direction.

- Transcutaneous Pacing 80 bpm
- Confirm Mechanical Capture

PEARLS

- Consider fundamental interventions first. Ensure oxygenation and consider a fluid bolus first.

- Consider causes of bradycardia, including hypoxia, hypoglycemia, medication overdose, especially calcium and beta blockers, acidosis, and renal failure.
- Use ultrasound if available to confirm mechanical capture via vascular or cardiac ultrasound.
- A Pediatric Weight-based Dosing Tool MUST be used for all Pediatric Patients and is recommended for adult patients.

Citations

Link

1 Guideline

139: Part 4: Pediatric Basic and Advanced Life Support: 2020 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care

[Go to document](#)

PC-02: Supraventricular Tachycardia

Revised 01/06/2026

All Providers

Link

3 Universal

U-01: Universal Care

[Go to document](#)

○ Evaluate for an underlying cause

▪ Dehydration

Link

14 Ped - Medical

PM-05: Hypotension

[Go to document](#)

▪ Overdose

Link

8 Adult - Medical

M-16: Overdose / Toxic Ingestion

[Go to document](#)

▪ Pain

Link

14 Ped - Medical

PM-07: Pain Management

[Go to document](#)

▪ Sepsis

Link
14 Ped - Medical
PM-09: Sepsis
[Go to document](#)

Paramedic

- QRS > 120 msec or Hx of WPW

Link
12 Ped - Cardiac
PC-03: Wide Complex Tachycardia (Pulse)
[Go to document](#)

- If AMS, hypotension, or signs of poor perfusion

- Medication
Synchronized Cardioversion
Route Transdermal **Dose** 0.5–1 j/kg **Max. total dose** 360 j
Note:

- May Repeat

- Medication
Synchronized Cardioversion
Route Transdermal **Dose** 2 j/kg **Max. total dose** 360 j
Note:

- Consider Procedural Sedation

Link
8 Adult - Medical
M-18: Procedural Sedation
[Go to document](#)

- If refractory to cardioversion

- | |
|---|
| Medication Adenosine (first dose) (Adenocard) Route IV Dose 0.1 mg/kg Max. dose 12 mg Conc. Multiple Note: May repeat x1, see repeat dose. <i>Paramedic</i> <i>Pediatric</i> |
|---|

- | |
|--|
| Medication Adenosine (repeat dose) (Adenocard) Route IV Dose 0.2 mg/kg Max. dose 12 mg Conc. Multiple Note: May repeat x1, see repeat dose. <i>Paramedic</i> <i>Pediatric</i> |
|--|

- If no signs of AMS, hypotension, or poor perfusion

- Modified vagal maneuver

- | |
|---|
| Medication Adenosine (first dose) (Adenocard) Route IV Dose 0.1 mg/kg Max. dose 12 mg Conc. Multiple Note: May repeat x1, see repeat dose. <i>Paramedic</i> <i>Pediatric</i> |
|---|

- | |
|--|
| Medication Adenosine (repeat dose) (Adenocard) Route IV Dose 0.2 mg/kg Max. dose 12 mg Conc. Multiple Note: May repeat x1, see repeat dose. <i>Paramedic</i> <i>Pediatric</i> |
|--|

- If refractory to treatment

| |
|---|
| Contact On-Call Medical Director Note: Use Pulsara to contact on-call Medical Direction. |
|---|

PEARLS

- Consider fundamental interventions first. Ensure oxygenation and consider a fluid bolus first.
- Consider causes of tachycardia, including hypoxia, hypoglycemia, medication overdose, especially sympathomimetic drugs, acidosis, and renal failure
- Vagal maneuvers may include a cold ice pack to the face for 15-30 seconds or holding the knees to the chest for 15-30 seconds for children who cannot follow directions to bear down.
- A Pediatric Weight-based Dosing Tool MUST be used for all Pediatric Patients and is recommended for adult patients.

Citations

Link

3 RCT

55: Postural modification to the standard Valsalva manoeuvre for emergency treatment of supraventricular tachycardias (REVERT): a randomised controlled trial.

[Go to document](#)

Link

1 Guideline

139: Part 4: Pediatric Basic and Advanced Life Support: 2020 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care

[Go to document](#)

Link

4 Cohort Study

142: Use of Adenosine in the Treatment of Supraventricular Tachycardia in a Pediatric Emergency Department

[Go to document](#)

PC-03: Wide Complex Tachycardia (Pulse)

Revised 01/06/2026

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

○ Evaluate for an underlying cause

▪ Dehydration

Link

14 Ped - Medical

PM-05: Hypotension

[Go to document](#)

▪ Overdose

Link

8 Adult - Medical

M-16: Overdose / Toxic Ingestion

[Go to document](#)

▪ Pain

Link

14 Ped - Medical

PM-07: Pain Management

[Go to document](#)

▪ Sepsis

Link
14 Ped - Medical
PM-09: Sepsis
[Go to document](#)

Paramedic

- If AMS, hypotension, or signs of poor perfusion

- | |
|--|
| Medication |
| Synchronized Cardioversion |
| Route Transdermal Dose 0.5–1 j/kg Max. total dose 360 j |
| Note: |

- May Repeat

- | |
|--|
| Medication |
| Synchronized Cardioversion |
| Route Transdermal Dose 2 j/kg Max. total dose 360 j |
| Note: |

- Consider procedural sedation

Link
8 Adult - Medical
M-18: Procedural Sedation
[Go to document](#)

- If refractory

- | |
|---|
| Medication |
| Amiodarone (Repeat) |
| Routes IV / IO Dose 5 mg/kg Max. dose 150 mg Conc. Multiple Give over 10 minutes |
| Note: |
| <i>Paramedic</i> <i>Pediatric</i> |

- Torsades de Pointes

- | |
|---|
| Medication |
| Magnesium Sulfate |
| Routes IV / IO Dose 50 mg/kg Max. dose 2 g Conc. Multiple Give over 20 minutes |
| Note: |
| <i>Paramedic</i> <i>Pediatric</i> |

- If no signs of AMS, hypotension, or signs of poor perfusion

- | |
|---|
| Medication |
| Amiodarone (Repeat) |
| Routes IV / IO Dose 5 mg/kg Max. dose 150 mg Conc. Multiple Give over 10 minutes |
| Note: |
| <i>Paramedic</i> <i>Pediatric</i> |

- Torsades de Pointes

- | |
|---|
| Medication |
| Magnesium Sulfate |
| Routes IV / IO Dose 50 mg/kg Max. dose 2 g Conc. Multiple Give over 20 minutes |
| Note: |
| <i>Paramedic</i> <i>Pediatric</i> |

PEARLS

- Consider fundamental interventions first. Ensure oxygenation and consider a fluid bolus first.
- Consider causes of tachycardia, including hypoxia, hypoglycemia, medication overdose, especially sympathomimetic drugs, acidosis, and renal failure.

- A Pediatric Weight-based Dosing Tool MUST be used for all Pediatric Patients and is recommended for adult patients.

Citations

Link

1 Guideline

139: Part 4: Pediatric Basic and Advanced Life Support: 2020 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care

[Go to document](#)

13 Ped - Respiratory

PR-01: Airway, Pediatric

Revised 01/06/2026

Assess Airway / Breathing

- Respiratory rate & effort
- Pulse oximetry
- EtCO₂ monitoring
- **Adequate**
 - Supplemental Oxygen PRN

Inadequate Airway or Breathing

Fundamental Maneuvers

- Oxygen PRN
- Padding under the shoulders
- Open Airway/Suction
- Insert NPA/OPA
- Consider BVM
- **Successful**
 - **All Responders:** Continue BVM or move to definitive airway
- **Becomes Inadequate**
 - Restart **fundamental maneuvers**

Obstruction Suspected

- **All Responders:** Fundamental foreign body airway dislodgment
- **AEMT or higher:** Video / direct laryngoscopy
- **Paramedic:** If unable to visualize, consider intubation to the right mainstem

Definitive airway

- **EMT or higher:** Supraglottic airway
- **Paramedic:** Oral tracheal intubation if the gag reflex is not intact

Reference

[Reference Pediatric Airway Size](#)

- **Intact Gag reflex:** Medication-assisted intubation

- Must be specially credentialed

Link

6 Adult - Respiratory

R-05: Medication Assisted Intubation (MAI)

[Go to document](#)

- Unsuccessful attempts

Link

13 Ped - Respiratory

PR-02: Airway, Failed, Pediatric

[Go to document](#)

PEARLS

- Waveform capnography (EtCO₂) & pulse oximetry are Mandatory with all methods of advanced airways.
- Failure to perform EtCO₂ may result in de-credentialing.
- Use of a Bougie should be standard practice with continuous suctioning, apneic oxygenation, and head-up positioning.
- If difficult intubation is anticipated, consider early use of SGA and aggressive suctioning.
- In pediatric patients, fundamental airway maneuvers are preferred over advanced airway skills.
- The use of Inline Viral filters is highly recommended.
- Secure an advanced airway with a tube holder or an appropriate device and document the depth at the lips.

- Avoid lying patients in the supine position, elevate the head 30°

Citations

Link

1 Guideline

8: Evidence-Based Guideline for Prehospital Airway Management

[Go to document](#)

Link

1 Guideline

13: European Resuscitation Council Guidelines 2021: Cardiac arrest in special circumstances.

[Go to document](#)

Link

1 Guideline

139: Part 4: Pediatric Basic and Advanced Life Support: 2020 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care

[Go to document](#)

PR-02: Airway, Failed, Pediatric

Revised 01/04/2026

All Responders

- 2 Failed Attempts or Anatomy Precludes Intubation
 - BVM with good chest rise; SpO₂ >90%; EtCO₂ Waveform?
 - **YES – All providers:**
 - OPA/NPA
 - BVM Ventilation
 - **NO – Paramedic:**
 - 1 Additional Attempt by a more experienced provider
- Facial trauma or obstruction preventing BVM or SGA?
 - **YES**
 - **Paramedic** : – Surgical Airway
 - **NO - EMT or higher:**
 - Insert SGA
 - SpO₂ >90%; EtCO₂ Waveform?
 - **NO**
 - **Paramedic** Surgical Airway
 - **YES**
 - **EMT or higher:** Maintain oxygenation and hemodynamics

PEARLS

- Surgical airway is contraindicated in patients younger than 10 years; use needle cricothyroidotomy instead.
- In pediatric patients, fundamental airway maneuvers are preferred over advanced airway skills.

- Waveform capnography (EtCO₂) & pulse oximetry are Mandatory with all methods of advanced airways.
- Failure to perform EtCO₂ may result in decredentialing.
- Fundamental airway maneuvers are preferred for pediatric patients
- Failed intubation attempts require repositioning and airway clearance

Citations

PR-03: Respiratory Distress

Revised 01/06/2026

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

EMT and higher

- Wheezing

- | |
|---|
| Medication Albuterol MDI Route Spray Dose 4 puffs Note: <i>Paramedic</i> <i>AEMT</i> <i>EMT</i> <i>Adult</i> |
|---|

OR

- | |
|---|
| Medication Albuterol Route Nebulized Dose 2.5 mg Conc. Multiple Note: May repeat, max 5 mg <i>Paramedic</i> <i>AEMT</i> <i>EMT</i> <i>Pediatric</i> |
|---|

- Consider CPAP 5-15 cm H2O if an appropriately sized mask is available

- Stridor

- Consider Foreign Body

- Medication
Epinephrine (1:1k)
Route Nebulized **Dose** 3 mg **Conc.** 1 mg/mL
Note: Diluted with 2 ml NS
Paramedic AEMT Pediatric Adult

AEMT and higher

- Wheezing, severe symptoms

- Medication
Epinephrine (1:1k)
Route IM **Dose** 0.01 mg/kg **Max. total dose** 0.5 mg **Conc.** 1 mg/mL
Note:
Paramedic AEMT EMT Pediatric

- Stridor

- Consider epinephrine

- Medication
Epinephrine (1:1k)
Route IM **Dose** 0.01 mg/kg **Max. total dose** 0.5 mg **Conc.** 1 mg/mL
Note:
Paramedic AEMT EMT Pediatric

Paramedic

- Wheezing, severe symptoms

- Medication
Magnesium Sulfate
Routes IV / IO **Dose** 50 mg/kg **Max. dose** 2 g **Conc.** Multiple
Note: Over 10 minutes
Paramedic *Pediatric*

- Medication
Dexamethasone
Routes IV / IO / IM / PO **Dose** 0.6 mg/kg **Max. dose** 10 mg **Conc.** Multiple
Note:
Paramedic *Pediatric*

○ Stridor

- Medication
Dexamethasone
Routes IV / IO / IM / PO **Dose** 0.6 mg/kg **Max. dose** 10 mg **Conc.** Multiple
Note:
Paramedic *Pediatric*

○ Anxiolysis treatment

- Medication
Ketamine
Routes IV / IO **Dose** 0.25 mg/kg **Max. dose** 25 mg **Conc.** 50 mg/mL
Note:

OR

- Medication
Midazolam (versed)
Routes IV / IO **Dose** 0.5 mg/kg **Max. dose** 5 mg **Conc.** 5 mg/mL
Note:
Paramedic *Pediatric*

PEARLS

- Early non-invasive ventilation can reduce the need for advanced airway maneuvers.
- Consider pneumonia and pneumothorax as potentially life-threatening causes of respiratory distress.
- Consider ultrasound early to assess for B-lines and lung-slide.
- Consider bilateral pleural decompression and Ketamine in the event of arrest or peri-arrest of a patient with asthma exacerbation.
- Bronchodilators are a quality measure for patients with wheezing.
- In pediatric patients, fundamental airway maneuvers are preferred over advanced airway skills.

Citation

Link

2 Meta-Analysis

12: Epinephrine (adrenaline) compared to selective beta-2-agonist in adults or children with acute asthma: a systematic review and meta-analysis

[Go to document](#)

Link

1 Guideline

14: EAACI guidelines: Anaphylaxis

[Go to document](#)

Link

8 Expert Opinion

15: Pneumothorax and asthma.

[Go to document](#)

Link

2 Meta-Analysis

140: Nebulized epinephrine for croup in children

[Go to document](#)

14 Ped - Medical

PM-01: Allergic Reaction

Revised 01/06/2026

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

- o Moderate / Severe
 - <30 kg Pedi Epi Pen (0.15 mg)
 - >30 kg Adult Epi Pen (0.3 mg)

EMT and higher

- o Mild Reaction

- | |
|---|
| Medication Dexamethasone (Decodron) Route PO Dose 0.6 mg/kg Max. dose 10 mg Conc. Multiple Note: <i>Paramedic AEMT EMT Pediatric</i> |
|---|

- | |
|---|
| Medication Diphenhydramine (Benadryl) Route PO Dose 1 mg/kg Max. dose 50 mg Note: <i>Paramedic AEMT EMT Pediatric</i> |
|---|

o Moderate / Severe Reaction

- All Mild treatments

- | |
|---|
| Medication Epinephrine (1:1k) Route IM Dose 0.01 mg/kg Max. total dose 0.5 mg Conc. 1 mg/mL Note: May repeat x2 <i>Paramedic</i> <i>AEMT</i> <i>EMT</i> <i>Pediatric</i> |
|---|

- Consider CPAP 5 cm - 15 cm H2O PEEP if appropriate sized mask

- | |
|---|
| Medication Albuterol Route Nebulized Dose 2.5 mg Conc. Multiple Note: continuous prn <i>Paramedic</i> <i>AEMT</i> <i>EMT</i> <i>Pediatric</i> |
|---|

AEMT and higher

o Mild Reaction

- | |
|--|
| Medication Diphenhydramine (Benadryl) Routes IV / IO / IM Dose 1 mg/kg Max. dose 50 mg Conc. 50 mg/mL Note: <i>Paramedic</i> <i>AEMT</i> <i>Pediatric</i> |
|--|

Paramedic

o Mild Reaction

- Medication**
Dexamethasone
Routes IV / IO / IM **Dose** 0.6 mg/kg **Max. dose** 10 mg **Conc.** Multiple
Note:
Paramedic *Pediatric*

o Severe with Hypotension

- Medication**
Epinephrine Push Dose (1:100k)
Routes IV / IO **Dose** 1 mcg/kg **Max. dose** 20 mcg **Conc.** 10 mcg/mL
Note: Mix by pulling 1ml of epinephrine 1:10 000 into 9ml normal saline
q 2-3 min
Paramedic *Pediatric*

OR

- Medication**
Epinephrine Infusion
Routes IV / IO **Dose** 0.1–1 mcg/kg/min **Conc.** 1 mg in 1 mL
Note: Titrate to MAP of 65 (Normal SBP for Peds)
For Dial-a-Flow, use the Pump Calculation
Paramedic *Pediatric* *Adult*

PEARLS

- o Epinephrine should be administered anytime there is an allergic reaction and evidence of involvement in two or more body systems.
- o Mild Allergic Reaction (No Respiratory Distress): Itchy/runny nose; sneezing; itchy mouth; a few hives, mild itch; mild nausea, discomfort
- o Moderate Allergic Reaction: Increasing hives, swelling of the lips, eyes, and skin; tightening of the throat or "my throat feels weird"
- o Severe Allergic Reaction (Respiratory Distress): Increasing hives and swelling, significant swelling to lips, tongue, or eyes; increased swelling of the throat, hoarse voice; vomiting, severe cramps, or diarrhea

- **Anaphylaxis:** Respiratory distress with wheezing, repetitive coughing, difficulty swallowing, hypotension with signs of poor perfusion.
- Remove the cause of the allergic reaction.
- All patients with moderate/severe symptoms should also receive the treatments provided for Mild reactions.
- A Pediatric Weight-based Dosing Tool MUST be used for all Pediatric Patients and is recommended for adult patients.

References

Link

1 Guideline

14: EAACI guidelines: Anaphylaxis

[Go to document](#)

PM-02: Altered Mental Status

Revised 01/06/2026

| TABLE 13.1 Mnemonic for Altered Mental Status | |
|---|--|
| A | Alcohol or Drug Intoxication; Atypical migraine (confusional migraine) |
| E | Electrolytes, Environment (hyper/hypothermia), Endocrinopathy, Encephalopathy (Wernicke), Epilepsy |
| I | Infection (meningitis, encephalitis, sepsis) |
| O | Overdose, Oxygen (hypoxia, pulmonary embolism) |
| U | Uremia |
| T | Trauma, Tumor |
| I | Insulin (hypoglycemia, DKA, HHS) |
| P | Poisons, Psychosis |
| S | Stroke, Status epilepticus (petit mal) |

DKA, Diabetic ketoacidosis; HHS, hyperosmolar hyperglycemic state.

II Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

- Consider SMR

Link
3 Universal
U-05: Spinal Motion Restriction
[Go to document](#)

- Support ventilations

- **Glucose assessment**

- **If glucose < 50 and not obtunded, and able to take soft foods**

- | |
|--|
| Medication Oral Glucose Route PO Dose 7.5 g ⚠ Must not be obtunded Note: |
|--|

- **If Glucose 50-300**

- Consider toxic ingestion

| |
|--|
| Link 8 Adult - Medical M-16: Overdose / Toxic Ingestion Go to document |
|--|

- Consider other causes

- Head trauma

| |
|---|
| Link 15 Ped - Trauma PT-02: Traumatic Brain Injury Go to document |
|---|

- Stroke

| |
|--|
| Link 8 Adult - Medical M-21: Stroke Go to document |
|--|

- Hypoxia

Link
13 Ped - Respiratory
PR-01: Airway, Pediatric
[Go to document](#)

▫ Seizure

Link
14 Ped - Medical
PM-08: Seizure
[Go to document](#)

▫ Sepsis

Link
14 Ped - Medical
PM-09: Sepsis
[Go to document](#)

AEMT and higher

○ If Glucose < 50 and obtunded

- Medication
Dextrose 10% (newborn to 3kg) (D10)
Routes IV / IO **Dose** 2–4 mL/kg
Note:
Paramedic *AEMT* *Pediatric*

- Medication
Dextrose 10% (3kg to 36kg) (D10)
Routes IV / IO **Dose** 5 mL/kg
Note:
Paramedic *AEMT* *Pediatric*

- If no IV access, place an IO

- If Glucose > 300

- | |
|--|
| Medication |
| Normal Saline |
| Routes IV / IO Dose 20 mL/kg |
| Note: |
| <i>Paramedic</i> <i>AEMT</i> <i>Pediatric</i> <i>Adult</i> |

- Obtain EKG and EtCO₂

Paramedic

- Cardiac monitor / 12-lead

PEARLS

- A Pediatric Weight-based Dosing Tool MUST be used for all Pediatric Patients and is recommended for adult patients.
- Be aware that AMS may be the only presenting sign of toxic environments.
- It is safer to assume hypoglycemia. When in doubt, treat with glucose.
- Beware of patients appearing to have behavioral issues or appearing intoxicated; they may actually be hypoglycemic.
- Check patients with hypoglycemia and those on oral diabetic medications as they drop glucose levels quickly.
- An EtCO₂ <25 with glucose >300 and no signs of infection may suggest DKA.
- A patient with hypoglycemia should eat and have means for checking levels before being allowed to refuse transport.

Citations

PM-03: Behavioral/Sedation

Revised 01/06/2026

Richmond Agitation-Sedation Scale

| Target RASS Value | RASS Description |
|-------------------|---|
| +4 | Combative Combative, Violent, Immediate Danger to Staff |
| +3 | Very Agitated Pulls or Removes Tube(s) or Catheter(s); Aggressive |
| +2 | Agitated Frequent non-Purposeful Movement, Fights Ventilator |
| +1 | Restless Anxious, Apprehensive but Movements are not Aggressive or Vigorous |
| 0 | Alert and Calm |
| -1 | Drowsy Not Fully Alert, but has Sustained Awakening to Voice (Eye Opening & Contact >10sec) |
| -2 | Light Sedation Briefly Awakens to Voice (Eye Opening & Contact <10sec) |
| -3 | Moderate Sedation Movements or Eye Opening to Voice (BUT NO Eye Contact) |
| -4 | Deep Sedation No Response to Voice, BUT has Movement or Eye Opening to Physical Stimulation |
| -5 | Unarousable No Response to Voice or Physical Stimulation |



Mild (RASS +1-2)

- Follows commands
- Irritable
- Pressured Speech
- Redirectable

Moderate (RASS +3)

- Threatening behavior
- Intermittently redirectable
- Motor restlessness/agitation

Severe (RASS +4)

- Violence

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

- o Consider

- Toxic ingestion

Link
8 Adult - Medical
M-16: Overdose / Toxic Ingestion
[Go to document](#)

- AMS

Link
14 Ped - Medical
PM-02: Altered Mental Status
[Go to document](#)

- Head trauma

Link
15 Ped - Trauma
PT-02: Traumatic Brain Injury
[Go to document](#)

- o De-escalate, address fear, agitating factors, safety, and basic needs
- o Check Glucose

Link
14 Ped - Medical
PM-02: Altered Mental Status
[Go to document](#)

◦ Consider LE Nav

- Excluding:
 - Toxic Ingestion
 - Trauma
 - Medical Co-morbidities
 - Inability for ADLS
 - Abnormal Vitals

Paramedic

- Refractory to de-escalation

▪ Mild

◦

Medication

Droperidol

Routes IV / IO / IM **Dose** 0.2 mg/kg **Max. dose** 2.5 mg **Conc.** Multiple

⚠ **Patient may not be prone and must have continuous monitoring**

Note:

Paramedic

Pediatric

▪ Moderate

◦

Medication

Droperidol (moderate)

Routes IM / IV / IO **Dose** 0.2 mg/kg **Max. dose** 5 mg **Conc.** Multiple

⚠ **Patient may not be prone and must have continuous monitoring**

Note:

Paramedic

Pediatric

OR

- ◻ Medication
Midazolam (versed)
Routes IM / IV / IO **Dose** 0.2 mg/kg **Max. dose** 5 mg **Conc.** 5 mg/mL
⚠ **Patient may not be prone and must have continuous monitoring**
Note:

▪ Severe

- ◻ Medication
Ketamine
Route IM **Dose** 5 mg/kg **Conc.** 50 mg/mL
⚠ **Patient may not be prone and must have continuous monitoring**
Note:
Paramedic *Pediatric*

OR

- ◻ Medication
Ketamine
Routes IV / IO **Dose** 2 mg/kg **Conc.** 50 mg/mL
⚠ **Patient may not be prone and must have continuous monitoring**
Note:
Paramedic *Pediatric*

- Avoid physical restraints
- Continuous EKG, SpO₂, and ETCO₂ Monitoring
- 12-LEAD EKG

PEARLS

- NEVER cover the face or allow the patient to be in the prone position for sedation or physical restraint
- A Pediatric Weight-based Dosing Tool MUST be used for all Pediatric Patients and is recommended for adult patients.

- If working with law enforcement, sedation should be considered independently by the provider, and clear communication on the use of physical restraints to administer the sedation dose. Documentation of de-escalation attempts is required.
- Sedation can be safely given IM through clothing
- Evaluate the medical cause of the behavioral presentation
- NEVER cover the face or allow the patient to be in the prone position for sedation or physical restraint
- Medical Control required for clearance LE Nav if any of the following: HR>120, SBP <90, RR>30, or Glucose <60 or >300

Citations

PM-04: Fever / Infection Control

Revised 01/06/2026

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

- Consider appropriate precautions

- Temp < 100.4

- Consider

Link

14 Ped - Medical

PM-09: Sepsis

[Go to document](#)

Link

8 Adult - Medical

M-10: Hyperthermia

[Go to document](#)

EMT and higher

- Temp > 100.4

- Medication
Acetaminophen (liquid) (Tylenol)
Route PO **Dose** 15 mg/kg **Max. dose** 1 g **Conc.** 160 mg in 5 mL
Note:
Paramedic AEMT EMT Pediatric

OR

- Medication
Ibuprofen
Route PO **Dose** 10 mg/kg **Max. dose** 600 mg **Conc.** 100 mg in 5 mL
⚠ Must be >6 months old, not to be used in head trauma.
Note:
Paramedic AEMT EMT Pediatric

▪ Consider

Link
14 Ped - Medical
PM-09: Sepsis
[Go to document](#)

Link
8 Adult - Medical
M-10: Hyperthermia
[Go to document](#)

Paramedic

◦ Temp > 100.4

- Medication
Acetaminophen (Tylenol)
Routes IV / IO **Dose** 15 mg/kg **Max. dose** 1 g **Conc.** 10 mg/mL
Note:
Paramedic Pediatric

▪

Medication**Ketorolac** (Toradol)**Routes** IV / IO / IM **Dose** 0.5 mg/kg **Max. dose** 15 mg **Conc.** 30 mg/mL⚠ **Must be ≥ 2 years old, not to be used in head trauma.****Note:***Paramedic* *Pediatric*

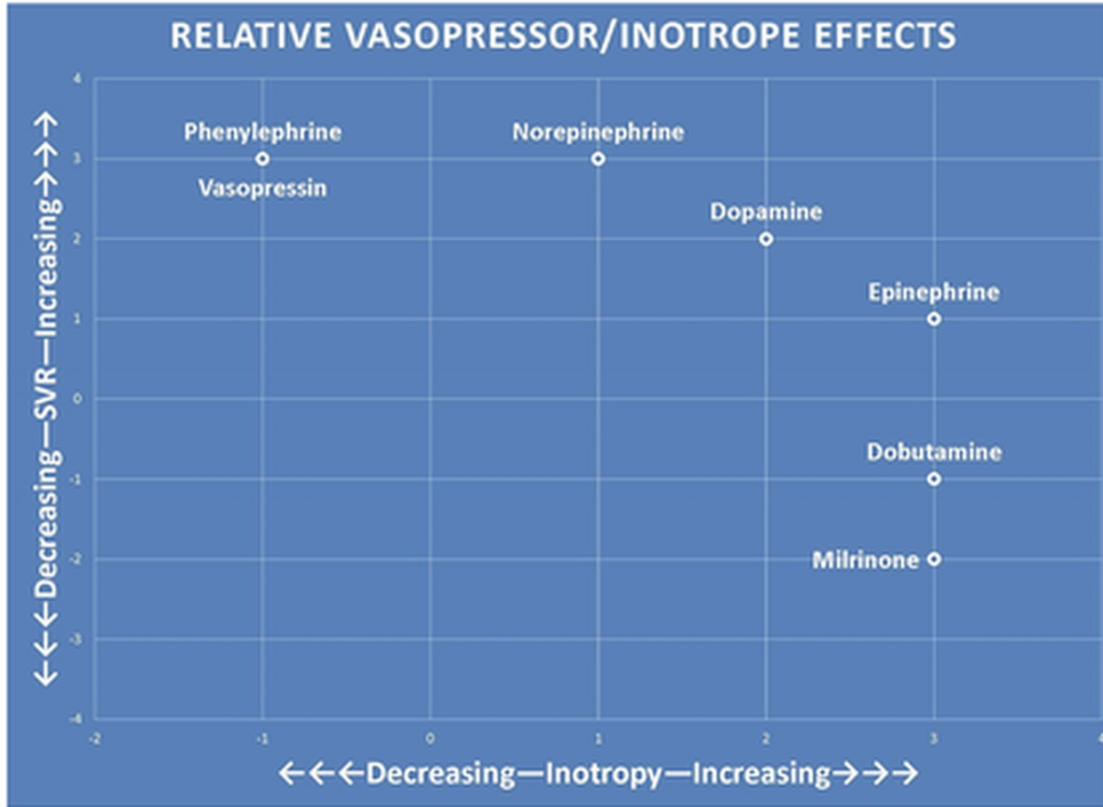
PEARLS

- A Pediatric Weight-based Dosing Tool **MUST** be used for all Pediatric Patients and is recommended for adult patients.
- Consider environmental exposure as a cause for fever. Antipyretics are contraindicated in heat stroke.
- IV Acetaminophen IV is preferred to PO for patients with a history of liver failure.
- Contact Precautions: Gown, gloves, eye protection. Recommended for MRSA, scabies, and zoster.
- Droplet Precautions: Surgical mask, gloves, eye protection. Recommended for Flu, meningitis, mumps, and Strep. A patient with a potentially infectious rash should have these precautions.
- Airborne Precautions: N95, Gloves, Eye protection. Recommended in the initial phase of the outbreak or found to be highly contagious are tuberculosis, measles, chickenpox, and disseminated herpes zoster.

Citations

PM-05: Hypotension

Revised 01/06/2026



All Providers

Link
3 Universal
U-01: Universal Care
[Go to document](#)

- The suspected cause is trauma

Link
15 Ped - Trauma
PT-03: Multisystem Trauma
[Go to document](#)

- The suspected cause is cardiac
 - Appropriate cardiac protocol
 - Evaluate fluid status
 - Norepinephrine is recommended as a first-line va
- Bleeding

Link
15 Ped - Trauma
PT-04: Hemorrhagic Shock
[Go to document](#)

AEMT and higher

- No bleeding or hypo/euvolemic fluid status

- | |
|---|
| Medication Normal Saline (NS, fluids) Routes IV / IO Dose 20 mL/kg Note: <i>Paramedic</i> <i>AEMT</i> <i>Pediatric</i> |
|---|

Paramedic

- Hypervolemic or in concert with fluid resuscitation

- Medication**
Epinephrine Push Dose (1:100k)
Routes IV / IO **Dose** 1 mcg/kg **Max. dose** 20 mcg **Conc.** 10 mcg/mL
Note: Mix by pulling 1ml of epinephrine 1:10 000 into 9ml normal saline q 2-3 min
Paramedic Pediatric

OR (A bolus may be given to bridge to infusion)

- Medication**
Norepinephrine (Levophed)
Routes IV / IO **Dose** 0.1–2 mcg/kg/min **Conc.** Multiple
Note: Titrate to MAP >65 (Normal SBP for Peds)
 For Dial-a-Flow, use the Pump Calculation
Paramedic Pediatric Adult

alternative

- Medication**
Epinephrine Infusion
Routes IV / IO **Dose** 0.1–1 mcg/kg/min **Conc.** 1 mg in 1 mL
Note: Titrate to MAP of 65 (Normal SBP for Peds)
 For Dial-a-Flow, use the Pump Calculation
Paramedic Pediatric Adult

- Titrate to improved signs of perfusion

Primary Vasoactive Medications

| Medication | Adult Dosing | Ped Dosing | Receptor | Notes |
|----------------------------------|-----------------|-------------------|-------------------|--|
| EPINEPHrine | 2–10 mcg/min | 0.05–1 mcg/kg/min | Alpha 1 Beta 1 | <ul style="list-style-type: none"> ↑ heart rate, ↑ contractility, ↑ vasoconstriction Alternate Adult dosing 0.1-0.5 mcg/kg/min |
| Norepinephrine | 2–35 mcg/min | 0.05–2 mcg/kg/min | Alpha 1 Beta 1 | <ul style="list-style-type: none"> Vasoconstriction with small amount of beta 1 effects Alternately in adults 0.05-2 mcg/kg/min |
| Vasopressin | 0.04 units/min | NA for shock | V1 | <ul style="list-style-type: none"> May be used as a second agent |
| Secondary Vasoactive Medications | | | | |
| Medication | Adult Dosing | Ped Dosing | Receptor | Notes |
| DOPamine | 5–20 mcg/kg/min | 5–20 mcg/kg/min | Beta 1 Alpha 1 | <ul style="list-style-type: none"> Moderate doses mainly increase heart rate & contractility High doses mainly cause isolated Alpha 1 vasoconstriction |
| DOBUtamine | 5–20 mcg/kg/min | 5–20 mcg/kg/min | Beta 1 Beta 2 | <ul style="list-style-type: none"> Increased cardiac output Vasodilation may lower blood pressure |
| Phenylephrine | 100–180 mcg/min | 0.1–3 mcg/kg/min | Alpha 1 | <ul style="list-style-type: none"> Typical steady state maintenance 40-60 mcg/min An alpha 1 drug that causes isolated vasoconstriction |

PEARLS

- A Pediatric Weight-based Dosing Tool MUST be used for all Pediatric Patients and is recommended for adult patients.
- A bolus may be given to bridge to infusion
- Fluid boluses and vasopressor support can be administered simultaneously. If the patient is fluid responsive, vasopressors can be titrated off.
- Norepinephrine is the preferred vasopressor drip; however, a push dose of epinephrine can be used as a bridge to the drip.
- Signs of hypervolemia include rales, JVD, hepatic congestion, and pitting lower extremity edema.
- Consider early consultation with OLMD for patients with a history of congenital heart or renal conditions and signs of hypervolemia.

Citations

PM-06: Nausea/Vomiting

Revised 01/06/2026

All Providers

Link

3 Universal

U-01: Universal Care

[Go to document](#)

- Glucose Assessment
 - <50 or >300?

Link

14 Ped - Medical

PM-02: Altered Mental Status

[Go to document](#)

- Hypotension?

Link

14 Ped - Medical

PM-05: Hypotension

[Go to document](#)

EMT and higher

-

Medication

Ondansetron (Zofran)

Route PO **Dose** 0.1 mg/kg **Max. dose** 4 mg **Conc.** 1 mg/mL

Note: Dissolve in 4ml water

Paramedic *AEMT* *EMT* *Pediatric*

AEMT and higher

o

Medication**Ondansetron** (Zofran)**Routes** IV / IO / IM **Dose** 0.1 mg/kg **Max. dose** 4 mg **Conc.** Multiple**Note:***Paramedic* *AEMT* *Pediatric*

PEARLS

- o A Pediatric Weight-based Dosing Tool MUST be used for all Pediatric Patients and is recommended for adult patients.
- o Consider the underlying causes of nausea, including metabolic disorders such as DKA, toxic ingestion, sepsis, and bowel obstruction.

Citations

Link

4 Cohort Study

143: Oral Ondansetron Administration in Children Seeking Emergency Department Care for Acute Gastroenteritis: A Patient-Level Propensity-Matched Analysis[Go to document](#)

PM-07: Pain Management

Revised 01/06/2026



FLACC Pain Rating Scale For infants to 7 years of age

KAISER PERMANENTE
San Diego

| Category | Scoring | | |
|-----------------------|---|---|---|
| | 0 | 1 | 2 |
| F ace | No particular expression or smile | Occasional grimace or frown withdrawn, disinterested | Frequent-constant quiver chin, clenched jaw |
| L egs | Normal position, relaxed | Uneasy, restless, tense | Kicking or legs drawn up |
| A ctivity | Lying quietly, normal position, moves easily | Squirming, shifting back & forth, tense | Arched, rigid or jerking |
| C ry | No cry (awake or asleep) occasional complaint | Moans or whimpers; sobs; frequent complaint | Crying steadily, screams, |
| C onsolability | Content, relaxed | Reassured by occasional touching, hugging, or being talked to, distractible | Difficult to console or comfort |

| CRIES Scale | | | |
|-------------------------|----------------|------------------------------|------------------------------|
| | 0 | 1 | 2 |
| Crying | None | High-pitched | Inconsolable |
| Requires O ₂ | None | <30% FiO ₂ needed | >30% FiO ₂ needed |
| Increased vital signs | Normal HR & BP | Increased HR & BP <20% | Increased HR & BP >20% |
| Expression | Normal | Grimace | Grimace & grunt |
| Sleeplessness | None | Wakes frequently | Awake constantly |

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

- Assess pain severity

EMT and higher

- Pain Score <7

- Medication
Acetaminophen (liquid) (Tylenol)
Route PO **Dose** 15 mg/kg **Max. dose** 1 g **Conc.** 160 mg in 5 mL
Note:
Paramedic AEMT EMT Pediatric

- Medication
Ibuprofen
Route PO **Dose** 10 mg/kg **Max. dose** 600 mg **Conc.** 100 mg in 5 mL
⚠ **Must be >6 months old, not to be used in head trauma.**
Note:
Paramedic *AEMT* *EMT* *Pediatric*

Paramedic

◦ Pain Score <7

- Medication
Ketorolac (Toradol)
Routes IV / IO / IM **Dose** 0.5 mg/kg **Max. dose** 15 mg **Conc.** 30 mg/mL
⚠ **Must be ≥2 years old, not to be used in head trauma.**
Note:
Paramedic *Pediatric*

▪ Acetaminophen IV/IO if PO intolerant

- Medication
Acetaminophen (Tylenol)
Routes IV / IO **Dose** 15 mg/kg **Max. dose** 1 g **Conc.** 10 mg/mL
Note:
Paramedic *Pediatric*

◦ Pain Score >7

- Medication
Fentanyl
Routes IV / IM / IN / IO **Dose** 1 mcg/kg **Max. total dose** 300 mcg **Conc.** 50 mcg/mL
Note: Repeat every 5 minutes until relieved or max dose
Dosed to 65 years or older should be cut by 50 %
Paramedic *Pediatric* *Adult*

OR

- Medication
Ketamine (Pain)
Routes IV / IO **Dose** 0.25 mg/kg **Conc.** 50 mg/mL **Give over** 15 minutes
Note:
Paramedic *Pediatric* *Adult*

alternative

- Medication
Ketamine
Route IN **Dose** 0.5 mg/kg **Conc.** 50 mg/mL
Note: Max 1 ml per naris
Paramedic *Pediatric* *Adult*

Continuous Pulse Ox and EtCO2

Document the pain score after administration

PEARLS

- A Pediatric Weight-based Dosing Tool MUST be used for all Pediatric Patients and is recommended for adult patients.
- Fentanyl is preferred over ketamine for pain. Ketamine can be used for refractory severe pain.
- Vitals will be documented 5 minutes following pain medication administration.
- Multimodal pain management can be employed for severe pain (addition of acetaminophen and/or NSAIDs)
- Pain management for pediatrics is a quality measure.
- Avoid opioids or NSAIDS for headaches.
- Contact OMD for repeat doses

Citations

Link

2 Meta-Analysis

91: What is the Evidence for Using Intranasal Medicine in the Prehospital Setting? A Systematic Review

[Go to document](#)

Link

4 Cohort Study

144: Impact of Prehospital Pain Management on Emergency Department Management of Injured Children

[Go to document](#)

Link

8 Expert Opinion

164: Pain Assessment for Children: Overcoming Challenges and Optimizing Care

[Go to document](#)

PM-08: Seizure

Revised 01/06/2026

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

- o Pregnant?

Link
10 Obstetric/Neonate
OB-03: Eclampsia
[Go to document](#)

- o Active seizure

- Fundamental Airway Management

Link
13 Ped - Respiratory
PR-01: Airway, Pediatric
[Go to document](#)

Reference
[Reference Pediatric Airway Size](#)

- Vagus nerve stimulator?
 - Place the magnet for 60 seconds, and may repeat 3x
 - If the seizure stops, move to postictal care

- No active seizure

- Postictal care

Link
14 Ped - Medical
PM-02: Altered Mental Status
[Go to document](#)

Paramedic

- Active seizure

- First line

- | |
|--|
| Medication Midazolam (versed) Routes IM / IV / IO Dose 0.2 mg/kg Max. dose 5 mg Conc. 5 mg/mL Note: <i>Paramedic</i> <i>Pediatric</i> |
|--|

- Second line (refractory 5 minutes)

- | |
|--|
| Medication Midazolam (versed) Routes IM / IV / IO Dose 0.2 mg/kg Max. dose 5 mg Conc. 5 mg/mL Note: <i>Paramedic</i> <i>Pediatric</i> |
|--|

- | |
|---|
| Medication Levetiracetam (Keppra) Routes IV / IO Dose 60 mg/kg Max. dose 4.5 g Conc. 100 mg/mL Note: Slow IV/IO <i>Paramedic</i> <i>Pediatric</i> <i>Adult</i> |
|---|

- Third line (refractory 5 minutes)

- | |
|--|
| Medication Ketamine Routes IV / IO Dose 1–2 mg/kg Conc. 50 mg/mL Note: <i>Paramedic</i> <i>Pediatric</i> |
|--|

◦ Consider

| |
|--|
| Link 14 Ped - Medical PM-02: Altered Mental Status Go to document |
|--|

- Postictal care

PEARLS

- A Pediatric Weight-based Dosing Tool MUST be used for all Pediatric Patients and is recommended for adult patients.
- Patient seizing following home abortive dose should receive 2nd line treatment from EMS.
- Status epilepticus is two or more successive seizures without a period of consciousness.
- Always consider the underlying cause of seizure, including medication non-compliance, intracranial process, metabolic dysfunction, trauma, withdrawal from alcohol or benzodiazepine.
- Airway monitoring is crucial.
- Patients must return to baseline before refusal can be obtained. Patients who refuse transport must be informed and documented that they are not to drive, swim, operate machinery, or use an open flame until cleared by a doctor.
- OMD must be contacted for all first-time seizures refusing transport.

Citations

Link

1 Guideline

94: Evidence-Based Guideline: Treatment of Convulsive Status Epilepticus in Children and Adults: Report of the Guideline Committee of the American Epilepsy Society

[Go to document](#)

Link

4 Cohort Study

145: Multicenter Evaluation of Prehospital Seizure Management in Children

[Go to document](#)

Link

8 Expert Opinion

146: Prehospital Glucose Testing for Children with Seizures: A Proposed Change in Management

[Go to document](#)

Link

4 Cohort Study

147: The Effectiveness of Intranasal Midazolam for the Treatment of Prehospital Pediatric Seizures: A Non-inferiority Study

[Go to document](#)

Link

7 Case Report

148: Prehospital Treatment of Benzodiazepine-Resistant Pediatric Status Epilepticus with Parenteral Ketamine: A Case Series

[Go to document](#)

PM-09: Sepsis

Revised 01/06/2026

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

Screen for Sepsis Criteria

Suspected infection

AND

Altered mental status (Any GCS <15)

Score

[Calculate score Glasgow Coma Scale \(GCS\) - Infant](#)

Score

[Calculate score Glasgow Coma Scale \(GCS\) - Pediatric 2-5yo](#)

OR

Poor Perfusion (any one item)

Cap Refill > 3 sec.

Mottled skin,

cool, clammy skin,

weak/thready pulse

Plus

EtCO₂ ≤30 mmHg

◦ **If the patient does not meet the criteria: Supportive care, consider:**

Link
14 Ped - Medical
PM-04: Fever / Infection Control
[Go to document](#)

AEMT and higher

- Criteria met? **Initiate Sepsis Alert**

- Medication**
Normal Saline (NS, fluids)
Routes IV / IO **Dose** 20 mL/kg
Note:
Paramedic *AEMT* *Pediatric*

- Hypotension

Link
14 Ped - Medical
PM-05: Hypotension
[Go to document](#)

Paramedic

- Criteria met? **Initiate Sepsis Alert**

- Medication**
Ceftriaxone
Routes IV / IO **Dose** 50 mg/kg **Max. dose** 2 g
Note: Slow IVP
Mix 1 g with 9.6 ml NS
Mix 2 g with 19.2 ml NS
Paramedic *Pediatric*

PEARLS

- These patients should be transported to a facility capable of facilitating early goal-directed therapy for sepsis.
- Administration of effective intravenous antimicrobials within the first hour of recognition of septic shock and severe sepsis is the goal of therapy.
- Consult OLMD for a patient with a history of renal or cardiac disease prior to fluid administration.
- Patients with no significant past medical history can still develop sepsis and should be considered in all patients with altered mental status.
- A Pediatric Weight-based Dosing Tool MUST be used for all Pediatric Patients and is recommended for adult patients as well.

Citations

Link

4 Cohort Study

149: Exhaled end-tidal carbon dioxide as a predictor of lactate and pediatric sepsis

[Go to document](#)

Link

4 Cohort Study

150: Prehospital Recognition and Management of Pediatric Sepsis: A Qualitative Assessment

[Go to document](#)

15 Ped - Trauma

PT-01: Burns

Revised 01/06/2026

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

o Airway

Link

13 Ped - Respiratory

PR-01: Airway, Pediatric

[Go to document](#)

- o Stop the Burning Process
- o Remove rings, bracelets, & constricting items

o Thermal

- Apply cool, running water to burn injury less than 10% BSA for 20 minutes within the first 3 hours
- Cover with a dry sheet or dressings

o Chemical

- Remove clothing
- Expose area
- Brush off any dry chemicals/powder

- Eye Involvement?

Link
8 Adult - Medical
M-08: Eye Complaint
[Go to document](#)

- Continuously flush the area with NS or Water
- Pain Management

Link
14 Ped - Medical
PM-07: Pain Management
[Go to document](#)

| Body Part | Body Surface Area |
|--------------------|-------------------|
| Entire Head & Neck | 9% |
| Entire Right Arm | 9% |
| Entire Left Arm | 9% |
| Entire Trunk | 36% |
| Groin | 1% |
| Entire Right Leg | 18% |
| Entire Left Leg | 18% |

AEMT and higher

- NS IV/IO per Rule of Tens*
 - 10 ml/hr. X% TBSA (add 100 ml/hr for every 10 kg > 80 kg)

PEARLS

- Evaluate BSA (Use chart or use patient's hand (1% BSA))
- Critical Burns: (Transport to Burn Center)
 - 15% BSA 2nd and 3rd Degree Burns for Patients > 16 years of age;
 - 10% BSA 2nd and 3rd Degree Burns for Patients 16 years of age
 - Burns to the airway
 - Burns to the face, eyes, hands, feet, joints, or groin
- Minor Burns: (Do not require Burn Center)
 - < 5% BSA 2nd and 3rd Degree Burns not complicated by airway compromise or trauma.
- Treat potential CO exposure with 100% oxygen.
- Be aware of hypothermia.
- Triage in a lightning strike should prioritize treatment of those in cardiac arrest, as they are likely to be in a shockable rhythm.
- Lightning and high voltage injuries should also have an EKG performed
- A Pediatric Weight-based Dosing Tool MUST be used for all Pediatric Patients and is recommended for adult patients.

Citations

Link

1 Guideline

115: ISBI Practice Guidelines for Burn Care

[Go to document](#)

PT-02: Traumatic Brain Injury

Revised 01/06/2026

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

○ Not an isolated head injury

- MATCH assessment

Link

15 Ped - Trauma

PT-03: Multisystem Trauma

[Go to document](#)

○ Assess GCS

Score

[Calculate score Glasgow Coma Scale \(GCS\) - Infant](#)

Score

[Calculate score Glasgow Coma Scale \(GCS\) - Pediatric 2-5yo](#)

▪ Motor GCS > 4

- Standard care

▪ Motor GCS < 4

- Elevate the head of the bed 30%
- **Airway**

- Maintain SPO2 >90%

[Link](#)

13 Ped - Respiratory

PR-01: Airway, Pediatric

[Go to document](#)

▫ **Blood Pressure**

- Hypotension

[Link](#)

14 Ped - Medical

PM-05: Hypotension

[Go to document](#)

[Link](#)

15 Ped - Trauma

PT-04: Hemorrhagic Shock

[Go to document](#)

▫ **Ventilation**

- Maintain EtCO2 35-45
- If <35 or >45, consider airway protocol

[Link](#)

13 Ped - Respiratory

PR-01: Airway, Pediatric

[Go to document](#)

▫ **Glucose**

- Maintain BGL >60

[Link](#)

14 Ped - Medical

PM-02: Altered Mental Status

[Go to document](#)

Link
14 Ped - Medical
PM-08: Seizure
[Go to document](#)

Link
14 Ped - Medical
PM-06: Nausea/Vomiting
[Go to document](#)

AEMT and higher

- Hypotension

- | |
|---|
| Medication Normal Saline (NS, fluids) Routes IV / IO Dose 20 mL/kg Note: May repeat x1 <i>Paramedic</i> <i>AEMT</i> <i>Pediatric</i> |
|---|

Paramedic

- Hypotension

- Consider pressure support

Link
14 Ped - Medical
PM-05: Hypotension
[Go to document](#)

Link
15 Ped - Trauma
PT-04: Hemorrhagic Shock
[Go to document](#)

PEARLS

- Signs of Cushing include widened pulse pressure, bradycardia, and an irregular respiratory rate.
- Signs of significant head trauma in pediatrics: AMS, loss of consciousness >5 seconds, vomiting, severe headache, hematoma to an area other than the frontal scalp, fall >3 feet, or high-risk mechanism
- A Pediatric Weight-based Dosing Tool MUST be used for all Pediatric Patients and is recommended for adult patients.

Citations

PT-03: Multisystem Trauma

Revised 01/06/2026

MATCH

- **Massive Hemorrhage**
 - Direct pressure & TQ
 - Pelvic Binder, Junctional TQ
- **Airway**
 - Supraglottic Airway
- **Tension Pneumo/Hemo**
 - Bilateral Chest Decompression
 - Bilateral Thoracostomy
- **Circulation**
 - Consider Blood/TXA
- **Hypothermia/Head Injury**
 - Keep the patient warm

Link
15 Ped - Trauma
PT-02: Traumatic Brain Injury
[Go to document](#)

- Consider warm NS

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

- Limit Scene Time to <10 minutes

- **MATCH Assessment**

Massive Hemorrhage

- Extremity Bleeding: Place a Tourniquet 2 inches proximal to the wound
- Junctional bleeding: Direct Pressure and wound packing
- Blunt Trauma with shock index >1 or AMS
 - Pelvic Binder if the appropriate size

Airway

- Maintain SPO2 >90%

Reference
[Reference Pediatric Airway Size](#)

Link
13 Ped - Respiratory
PR-01: Airway, Pediatric
[Go to document](#)

Tension

- Penetration to the chest with Spontaneous Breathing, place a chest seal
- Must be specially credentialed
- Pneumothorax suspected, perform a Needle Pleural Decompression

EMT and higher

Circulation

- NS IV/IO goal min SBP for age

- **Link**
15 Ped - Trauma
PT-04: Hemorrhagic Shock
[Go to document](#)

Hypothermia / Head Injury

- Cover the patient and provide a warm environment

[Link](#)

15 Ped - Trauma

PT-02: Traumatic Brain Injury

[Go to document](#)

PEARLS

- Fundamental skills of MAR should be completed before transport
- Transport to the appropriate facility based on Red/Blue Criteria
- A Pediatric Weight-based Dosing Tool MUST be used for all Pediatric Patients and is recommended for adult patients.

Citations

[Link](#)

8 Expert Opinion

135: Prehospital Hemorrhage Control and Treatment by Clinicians: A Joint Position Statement

[Go to document](#)

PT-04: Hemorrhagic Shock

Revised 01/06/2026

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

- MOI Suggests Multisystem Trauma
 - Call for Whole Blood Early

- <6 years old
 - Call OMD for recommendations

Contact
On-Call Medical Director
Note: Use Pulsara to contact on-call Medical Direction.

- Have weight/color ready

- >6 years
 - Inclusion Criteria (One Required)
 - SBP <70 mmHg
 - SBP <90 & HR >110
 - SI >1.2
 - EtCO2 <25
 - If no criteria are met, monitor for deterioration

AEMT or higher

- **Medication**
Tranexamic Acid (TXA)
Routes IV / IO **Dose** 10 mg/kg **Max. dose** 2 g **Conc.** Multiple
Note: Slow IV/IO
Paramedic *AEMT* *Pediatric*

Paramedic

- **Medication**
Whole Blood
Routes IV / IO **Dose** 10 mL/kg
Note: Repeat to maintain SBP > min for age
Paramedic *Pediatric*

PEARLS

- A Pediatric Weight-based Dosing Tool MUST be used for all Pediatric Patients and is recommended for adult patients.
- SI is calculated by dividing SBP by HR.
- In the event of a transfusion reaction, discontinue all blood tubing, provide bags and tubing to the receiving facility, and notify OMD.
- Warm Blood is preferred.
- If more than one unit is on hand and the patient's SBP is < the minimum for age or EtCO2 <25 after 1 unit, additional units can be administered.

Citations

Link
1 Guideline
139: Part 4: Pediatric Basic and Advanced Life Support: 2020 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care
[Go to document](#)

[Link](#)

4 Cohort Study

151: An assessment of the safety, hemostatic efficacy, and clinical impact of low-titer group O whole blood in children and adolescents

[Go to document](#)

[Link](#)

7 Case Report

152: Prehospital Whole Blood Administration for Pediatric Gastrointestinal Hemorrhage: A Case Report

[Go to document](#)

16 Toxic Exposure

TE-01: Carbon Monoxide

Revised 01/06/2026

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

- Measure CO Hb%
 - Unable to measure
 - Oxygen via NRB
 - 0-5% CO
 - No treatment needed
 - <15% CO
 - Symptomatic or pregnant: oxygen via NRB
 - Otherwise, no treatment needed
 - >15% CO
 - Oxygen via non-rebreather
 - Consider

Link
6 Adult - Respiratory
R-04: Respiratory Distress
[Go to document](#)

Link

8 Adult - Medical

M-12: Hypotension[Go to document](#)**Link**

16 Toxic Exposure

TE-02: Cyanide / Hydrogen Sulfide[Go to document](#)

Medical Control

- >15% CO
 - No signs of smoke inhalation
 - Consult medical control for destination decision

Contact**On-Call Medical Director****Note:** Use Pulsara to contact on-call Medical Direction.

PEARLS

- Patients with burns or signs of airway burns should be taken directly to a burn center.
- Patients with suspected smoke inhalation who are obtunded should have treatment for cyanide poisoning.
- Fetal Hb has a higher affinity for CO.
- CO is just one toxic byproduct of combustion and does not rule out other toxic exposures.
- Chronic CO exposure is clinically significant; advise on smoking cessation when appropriate.
- A patient with signs of smoke inhalation should be transported to a burn center
- Contact Poison Control at 1-800-222-1222 (will need to use a phone with a 210 area code). Record case number on Pulsara

Contact

Poison Control

Phones: Phone: 1-800-222-1222

[Services](#)

Citations

Link

2 Meta-Analysis

153: The diagnostic accuracy of carbon monoxide pulse oximetry in adults with suspected acute carbon monoxide poisoning: a systematic review and meta-analysis

[Go to document](#)

Link

3 RCT

154: Comparison of high-flow nasal cannula oxygen therapy and conventional reserve-bag oxygen therapy in carbon monoxide intoxication: A pilot study

[Go to document](#)

Link

4 Cohort Study

155: Comparison of non-invasive CPAP with mask use in carbon monoxide poisoning

[Go to document](#)

TE-02: Cyanide / Hydrogen Sulfide

Revised 02/09/2026

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

◦ Exposure to Cyanide / Hydrogen Sulfide or products of combustion **AND** one of the following:

- EtCO₂ <20
- Obtunded
- Seizure
- Hypotension
- Cardiac Arrhythmia
- Cardiac Arrest

Paramedic

◦ Adult

▪

Medication

Hydroxocobalamin (Cyanokit)

Routes IV / IO **Dose** 5 g **Conc.** 5 g in 200 mL **Give over** 15 minutes

Note: May repeat x1

Paramedic *Adult*

◦ Pediatric

- **Medication**
Hydroxocobalamin (Cyanokit)
Routes IV / IO **Dose** 70 mg/kg **Max. dose** 5 g **Conc.** 5 g in 200 mL
Give over 15 minutes
Note: May repeat x1
Paramedic *Pediatric*

PEARLS

- Patients with burns or signs of airway burns should be taken directly to the burn center
- Patients with suspected smoke inhalation should have treatment for carbon monoxide poisoning.
- The patient's skin may become red after receiving hydroxocobalamin. This is normal
- Pulse oximetry readings may be erroneous; recommend high-flow oxygen for all patients with suspected cyanide poisoning.
- Contact Poison Control at 1-800-222-1222. Record case number on Pulsara and ePCR

Contact
Poison Control
Phones: Phone: 1-800-222-1222
Services

Citations

Link
1 Guideline
87: 2023 American Heart Association Focused Update on the Management of Patients With Cardiac Arrest or Life-Threatening Toxicity Due to Poisoning: An Update to the American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care
[Go to document](#)

Link

6 Cross-Sectional

156: Evaluation of prehospital hydroxocobalamin use in the setting of smoke inhalation

[Go to document](#)

Link

4 Cohort Study

157: Cost impact of hydroxocobalamin in the treatment of patients with known or suspected cyanide poisoning due to smoke inhalation from closed-space fires

[Go to document](#)

Link

4 Cohort Study

158: Evaluation of hydroxocobalamin use for the treatment of suspected cyanide toxicity secondary to smoke inhalation

[Go to document](#)

TE-03: Hydrofluoric Acid

Revised 01/06/2026

All Responders

Link

3 Universal

U-01: Universal Care

[Go to document](#)

- Skin exposure

- Irrigation with water

- Eye exposure

- Continuous irrigation

Link

8 Adult - Medical

M-08: Eye Complaint

[Go to document](#)

Link

8 Adult - Medical

M-17: Pain Management

[Go to document](#)

Paramedic

- Skin exposure

- Calcium Chloride 500 mg mixed with 30 g of water, water-soluble lubricant

- Eye exposure

- Calcium Chloride 250 mg added to 500 ml NS
- Irrigate Eye

- Inhalation exposure

- Calcium Chloride 50 mg diluted in 3 ml NS neutralized

- Ingestion exposure

- The airway must be patent
- Calcium Chloride 500 mg PO
- Obtain EKG
- QTC >480 msec or Ventricular Tachycardia

-

Medication

Calcium Chloride

Routes IV / IO **Dose** 1 g **Conc.** Multiple

⚠ **Not recommended in Cardiac Arrest**

Note: Should have a well-established large-bore IV or IO

Paramedic Adult

OR

-

Medication

Calcium Gluconate

Routes IV / IO **Dose** 3 g **Conc.** Multiple

⚠ **Not recommended in Cardiac Arrest**

Note:

Paramedic Adult

AND

-

Medication

Magnesium Sulfate

Routes IV / IO **Dose** 2 g **Conc.** Multiple **Give over** 10 minutes

Note:

Paramedic Adult

PEARLS

- Concentrated Hydrofluoric acid causes immediate pain. Less concentrated exposures maybe delayed
- Contact Poison Control. Record case number on Pulsara and ePCR

Contact

Poison Control

Phones: Phone: 1-800-222-1222

Services

TE-04: Pulmonary Chemical Agent

Revised 01/06/2026

All Responders

Link
3 Universal
U-01: Universal Care
[Go to document](#)

- Consider

- Respiratory Distress

Link
6 Adult - Respiratory
R-04: Respiratory Distress
[Go to document](#)

- Hypotension

Link
8 Adult - Medical
M-12: Hypotension
[Go to document](#)

- Seizure

Link
8 Adult - Medical
M-19: Seizure
[Go to document](#)

- Eye Complains

Link
8 Adult - Medical
M-08: Eye Complaint
[Go to document](#)

EMT and higher

- Gas Exposure

- | |
|---|
| Medication Albuterol MDI Route Spray Dose 4 puffs Note: <i>Paramedic</i> <i>AEMT</i> <i>EMT</i> <i>Adult</i> |
|---|

OR

| |
|--|
| Medication Albuterol Route Nebulized Dose 5 mg Conc. Multiple Note: May repeat max 10mg <i>Paramedic</i> <i>AEMT</i> <i>EMT</i> <i>Adult</i> |
|--|

Paramedic

- | |
|---|
| Medication Dexamethasone (Decadron) Routes IV / IO / IM / PO Dose 10–12 mg Conc. Multiple Note: <i>Paramedic</i> <i>Adult</i> |
|---|

o

Medication**Sodium Bicarbonate****Route** Nebulized **Dose** 2 mEq **Conc.** Multiple**Note:** With 2ml NS in nebulizer. May repeat in 20 minutes.*Paramedic* *Adult*

Pearls

- o Pulmonary Chemical Agents (Choking Agents) include Chlorine, Ammonia, Methyl isocyanate, Methyl bromide, Hydrochloric acid, and Phosgene.
- o Patients' contaminated clothing must be removed and decontaminated before transport.
- o Mixing chlorine and ammonia cleaning production produces chloramine gas, which can be treated as a pulmonary irritant.
- o Contact Poison Control. Record case number on Pulsara and in ePCR

Contact**Poison Control****Phones:** Phone: 1-800-222-1222*Services*

Citations

18 Drug Formulary

00: Overview

Revised 01/04/2026

The information contained in this drug formulary is provided for reference purposes only. All EMS personnel are required to follow current clinical operating guidelines and adhere to both online and offline medical direction at all times. This formulary does not replace professional medical judgment or established protocols.

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01: Acetaminophen

Revised 01/04/2026

(Tylenol, FeverAll, Anacin, Vicks 44)

Classification

- Analgesic, Antipyretic

Action(s)

- Centrally Acting
- Exact mechanism unknown

Indication(s)

- Fever
- Mild - Moderate pain

Contraindications

- Known Hypersensitivity
- Max dose < 4hrs prior (see notes)

Precautions

- Caution in liver failure or chronic alcohol use/abuse, limit to 2 g per day
- Multiple formulations exist. Concentration varies among manufacturers and trade names.

Drug interactions

- Ethanol - May increase the risk of hepatic toxicity
- Benzodiazepines - May increase the risk of hepatic toxicity

Adult Dosing and Administration

- 325-1000mg PO q 4hrs
- 1000 mg IV q 4hrs

Pediatric Dosing and Administration

- 15 mg/kg PO/IV q 4hs

Onset

- 30-60min

Duration

- 3-4hrs

Possible Adverse Effects

- Hepatic Toxicity
- Acute renal tubular necrosis
- Allergic reaction / Anaphylaxis

Other Notes

- Many OTC medications contain varied formulations
- Generally, those with liver disease can safely take up to 2 g a day
- Overdoses of acetaminophen may be life-threatening!
- Overdose antidote = "Acetadote" (acetylcysteine, Mucomyst) - must be given within 4 hours of toxic ingestion.
- NOT an NSAID. No direct interaction with ibuprofen or aspirin.

02: Adenosine

Revised 01/04/2026

(Adenocard, Adenoscan)

Classification

- Antiarrhythmic

Action

- Slows AV node conduction time
- Interrupts AV Nodal re-entry pathways

Indication

- Narrow Complex Tachycardia with Pulse
- Regular Wide Complex Tachycardia with Pulse (avoid in Irregular Wide Complex)

Contraindications

- Known Hypersensitivity
- Irregular Wide Complex Tachycardia / Wolf-Parkinson-White (WPW)
- 2nd / 3rd Degree Heart Block without Pacemaker
- Sick Sinus Syndrome

Precautions

- Usually produces short periods of asystole
- May induce significant arrhythmias, including V-Tach / V-Fib
- May induce complete heart block
- Caution with those with a history of COPD/Asthma (must have rescue airway available)

Drug interactions

- Digoxin and Verapamil - May increase the risk of V-Fib
- Carbamazepine - May increase the degree of heart block
- Aspirin and Dipyridamole - May increase Adenosine effects

Adult Dosing and Administration

- 12 mg rapid IV push followed by rapid flush, may repeat x1 in Narrow Complex Tachycardia with Pulse
- Decrease the initial dose to 3 mg if central line administration or if a history of heart transplant

VIII. Pediatric Dosing and Administration

- First Dose - 0.1 mg/kg (max dose 12 mg)
- Second Dose (Narrow Complex Tach with Pulse only) - 0.2 mg/kg (max dose 12 mg)
- Age 13 years and older, use Adult Dosing

Onset

- Rapid (1-2 sec)

Duration

- Brief (10-20 sec)

Possible Adverse Effects

- May induce significant arrhythmia, including v-fib, v-tach, and bradycardia, requiring resuscitation
- Expect a short period of asystole/bradycardia (10-15 sec)
- Commonly induces nausea, headache, chest pressure

Other Notes

- Must have defibrillation/pacer pads attached to the patient, ACLS medication, and rescue airway available prior to medication administration

03: Albuterol

Revised 01/04/2026

(Proventil, Ventolin)

Classification

- Bronchodilator

Action

- A selective B2-agonist relaxes bronchial smooth muscle, causing bronchodilation.

Indications

- Asthma / COPD
- Moderate to severe allergic reaction and anaphylaxis
- Other conditions with Bronchospasm / Wheeze (Drowning, CO Poisoning, Bronchiolitis)
- Suspected Hyperkalemia (Bradycardia & History of Renal Failure, Chemotherapy)

Contraindications

- Known hypersensitivity/allergy

Precautions

- The patient's vital signs should be monitored for tachycardia and hypertension
- Caution in elderly patients and those with cardiovascular disease or hypertension—monitor closely for tachydysrhythmias.
- Lung sounds should be auscultated before and after treatment to assess treatment efficacy.

Drug interactions

- Beta-blockers may antagonize the effect
- Ipratropium bromide increases the duration of bronchodilation
- Caution if the patient takes MAOIs, tricyclic antidepressants, or sympathomimetics

Adult Dosing and Administration

- 2.5-10 mg nebulized
- Suspected Hyperkalemia - 20 mg nebulized
- Repeat as needed and per guidelines

Pediatric Dosing and Administration

- 2.5-10 mg nebulized
- Repeat as needed and per guidelines

Onset

- 5-15 minutes, Peak effects 1-1.5 hours

Duration

- 5 hours

Possible Adverse Effects

- Hypersensitivity/allergy
- Paradoxical bronchospasm
- Tachycardia/hypertension/palpitations/arrhythmias / myocardial infarction
- Cough
- Nausea/vomiting
- Dizziness/nervousness/tremulousness

04: Amiodarone

Revised 01/04/2026

(*Cordarone, Pacerone*)

Classification

- Anti-arrhythmic

Action

- Increases action potential duration and refractory period duration
- Noncompetitive alpha- and beta-adrenergic inhibition

Indication

- Ventricular tachycardia and ventricular fibrillation
- Wide complex tachycardia
- Atrial arrhythmia refractory to other treatments

Contraindications

- Hypersensitivity to Amiodarone
- Sinus bradycardia, 2nd or 3rd degree Heart Block
- Cardiogenic shock
- Severe CHF

Precautions

- Hypotension frequently occurs
- Do not mix with any other drugs
- Precipitates with sodium bicarbonate

Drug interactions

- Quinolone antibiotics (Cipro, Levaquin)

Adult Dosing and Administration

- Cardiac Arrest VF / Pulseless V-Tach
 - 300 mg IV/IO push
 - If rhythm continues, may administer a second bolus of 150 mg IV/IO
- Wide-complex tachycardia with pulse
 - 150 mg IV/IO over 10 minutes, mixed in 100cc NS and given via medication pump
 - Maintenance dose 1mg/min
- Narrow-complex tachycardia refractory to other treatments
 - Consult Medical Direction

Pediatric Dosing and Administration

- Cardiac Arrest VF / Pulseless V-Tach
 - 5 mg/kg IV/IO push
- Wide-complex tachycardia with pulse -
 - 5 mg/kg IV/IO mixed in 100 CC NS and given over 10 minutes
- Max dose is 15 mg/kg or the max adult dose

Onset

- 2-5 minutes

Duration

- Very long half-life - several days

Possible Adverse Effects

- Dizziness, headache,

- Hypotension
- Bradycardia, AV Blocks, Ventricular dysrhythmias
- Nausea/Vomiting, anorexia
- Dyspnea, Pulmonary toxicity, CHF

05: Aspirin

Revised 01/04/2026

(Bayer / Ecotrin / Bufferin / Anacin / Excedrin)

Classification

- Salicylate, non-steroidal anti-inflammatory

Action

- Inhibits platelet aggregation
- Inhibits prostaglandin synthesis and affects the hypothalamus, which produces anti-pyretic, non-opioid, and non-steroidal anti-inflammatory and analgesic effects

Indication

- Acute Myocardial Infarction
- Cardiac-related chest pain, angina pectoris

Contraindication

- Hypersensitivity/allergy to aspirin
- Bleeding gastric or duodenal ulcers
- Hemophilia
- Thrombocytopenia (low platelet count)
- Children

Precautions

- NSAIDs may cause an increase in gastric irritation
- May enhance the activity of anticoagulant therapy

Drug Interactions

- No drug interactions that should prevent administration when indicated

Adult Dosing and Administration

- 324 mg PO X 1 dose, chew before swallowing

Pediatric Dosing and Administration

- Not given in pediatric EMS patients

Onset

- 1-2hours

Duration

- Half-life is approximately 6 hours

Possible Adverse Effects

- Allergic reaction
- Bleeding
- Heartburn, Nausea/vomiting
- Drop in blood sugar levels (in diabetics)
- Kidney/liver toxicity

06: Atropine Sulfate

Revised 01/04/2026

Atropine

Classification

- Parasympathetic blocking agent

Action

- Inhibits parasympathetic actions of acetylcholine at postganglionic cholinergic neuroreceptor sites
- Decreases vagal tone, allows bronchial dilation, decreases secretions in the respiratory tract and GI tract

Indication

- Symptomatic bradycardia
- Organophosphate and nerve agent poisoning
- Management of Excessive Secretions (MIH Hospice / Palliative Care)

Contraindications

- Known hypersensitivity
- Tachycardia
- No absolute contraindications in use for organophosphate/nerve agent poisoning

Precautions

- Can cause paradoxical bradycardia if pushed slowly or if less than the therapeutic dose is given (less than 0.5 mg in adults, less than 0.1 mg in children)

Drug interactions

- Other anticholinergics: additive anticholinergic effects, vagal blockade
- Digitalis, cholinergic, and neostigmine have potential adverse reactions
- Antihistamines, procainamide, quinidine, antipsychotics, antidepressants, and benzos enhance effects

Adult Dosing and Administration

- Symptomatic Bradycardia: 0.5 mg - 1 mg IV / 10 (max dose 3 mg)
- Nerve agent / Organophosphate: Consult On-Call Medical Director if given
 - 2-4mg IV/IO/IM, repeat as necessary until patient is asymptomatic, no max dose

Pediatric Dosing and Administration

- Symptomatic Bradycardia: 0.02 mg/kg IV/IO (Minimum dose 0.1 mg, Max single dose 0.5 mg, Max total dose 3 mg)
- Nerve agent/organophosphate: Consult On-Call Medical Director if given
 - 0.05 mg/kg IV/IM, repeat as necessary (max single dose 2mg, no max total dose for poisoning)

Onset

- 2-5 minutes

Duration

- Half-life is approximately 3 hours

Possible Adverse Effects

- Tachycardia, cardiac dysrhythmia
- Seizures
- Dry mouth, difficulty swallowing
- Flushed skin
- Dilated pupils / blurred vision
- Acute glaucoma

Other Notes

- Not recommended in ASYMPTOMATIC bradycardia

07: Buprenorphine/Naloxone

Revised 01/06/2026

(Suboxone)

Classification

- Opioid partial agonist/antagonist

Action

- Partial agonist at mu-opioid receptors, reducing withdrawal symptoms and cravings.

Indication

- Opioid withdrawal syndrome

Contraindications

- Acute opioid use not reversed with naloxone
- PO opioid use
- Hypersensitivity to buprenorphine, naloxone, or any of their excipients
- Severe respiratory depression

Precautions

- Breastfeeding: Buprenorphine is excreted in breast milk. Consider the risks and benefits.

Drug interactions

- **Opioids:** Avoid concurrent use of full opioid agonists.
- **CNS depressants:** Use with caution when combined with other CNS depressants (e.g., alcohol, benzodiazepines).

Adult Dosing and Administration

- 16 mg SL Film

Pediatric Dosing and Administration

- Not indicated

Onset

- 30-60min

Duration

- 23-70 hrs

Possible adverse effects

- Induce withdrawal
- **Common:** Constipation, headache, fatigue, insomnia
- **Less common:** Nausea, vomiting, diarrhea, sweating, muscle aches
- **Rare:** Hypersensitivity reactions, Stevens-Johnson syndrome

08: Calcium Chloride

Revised 01/04/2026

Classification

- Electrolyte

Action

- An essential component for the proper function of the nervous and muscular systems, normal cardiac contractility, and coagulation of blood

Indication

- Hyperkalemia
- Calcium Channel or Beta Blocker toxicity

Contraindications

- V-fib during cardiac resuscitation
- Digitalis toxicity
- Hypercalcemia

Precautions

- Flush the IV line between administration of calcium chloride and sodium bicarbonate
- Very irritating to soft tissues if extravasation occurs

Drug interactions

- Digitalis - asystole worsens arrhythmias

Adult Dosing and Administration

- 1000 mg of 10% solution, slow IV/IO
- Administer no faster than 100 mg/min (1 ml/min)

Pediatric Dosing and Administration

- 20 mg/kg of 10% solution, slow IV/IO - Max dose 1000 mg
- Administer no faster than 100 mg/min (1 ml/min)

Onset

- 5-15 minutes

Duration

- 30-90 minutes

Possible Adverse Effects

- Nausea
- Bradycardia (with rapid administration)
- Hypotension (with rapid administration)

Other Notes

- Avoid giving in the pre-hospital environment if the patient takes digoxin

09: Calcium Gluconate

Revised 01/04/2026

Classification

- Calcium salt;
- Electrolyte replacement agent.

Actions

- Replaces calcium in hypocalcemic states.
- Antagonizes the effects of hyperkalemia and hypermagnesemia on the heart; stabilizes cardiac cell membranes.

Indications

- Treatment of hypocalcemia, hyperkalemia, hypermagnesemia, and calcium channel blocker overdose.

Contraindications

- Known hypersensitivity to calcium gluconate; ventricular fibrillation; digitalis toxicity (relative contraindication).

Precautions

- Use with caution in patients taking digitalis glycosides.
- Avoid extravasation (tissue necrosis);
- Monitor serum calcium levels.

Drug Interactions

- May increase risk of arrhythmias with digitalis;

- May precipitate with certain medications in IV lines (phosphates, carbonates, bicarbonates).

Adult Dosing and Administration

- Typical dose: 1–2 g IV slowly (10% solution) over 2–5 minutes; may repeat as needed.

Pediatric Dosing and Administration

- 50–100 mg/kg (maximum single dose 2 g) IV slowly (10% solution).

Onset

- Immediate (minutes) when given IV.

Duration

- 30 minutes to 2 hours.

Possible Adverse Effects

- Bradycardia
- Hypotension
- Arrhythmias
- Local tissue necrosis (if extravasated)
- Nausea
- Vomiting
- Tingling
- Sense of heat.

Other notes

- Do not administer IM or SC (tissue necrosis risk);
- Monitor ECG during IV administration.

- Ensure IV patency.

10: Cefepime

Revised 01/04/2026

Classification

- Fourth-generation cephalosporin that belongs to a class of antibiotics known as beta-lactams

Action

- inhibits bacterial cell wall synthesis by covalently binding enzymes responsible for the final step in transpeptidation during peptidoglycan wall synthesis. This binding causes defects in the cell wall, leading to autolysis and the organism's subsequent death.

Indication

- Suspected sepsis patient who has been hospitalized in the last 30 days lives in a skilled nursing facility, has previous resistance to Rocephin, or is on chemotherapy/immunosuppressive.

Contraindications

- Hypersensitivity

Precautions

- **Breastfeeding:** Cefepime is excreted in breast milk. Consider the risks and benefits.

Drug interactions

- **Aminoglycoside antibiotics:** increase the risk of cytotoxicity and nephrotoxicity.
- **Furosemide:** nephrotoxicity.

Adult Dosing and Administration

- 2 g IV/IO slow push

Pediatric Dosing and Administration

- Not indicated without medical direction
- 50 mg/kg IV/IO

Onset

- 30 min

Duration

- 8 hrs

Possible adverse effects

- **Common:** Diarrhea, rash
- **Less Common:** Headache, neurotoxicity, renal injury,
- **Rare:** Stevens-Johnson Syndrome, erythema multiform, hemolysis, aplastic anemia

Other Notes

11: Ceftriaxone

Revised 01/04/2026

Rocephin

Classification

- Third-generation cephalosporin antibiotic

Action

- Prevents and treats infection

Indication

- Open fractures of the extremities
- Significant Soft Tissue Trauma
- Sepsis

Contraindications

- Allergy to Cephalosporin-type antibiotics (e.g., Cefdinir [Omnicef], Ceftriaxone [Rocephin], Cefepime [Maxipime])

Precautions

- Rapid administration risks phlebitis.

Drug interactions

- Should be administered in a separate IV from other medications if possible.

Adult Dosing and Administration

- 2000 mg (2 g) reconstituted with **19.2** ml 0.9% Sodium Chloride for injection IVP over 2 minutes or in 100 ml Normal Saline IVP.
- 1000 mg (1 g) reconstituted with **9.6 ml** 0.9% Sodium Chloride for injection IVP over 2 minutes or in 100 ml Normal Saline IVP.

Pediatric Dosing and Administration

- 50 mg/kg reconstituted as above (100 mg/ml) for Injection IVP over 2 minutes or in 100 ml Normal Saline IVPB

Onset

- Immediate

Duration

- 24 hours

Possible Adverse Effects

- Rare

Other Notes

12: Dexamethasone

Revised 01/04/2026

(Decadron)

Classification

- Corticosteroid

Action

- Decreased inflammation by suppression of neutrophil migration, decreased production of inflammatory mediators, and reversal of increased capillary permeability; suppresses normal immune response.

Indication

- Allergic Reaction / Anaphylaxis
- Asthma / COPD

Contraindications

- Known hypersensitivity
- Systemic Fungal Infection

Precautions

- Caution in patients with active infections (bacterial, viral)
- Caution in patients with recent live viral vaccinations
- Caution in immunosuppressed patients
- Caution in ocular infections (especially herpes simplex infections)
- Caution in hyperglycemia and diabetes - worsens hyperglycemia
- Caution in CHF

Drug interactions

- Live viral vaccines

Adult Dosing and Administration

- 10-12 mg IV / IO / IM / PO

Pediatric Dosing and Administration

- 0.6 mg/kg IV / IO/ IM / PO (max dose 12 mg)

Onset

- IV Rapid

Duration

- Hours

Possible Adverse Effects

- Anaphylaxis
- Tachycardia, Hypertension, CHF
- Hyperglycemia
- Headache, insomnia, personality changes, anxiety, paresthesia
- Immunosuppression & increased risk of infection

13: Dexmedetomidine

Revised 01/04/2026

Precedex

Classification

- Alpha-2 adrenergic agonist (sedative/analgesic)

Actions

- Produces sedation, anxiolysis, and analgesia by activating alpha-2 adrenoceptors in the brain and spinal cord; reduces sympathetic tone.

Indications

- Sedation of intubated and non-intubated patients in ICU settings, procedural sedation.

Contraindications

- Hypersensitivity to dexmedetomidine
- Advanced heart block without a pacemaker
- Severe ventricular dysfunction

Precautions

- Use caution in patients with bradycardia, hypotension, hepatic impairment, and elderly patients.

Drug Interactions

- Enhanced effects with other sedatives, hypnotics, opioids, or antihypertensives
- May potentiate bradycardia with beta-blockers.

Adult Dosing and Administration

- Maintenance: 0.2–1 mcg/kg/hr IV infusion, titrated to response
- Loading dose - generally avoided due to potential for cardiac effects: 1 mcg/kg IV over 10 minutes

Pediatric Dosing and Administration

- Limited data. Typical: 0.2–1 mcg/kg/hr IV infusion; titrate to effect.
- Loading doses are generally avoided

Onset

- Within minutes
- Peak effect in 15–30 minutes.

Duration

- Dose-dependent
- Typically, 60–120 minutes after infusion stopped.

Possible Adverse Effects

- Bradycardia
- Hypotension
- Transient hypertension with rapid IV doses
- Dry mouth
- Nausea
- Sinus arrest (rare)

Other notes

- Does not cause respiratory depression at usual doses; use with caution in hemodynamically unstable patients.

14: Dextrose

Revised 01/04/2026

D10W, D25W, D50W

Classification

- Carbohydrate

Action

- Restores blood glucose levels in hypoglycemia for cellular metabolism

Indication

- Blood glucose < 60 mg/dL and Altered Mental Status OR NOT Alert
- (Non-EMS use - given with IV insulin for hyperkalemia)

Contraindications

- Intracranial hemorrhage
- Increased intracranial pressure
- Absence of hypoglycemia
- Delirium tremens if the patient is dehydrated

Precautions

- Causes necrosis with extravasation into tissues
- May sometimes precipitate severe neurologic symptoms (Wernicke's encephalopathy) in thiamine-deficient patients

Drug interactions

- No significant adverse interaction

Adult Dosing and Administration

- 25 g (250 ml) of D10W IV/IO
- 25 g (50 ml) of D50W
- May be repeated once
- if blood glucose is < 60 after 5 minutes

Pediatric Dosing and Administration

- < 50 kg: 5 ml/kg (.5 g/kg) IV/IO of D10W
- > 50 kg: 25 g (250 ml) IV/IO of D10W
- **If D10W not available, mix from D50W:**
- 10 kg - 25 kg: 2 ml/kg (.5 g/kg) IV/IO D25W
- 27 kg - 50 kg: 1 ml/kg (.5 g/kg) IV/IO D50W
- 50+ kg: 25 g (50ml) IV/IO D50W

| D₁₀W | | |
|------------------------|----------------|--------------------|
| AGE – KG | .5 g/kg | 25 g/250 mL |
| NB – 4 kg | 2 g | 20 mL |
| 4MO – 6 kg | 3 g | 30 mL |
| 6MO – 8 kg | 4 g | 40 mL |
| 1YR – 10 kg | 5 g | 50 mL |
| 2YR – 12 kg | 6 g | 60 mL |
| 3YR – 15 kg | 7.5 g | 75 mL |
| 5YR – 20 kg | 10 g | 100 mL |
| 7YR – 25 kg | 12.5 g | 125 mL |
| 9YR – 30 kg | 15 g | 150 mL |
| 10YR – 35 kg | 17.5 g | 175 mL |
| 11YR – 40 kg | 20 g | 200 mL |
| 12YR – 50 kg | 25 g | 250 mL |
| 13YR – 60 kg | 25 g | 250 mL |
| ADULT – 75 kg | 25 g | 250 mL |
| ADULT – 100 kg | 25 g | 250 mL |

Onset

- < 1 minute

Duration

- Depends on the degree of hypoglycemia

Possible Adverse Effects

- Warmth, pain or burning from infusion

Other Notes

- D10W: Dilute D50W 1:4 (Waste 40 ml of D50W then add 40 ml normal saline)
- D25W: Dilute D50W 1:1 (Waste 25 ml of D50W then add 25 ml normal saline)

15: Diazepam

Revised 01/04/2026

Classification

- Benzodiazepine

Actions

- Enhances the effect of the neurotransmitter GABA at the GABA-A receptor, leading to CNS depression, anxiolytic, sedative, muscle relaxant, and anticonvulsant effects

Indications

- Anxiety disorders,
- Acute alcohol withdrawal
- Muscle spasms
- Seizures (including status epilepticus)
- Premedication for medical procedures

Contraindications

- Hypersensitivity to diazepam or benzodiazepines, acute narrow-angle glaucoma, severe respiratory insufficiency, sleep apnea syndrome, severe hepatic impairment, myasthenia gravis

Precaution

- Risk of dependence and withdrawal;
- caution in the elderly;
- potential for respiratory depression;
- Use with caution in hepatic or renal impairment.
- avoid abrupt discontinuation.

Drug Interactions

- Potentiated effects with other CNS depressants (e.g., opioids, alcohol); CYP3A4 inhibitors increase levels; CYP3A4 inducers decrease levels.

Adult Dosing and Administration

- Anxiety: 2–10 mg orally, 2–4 times daily.
- Muscle spasm: 2–10 mg orally, 3–4 times daily.
- Seizures/status epilepticus: 5–10 mg IV/IM, repeat every 10–15 min as needed (max 30 mg).
- Oral, IV, and rectal doses vary by age and indication; consult specific pediatric dosing guidelines.
- Rectal gel is often used for status epilepticus in children

Onset

- Oral: 30–60 minutes.
- IV: 1–5 minutes.
- Rectal: 5–10 minutes.

Duration

Oral: 12–24 hours.

IV/IM: 15–60 minutes (anticonvulsant effect), but metabolites have longer half-life (up to 48 hours or more)

Possible Adverse Effects

- Drowsiness
- Fatigue
- Ataxia
- Confusion
- Dizziness
- Respiratory depression (especially with overdose),

- Hypotension,
- paradoxical reactions (agitation, aggression),
- Dependence
- Withdrawal

Other notes

- Pregnancy category D; excreted in breast milk. Store at room temperature, protected from light. Avoid alcohol. Do not drive or operate machinery until the effects are known.

16: Diltiazem

Revised 01/04/2026

Cardizem, Cartia, Dilacor, Dilt, Diltia, Taztia, Tiazac

Classification

- Antiarrhythmic, Calcium channel blocker

Action

- Inhibits calcium influx to the myocardium and smooth muscle
- Relaxes/dilates smooth muscle and coronary vessels
- Prolongs the AV Node refractory period.

Indication

- Atrial Fibrillation / Flutter - rate control
- PSVT Conversion

Contraindications

- Known Hypersensitivity
- Sick Sinus Syndrome
- 2nd or 3rd Degree AV Block
- Hypotension
- Acute myocardial infarction with pulmonary congestion
- Wide complex tachycardias / Wolf-Parkinson White (WPW) Syndrome

Precautions

- Caution in patients with CHF and pulmonary congestion
- Caution in patients on beta-blockers or Verapamil

- Caution in Hepatic / Renal Failure - May have delayed clearance

Drug interactions

- Beta Blockers (including ophthalmic), Verapamil, Amiodarone- May cause significant bradycardia, AV blockade, and Hypotension.
- Pain medications - May increase CNS depression

Adult Dosing and Administration

- 0.25 mg/kg (max 25 mg) slow IV over at least 2 minutes
- May repeat at a higher dose (0.35 mg/kg) if needed after 15 minutes

Pediatric Dosing and Administration

- Contact Medical Control

Onset

- 5-10 min

Duration

- 3-5 hrs

Possible Adverse Effects

- Hypotension, Bradycardia, A-V Blockade, Syncope, Pulmonary edema
- Commonly causes rash, headache, orthostatic hypotension, and dizziness

Other Notes

- Calcium administration may decrease the efficacy of medication

17: Diphenhydramine

Revised 01/04/2026

Benadryl, Unisom, Sominex, Nytol

Classification

- Antihistamine, Anticholinergic

Action

- Antagonizes central and peripheral H1-Receptors (Non-selective)
- Antagonizes cholinergic pathways
- Suppresses the medullary cough center

Indication

- Allergic reactions (Moderate - Severe)
- Dystonic reactions
- Non-EMS uses include: Insomnia, Motion Sickness

Contraindications

- Known hypersensitivity
- Recent potassium administration

Precautions

- Elderly and children < 6 years old
- Cardiovascular disease
- COPD / Asthma
- Angle-closure glaucoma
- May induce a significant change in mental status

Drug interactions

- Potassium - May cause gastric ulceration with recent potassium ingestion
- Haloperidol - Q-T prolongation, cardiac dysrhythmias, severe anticholinergic effect
- MAO Inhibitor - May increase anticholinergic effects
- Pain medications - may increase CNS depression

Adult Dosing and Administration

- 25-50mg IV/ IM / PO slowly (do not exceed 25 mg/min)

Pediatric Dosing and Administration

- 1 mg/kg IV/ IM / PO slowly (do not exceed 25 mg/min) (Max dose 50 mg)

Onset

- 5-10 minutes

Duration

- 4-10 hours

Possible Adverse Effects

- Anaphylaxis, Seizures, drowsiness, dizziness, disturbance in coordination
- Arrhythmia, tachycardia, bradycardia, palpitations, Dry mouth, headache

Other Notes

- Increases the sedative potential of all medications
- Found in many OTC medications for adults and children

18: Droperidol

Revised 01/04/2026

Actions/Effects:

- Powerful anti-psychotic
- Anti-emetic properties

Indications:

- Nausea/Vomiting refractory to Ondansetron
- Migraines or Vertigo
- Agitated Schizophrenic or Psychotic episodes
- Chemical restraint
- Delirium Tremens/Alcohol Withdrawal (Only as required as an adjunct post Benzodiazepine administration)

Precautions:

- Obtain an EKG as soon as possible.
- May be capable of potentiating CNS depressants such as anesthetics, opiates, sedation medications, and alcohol.
- May cause Extrapramidal Reaction (Treat with Diphenhydramine per COG)

Contraindications:

- Parkinson's Disease
- Pregnancy
- Known QTc over 500 ms

Administration:

- Agitation/Psychosis
 - Mild: 2.5 mg - 5 mg IV/IO

- Moderate: 5 mg - 10 mg IM (**Contact OMD for dosage \geq 10 mg**)
- Nausea/Vomiting
 - 1.25 mg - 2.5 - mg IV/IO/IM
- Pain Management for Headache
 - 1.25 mg - 2.5 mg IV/IO/IM
 - **ELDERLY USE HALF DOSE**

Side Effects / Special Notes:

- Monitor hemodynamic status and ECG closely (Watch for QT interval prolongation, Torsades de Pointes, or Ventricular arrhythmia)
- May render Epinephrine ineffective as a vasopressor.
- **Caution for use in elderly dementia psychosis.**
- **Call medical direction:**
 - **Severe agitation, dosage \geq 10 mg, or combining with Benzodiazepine.**

19: Duo-Dote

Revised 01/06/2026

Pralidoxime chloride and atropine sulfate

Classification

- Antidote

Action

- Atropine counters the effect of nerve agents/organophosphates by blocking the effects of acetylcholine at the nerve receptor level
- Pralidoxime reactivates acetylcholinesterase, which breaks down excess acetylcholine, therefore restoring normal cholinergic nerve function

Indication

- Nerve agent poisoning (sarin, soman, tabun, VX, etc.)
- Organophosphate poisoning

Contraindications

- None

Precautions

- None

Drug interactions

- None significant enough to prevent use when needed

Adult Dosing and Administration

- 1-3 auto-injectors IM in the outer quadrant of the thigh
- Dose-dependent on the severity of signs/symptoms (1 for mild symptoms, 2 for moderate symptoms, 3 for severe symptoms)

Pediatric Dosing and Administration

- Same as an adult

Onset

- Immediate

Duration

- varies by the patient's age and metabolism

Possible Adverse Effects

- Allergic reaction
- Dilated pupils / dry mouth / decreased sweating / dry skin / urinary retention
- Tachycardia / atrial fibrillation / PVCs / palpitations / V-fib
- Tachypnea
- Hypertension

Other Notes

- Inject into the outer quadrant of the thigh only - hold in place for 10 seconds

20: Epinephrine

Revised 01/04/2026

Epinephrine

Classification

- Sympathomimetic agent

Action

- Stimulates alpha and beta receptors
- Causes smooth muscle relaxation in the airways, increases cardiac output, and causes contraction of the smooth muscle that lines most arterioles.

Indication

- Cardiac Arrest
- Hypotension or Post-ROSC Care
- Anaphylaxis
- Bradycardia
- Severe stridor/croup
- Severe Asthma or COPD

Contraindications

- Coronary insufficiency

Precautions

- HTN

Drug interactions

- Beta blockers will inhibit the effects
- Haldol may decrease or reverse effects
- Tricyclic antidepressants may cause prolonged hypertension

Adult Dosing and Administration

- Cardiac Arrest - 0.5-1 mg IV/IO (1:10,000), dose every 5 - 10 minutes
- Hypotension
 - Epinephrine Push Dose (1:100,000) 10-20 mcg (1-2 mL) every 2-3 minutes to maintain SBP >90 mmHg
 - Epinephrine Drip starts at 0.1 mcg/kg/min (range 0.05 - 5mcg/kg/min) to maintain SBP >90mmHg
- Bradycardia - Push Dose (1:100,000) 10-20mcg (1-2mL) every 2-3 minutes
- Anaphylaxis - 0.5 mg IM (1:1000), may repeat every 5 min to max 3 doses
- Severe Asthma / COPD- 0.5mg IM or Nebulize 3mg (3 vials 1:1,000)

Pediatric Dosing and Administration

- Anaphylaxis/Asthma: 0.01 mg/kg IM (1:1000), max 0.3 mg per dose, repeat every 5–15 min PRN
- Cardiac arrest: 0.01 mg/kg IV/IO (1:10,000), every 3–5 min as needed

Onset

- IM: 3–10 minutes
- IV: 1–2 minutes

Duration

- IM: 20–30 minutes
- IV: 5–10 minutes

Possible Adverse Effects

- Tachycardia

- Hypertension
- Arrhythmias
- Anxiety
- Tremor
- Headache
- Nausea/vomiting

Other notes

- Use caution in patients with underlying cardiac conditions
- Protect from light
- Do not inject into the buttocks or digits due to the risk of tissue necrosis

21: Esmolol

Revised 01/04/2026

Classification

- Selective beta-1 adrenergic blocker; ultra-short acting.
- Blocks beta-1 adrenergic receptors, leading to decreased heart rate, cardiac output, and myocardial oxygen demand.

Indications

- Supraventricular tachycardia (SVT)-
- Intraoperative and postoperative tachycardia or hypertension-
- Rapid rate control in atrial fibrillation or atrial flutter

Contraindications

- Sinus bradycardia
- Overt cardiac failure
- Greater than first-degree heart block (unless with a pacemaker)
- Hypersensitivity to esmolol or components

Use with caution in patients with bronchospastic disease, diabetes, or impaired renal/hepatic function

- Use with caution in patients with bronchospastic disease, diabetes, or impaired renal/hepatic function
- May mask signs of hypoglycemia
- Taper slowly to avoid withdrawal effects

Drug Interactions

- Increased risk of bradycardia or hypotension with calcium channel blockers (verapamil, diltiazem)
- May interact with digoxin, other antihypertensives, or anesthetics

Adult Dosing and Administration

- Loading dose: 500 mcg/kg IV over 1 min, then infusion 50-200 mcg/kg/min IV, titrated to effect.
- Maximum: 300 mcg/kg/min.
- Short half-life allows for rapid titration and discontinuation.

Pediatric Dosing and Administration

- Limited data; typical dosing: 100-500 mcg/kg IV loading dose over 1 min, then 50-200 mcg/kg/min infusion.
- Titrate to effect and monitor closely.

1-2 minutes after IV administration

- 1-2 minutes after IV administration

10-20 minutes after IV infusion stopped; very short due to rapid hydrolysis by esterases

- 10-20 minutes after IV infusion stopped; very short due to rapid hydrolysis by esterases

Hypotension

- Hypotension
- Bradycardia
- Heart block
- Bronchospasm
- Nausea
- Injection site reactions

Other notes

- Metabolized by plasma esterases; minimal renal or hepatic elimination. Useful for short-term beta-blockade when rapid titration/onset/offset is needed.

22: Etomidate

Revised 01/04/2026

Etomidate

Classification

- Anesthetic, sedative-hypnotic

Actions

- Short-acting hypnotic, which appears to have gamma-aminobutyric acid (GABA)-like effects.
- Unlike barbiturates, Etomidate reduces subcortical inhibition at the onset of hypnosis while inducing neocortical sleep.

Indications

- Etomidate may blunt the rise in intracranial pressure during intubation and may also be used to provide short-term sedation
- A hypnotic effect for situations such as automobile extrication.

Contraindications

- Known hypersensitivity

Precautions

- Monitor renal function in elderly patients. Monitor plasma cortisol and aldosterone levels during induction.

Drug Interactions

- unknown

Adult Dosing

- RSI/ Pharmacologically- Assisted Intubation 0.3 mg/kg IV/IO Max 30 mg
- Sedation- 0.1mg/kg IV/OP max 30 mg

Pediatric Dosing

- RSI/Pharmacologically-Assisted Intubation 0.3 mg/kg IV/IO

Onset

- Onset usually occurs within 1 minute.

Duration

- Rapidly metabolized in the liver, primarily by hydrolysis. Elimination half-life is about 75 min. Approximately 75% were eliminated in the urine within 24 hours.

Possible Adverse Effects

- Nausea and/or vomiting, alterations in respiratory patterns, alterations in hemodynamic status, and alterations in heart rate

Other Note

- **No analgesic properties**

23: Fentanyl

Revised 01/04/2026

Sublimaze, Duragesic

Classification

- Opioid Analgesics

Action

- Binds to opiate receptors in the CNS. Alters the perception of and response to painful stimuli while producing generalized CNS depression

Indication

- Severe Pain
- MAI Induction, Post-Intubation Sedation

Contraindications

- Hypersensitivity

Precautions

- Head trauma / Increased intracranial pressure
- Severe renal, hepatic, or pulmonary disease
- History of Substance Abuse
- Elderly or debilitated patients (dosage reduction suggested)

Drug interactions

- MAO inhibitors or linezolid - may result in serotonin syndrome

- Sedative/Hypnotics, clomipramine, barbiturates, tricyclic antidepressants, and antihistamines may increase CNS depression

Adult Dosing and Administration

- 1 mcg/kg IV / IO / IM / IN (max initial dose 100 mcg, max cumulative dose 300 mcg)
- Consider starting with dose 0.5 mcg/kg dose in the elderly
- For pain: May repeat x1 after 5 minutes; call the medical director for total >300mcg
- For Post-Intubation Sedation: May repeat 1 mcg/kg IV/IO every 10 minutes as needed.

Pediatric Dosing and Administration

- Consult the On-Call Medical Director for Children aged <1 year
- 1 mcg/kg IV / IO / IM / IN (max initial dose 100 mcg, max total 3 mcg/kg or 300 mcg)
- May repeat x1 after 5 minutes, call the medical director for subsequent orders

Onset

- Immediate

Duration

- 30-60 minutes

Possible Adverse Effects

- Allergic reaction/anaphylaxis
- Respiratory depression/laryngospasm/chest wall rigidity / respiratory arrest
- Bradycardia/hypotension
- Altered mental status/seizures

Other Notes

- Administer slowly! Rapid administration may lead to increased respiratory depression, respiratory muscle rigidity, hypotension, and circulatory collapse.
- Assess LOC, B/P, pulse, and respirations before and periodically after administration
- Monitor EtCO₂ after administration

24: Glucagon

Revised 01/04/2026

Glucagen

Classification

- Hormone

Action

- Converts hepatic glycogen to glucose, thus increasing blood glucose concentration
- Relaxes smooth muscles of the gastrointestinal tract

Indication

- Hypoglycemia
- Calcium channel blocker overdose, beta-blocker overdose

Contraindications

- Known hypersensitivity
- Adrenal or pancreatic tumors (pheochromocytoma, insulinoma)

Precautions

- The patient must be advised to eat a carbohydrate-heavy meal after use
- Does not work well in malnourished persons (minimal glycogen stores)

Drug interactions

- Beta blockers decrease the effectiveness of Glucagon
- Use with anticoagulants can increase the risk of bleeding

Adult Dosing and Administration

- Hypoglycemia: 1 mg IV / IO / IM, may repeat once after 5 minutes
- Calcium channel blocker or Beta-blocker overdose:
 - 5 mg IV / IO

Pediatric Dosing and Administration

- Age <5 years (<20 kg): 0.5 mg IV / IO/ IM
- Age 5 years and older (>20 kg): 1mg IV / IO / IM
- May repeat once after 5 minutes
- Calcium Channel Blocker or Beta-blocker overdose:
 - 50 mcg/kg IV / IO (max dose 3 mg), may repeat after 10 minutes (max total 5 mg)

Onset

- 5-20 minutes

Duration

- Peaks 30 minutes post-injection
- Designed to increase blood sugar by at least 30 mg/dl in < 5 minutes

Possible Adverse Effects

- Headache and nausea
- Rash / allergic reaction
- Hyperglycemia

25: Glucose Gel (Oral)

Revised 01/04/2026

Glucose, Insta-Glucose

Classification

- Carbohydrate

Action

- Increases circulating blood sugar for cellular metabolism

Indication

- Hypoglycemia in an alert patient with the ability to swallow

Contraindications

- Known hypersensitivity
- Altered level of consciousness

Precautions

- Patient must have the ability to swallow without airway compromise

Drug interactions

- None

Adult Dosing and Administration

- 15 gm (1 tube), repeat until improved condition and blood glucose > 60 mg/dl

- Must have an intact gag and be able to handle own secretions

Pediatric Dosing and Administration

- Age >1 year: 15 gm (1 tube)
- Up to 45 g until improved condition and blood glucose > 60 mg/dl
- Must have an intact gag and be able to handle own secretions
- Not indicated in age <1 year, consider the patient's formula/juice/baby food

Onset

- Within 10 minutes

Duration

- Depends on the degree of hypoglycemia

Possible Adverse Effects

- Nausea / Vomiting
- Aspiration

26: Hydromorphone

Revised 01/04/2026

Dilaudid

Classification

- Semi-synthetic opioid analgesic.

Actions

- Acts primarily as a mu-opioid receptor agonist in the central nervous system, producing analgesia and sedation.

Indications

- Indicated for the management of moderate to severe pain where the use of an opioid analgesic is appropriate.

Contraindications

- Significant respiratory depression,
- Acute or severe bronchial asthma,
- Known hypersensitivity to hydromorphone.

Precautions

- Use with caution in patients with head injury, increased intracranial pressure, respiratory disorders, elderly patients, or those with hepatic/renal impairment.
- May cause dependency or abuse.

Drug Interactions

- CNS depressants (e.g., benzodiazepines, alcohol) may enhance sedative effects.

- MAO inhibitors may increase the risk of serotonin syndrome or respiratory depression.
- Use with caution with other serotonergic drugs.

Adult Dosing and Administration

- Oral: 2–4 mg every 4–6 hours as needed.
- IV/IM: 0.2–1 mg every 2–3 hours as needed.
- Adjust dose based on patient response and opioid tolerance.

Pediatric Dosing and Administration

- Pediatric dosing must be individualized; oral dose typically 0.03–0.08 mg/kg every 4–6 hours as needed. |
- V/IM: 0.015 mg/kg every 3–4 hours as needed.
- Consult pediatric dosing guidelines.

Onset

- IV—5 minutes
- IM—15 minutes
- Oral—30 minutes.

Duration

- 2–4 hours (route dependent).

Possible Adverse Effects

- Common: nausea, vomiting, constipation, sedation, dizziness.
- Serious: respiratory depression, hypotension, bradycardia, anaphylaxis.

Other notes

- Dilaudid is a controlled substance (Schedule II in the US).

- Tolerance, dependence, and withdrawal can occur with prolonged use.
- Titrate dose carefully to minimize adverse effects.

27: Hydroxocobalamin

Revised 01/04/2026

Cyanokit

Classification

- Antidote

Action

- Binds with cyanide to form cyanocobalamin (vitamin B12), which is excreted through the urinary tract

Indication

- Cyanide poisoning
- Smoke inhalation with suspicion of cyanide poisoning
- Hydrogen sulfide toxicity

Contraindications

- Known hypersensitivity or allergy

Precautions

- May cause transient hypertension
- May cause an allergic reaction
- Start a second IV line to administer as hydroxocobalamin reacts with many other IV medications

Drug interactions

- None

Adult Dosing and Administration

- 5 gm IV over a total of 15 minutes

Pediatric Dosing and Administration

- 70 mg/kg IV (max 5 gm) over 15 minutes

Onset

- Immediate

Duration

- The majority of urinary excretion occurs within 24 hours

Possible Adverse Effects

- Allergic reaction
- Hypertension (transient)
- Reddish discoloration of skin and urine
- Dry throat
- Nausea/vomiting

Other Notes

- Mixing:
 - Place the transfer spike into a 250 mL bag of NS or D5W, then insert the other end into the Cyanokit bottle. Squeeze 200 mL NS or D5W into the Cyanokit bottle. Remove the spike and gently mix the bottle for 60 seconds. Insert the enclosed vented IV set into the Cyanokit bottle, prime the line, and infuse the appropriate dose over 15 minutes.

28: Ibuprofen

Revised 01/04/2026

Aggressive Medical Care

- We are comClassification
 - Nonsteroidal anti-inflammatory drug (NSAID); analgesic; antipyretic

Actions

- Inhibits cyclooxygenase (COX-1 and COX-2) enzymes, reducing prostaglandin synthesis; produces anti-inflammatory, analgesic, and antipyretic effects

Indications

- Mild to moderate pain, fever, inflammatory conditions such as arthritis, dysmenorrhea

Contraindications

- Hypersensitivity to ibuprofen or other NSAIDs
- Active gastrointestinal bleeding or ulcer
- Severe heart failure
- History of asthma
- Allergic reaction to NSAIDs

Precautions

- Use with caution in patients with renal or hepatic impairment, hypertension, cardiovascular disease, GI disorders, the elderly, and pregnant women (especially in the third trimester)

Drug Interactions

- May interact with anticoagulants (e.g., warfarin), antiplatelet agents, other NSAIDs, corticosteroids, ACE inhibitors, diuretics, lithium, and methotrexate

Adult Dosing and Administration

- 200–400 mg orally every 4–6 hours as needed; maximum 3,200 mg per day (prescription strength);
- Lower maximum for over-the-counter use (1,200 mg/day)

Pediatric Dosing and Administration

- 5–10 mg/kg orally every 6–8 hours as needed; maximum 40 mg/kg/day

Onset

- 30–60 minutes (oral)

Duration

- Duration of action: 4–6 hours

Possible Adverse Effects

- Gastrointestinal upset
- Nausea
- Vomiting
- Dyspepsia
- Gastric ulcer
- Bleeding
- Headache
- Dizziness
- Rash
- Renal impairment
- Increased blood pressure

Other notes

- Avoid use in late pregnancy (third trimester); use the lowest effective dose for the shortest duration; available over-the-counter and by prescription; take with food or milk to reduce GI upset.

29: Ipratropium

Revised 01/04/2026

Atrovent

Classification

- Anticholinergic bronchodilator

Action

- Inhibits the parasympathetic action of acetylcholine in bronchial smooth muscle, causing bronchodilation

Indications

- Asthma / COPD
- Moderate to severe allergic reaction and anaphylaxis

Contraindications

- Known hypersensitivity/allergy to anticholinergics (Atropine, Ipratropium)

Precautions

- The patient's vital signs should be monitored for tachycardia
- May enhance the effect or toxicity of other Anticholinergic agents
- Use with caution in Glaucoma, as it may increase intraocular pressure
- Lung sounds should be auscultated before and after treatment to assess treatment efficacy.

Drug interactions

- Combination with other Anticholinergic agents may lead to Anticholinergic Toxicity.

- Ipratropium bromide increases the duration of bronchodilation from Albuterol
- Caution if the patient takes MAOIs, tricyclic antidepressants, SSRIs, or Antipsychotics

Adult Dosing and Administration

- Combine with Albuterol for 1st and 2nd doses
- 500 mcg / 2.5 mL

Pediatric Dosing and Administration

- Combine with Albuterol for 1st and 2nd doses
- 500 mcg / 2.5 mL

Onset

- 15 minutes, Peak effect 1-2 hours

Duration

- 4-5 hours

Possible adverse effects

- Hypersensitivity/allergy
- Headache / Dizziness / Blurred Vision
- Nausea / Vomiting / GI upset
- Paradoxical bronchospasm
- Tachycardia/palpitations
- Cough, Shortness of Breath
- Dry throat or mouth, bitter taste in the mouth

30: Ketamine

Revised 01/04/2026

Ketalar

Classification

- A non-barbiturate dissociative anesthetic drug

Actions

- Produces a dream-like state - dissociative anesthesia
- Has analgesic (pain control) as well as sedative effects
- Works without causing loss of airway control
- Has limited respiratory or cardiovascular effects and is less likely to cause hypotension or apnea than benzodiazepines or etomidate
- Ketamine is known for having a wide margin of safety, typically provides good pain relief or sedation, and is generally well-tolerated

Indications

- Sedation for MAI (credentialed paramedics only)
- Pain control
- Excited Delirium
- Sedation for Intubated Patients
- Severe Respiratory Distress from Asthma/COPD
- Adult Cardiac Arrest, possibly caused by Asthma Exacerbation

Contraindications

- Allergy to a drug

Precautions

- Must give SLOWLY (over 60 seconds). Rapid administration can cause respiratory depression or apnea
- Must monitor very closely after administration
- Safety for use in pregnancy is not well established.

Drug interactions

- Multiple, including significant interactions below
 - Use with other central nervous system depressants can cause increased sedation.
 - SSRIs may increase the toxic effects of SSRIs

Adult dosing

- For **Adjunct Pain Control**
 - 0.25 mg/kg IV/IO over 15 minutes in IVPB
 - 0.75 mg/kg Neb diluted with NS to a volume of 5ml
- For **Sedation**
 - 1 mg/kg IV/IO over 60 seconds
 - 5mg/kg IM
- For **Severe Respiratory Distress caused by Asthma/COPD**
 - 0.25 mg/kg IV over 60 seconds, may repeat X 1 after 10 minutes if needed
- For **Cardiac Arrest, possibly caused by Asthma Exacerbation**
 - 1 mg/kg IV/IO

Pediatric dosing:

- For **Adjunct Pain Control** (age 8 years and older)
 - 0.25 mg/kg IV over 15 min IVPB
 - 0.75 mg/kg Neb diluted with NS to a volume of 5ml
- For **Sedation**
 - 1 mg/kg IV/IO over 60 seconds
 - 5mg/kg IM
- For **Severe Respiratory Distress caused by Asthma/COPD**
 - 0.25 mg/kg IV/IO over 60 seconds

- For **Cardiac Arrest, possibly caused by Asthma Exacerbation**
 - 1 mg/kg IV/IO

Onset:

- 30 seconds IV
- 3-4 minutes IM

Duration:

- 5-10 minutes IV
- 10-25 minutes IM
- Sedation is followed by a gradual awakening that may last up to an hour, depending on the patient. This tends to be longer if given IM.

Possible Adverse Effects:

- Rapid horizontal/Vertical involuntary eye movements (Nystagmus) are expected and can be used as an indication of drug effect
- Laryngospasm-typically transient, overcome with BVM if necessary
- Increased salivation / bronchial secretions
- Bradycardia/tachycardia
- Hypertension is usually transient.
- As with any sedative, there is a risk of aspiration, though this should be theoretically less with Ketamine since the laryngeal reflex remains intact.
- Respiratory depression or even apnea may occur, particularly with rapid administration of the drug, so monitor end-tidal and pulse oximetry.
- Emergence phenomenon: As patients wake from a dissociative state, they may become agitated or frightened. It may have associated delirium. As the drug is metabolized, this should resolve, but severe cases may require a benzodiazepine to be given. (Call medical direction first)

Notes

- *Giving a dose too fast may cause respiratory depression*
- *Do not mix benzodiazepines in the same syringe as ketamine*

- *Treat emergence reaction with benzodiazepine, call medical direction first*
- *Ketamine may be particularly good for MAI in patients with bronchoconstriction secondary to asthma due to the bronchodilator effects of Ketamine*

31: Ketorolac

Revised 01/04/2026

Torodal, Toreador

Classification

- Nonsteroidal anti-inflammatory drug (NSAID)

Actions

- The primary mechanism of action responsible for ketorolac's anti-inflammatory, antipyretic, and analgesic effects is the inhibition of prostaglandin synthesis by competitively blocking the cyclooxygenase (COX) enzyme. Ketorolac is a non-selective COX inhibitor.

Indications

- Fever
- Pain

Contraindications

- Ketorolac Tromethamine is contraindicated in patients with a history of hypersensitivity to ketorolac tromethamine.
- Patients with active peptic ulcer disease.
- Patients with recent gastrointestinal bleeding or perforation
- Patients with a history of peptic ulcer disease or gastrointestinal bleeding.
- Patients who have experienced asthma, urticaria, or allergic-type reactions after taking aspirin or other NSAIDs.
- Contraindicated as a prophylactic analgesic before any major surgery.
- Contraindicated for the treatment of peri-operative pain in the setting of coronary artery bypass graft (CABG) surgery (see WARNINGS).
- Patients with advanced renal impairment or in patients at risk for renal failure due to volume depletion (see WARNINGS for correction of volume depletion).

- Contraindicated in labor and delivery because, through its prostaglandin synthesis inhibitory effect, it may adversely affect fetal circulation and inhibit uterine musculature, thus increasing the risk of uterine hemorrhage.
- Ketorolac tromethamine inhibits platelet function and is, therefore, contraindicated in patients with suspected or confirmed cerebrovascular bleeding, hemorrhagic diathesis, incomplete hemostasis, and those at high risk of bleeding.
- Patients who are currently receiving aspirin or NSAIDs because of the cumulative risks of inducing serious NSAID-related adverse events. The concomitant use of ketorolac tromethamine and probenecid is contraindicated. The concomitant use of ketorolac tromethamine and pentoxifylline is contraindicated. Ketorolac tromethamine injection is contraindicated for neuraxial (epidural or intrathecal) administration due to its alcohol content.

Precautions

- Severe, rarely fatal, anaphylactic-like reactions to NSAIDs have been reported in such patients (see WARNINGS - Anaphylactoid Reactions, and PRECAUTIONS- Pre-existing Asthma).

Drug Interactions

- The concomitant use of ketorolac tromethamine and probenecid is contraindicated. The concomitant use of ketorolac tromethamine and pentoxifylline is contraindicated. Ketorolac tromethamine injection is contraindicated for neuraxial (epidural or intrathecal) administration due to its alcohol content.

Adult Dosing and Administration

- 15mg IV/IO/IM

Pediatric Dosing and Administration

- Not recommended

Onset

- Rapid onset with initial pain relief within 10 minutes, with maximum effect between 1-2 hours.

Duration

- 4-6 hrs

Possible Adverse Effects:

- Adverse reaction rates increase with higher doses of ketorolac tromethamine.
- Practitioners should be alert for the severe complications of treatment with ketorolac tromethamine, such as G.I. ulceration, bleeding and perforation, postoperative bleeding, acute renal failure, anaphylactic and anaphylactoid reactions, and liver failure.

32: Labetalol

Revised 01/04/2026

Classification

- Nonselective beta-blocker with alpha-blocking properties

Action

- **Beta-blockade:** Blocks the effects of epinephrine and norepinephrine at beta-adrenergic receptors, reducing heart rate, blood pressure, and cardiac output.
- **Alpha-blockade:** Blocks the effects of epinephrine and norepinephrine at alpha-adrenergic receptors, reducing peripheral vascular resistance and blood pressure.

Indication

- Preeclampsia
- Hypertensive emergency

Contraindications

- Severe bradycardia
- Severe heart failure
- Cardiogenic shock
- Hypersensitivity to labetalol or any of its excipients

Precautions

- **Heart failure:** Use with caution in patients with heart failure.
- **Asthma or COPD:** May worsen symptoms.
- **Diabetes:** May mask hypoglycemic symptoms.
- **Breastfeeding:** Labetalol is excreted in breast milk. Consider the risks and benefits.

Drug interactions

- **Beta-blockers:** Avoid concurrent use of other beta-blockers.
- **Nonsteroidal anti-inflammatory drugs (NSAIDs):** May reduce the antihypertensive effect of labetalol.
- **Alpha-blockers:** Avoid concurrent use of other alpha-blockers.

Adult Dosing and Administration

- 20-80mg IV/IO slow IVP

Pediatric Dosing and Administration

- Not indicated

Onset

- 2-5 mins

Duration

- 4 hours

Possible adverse effects

- **Common:** Dizziness, fatigue, bradycardia, hypotension
- **Less common:** Nausea, vomiting, diarrhea, constipation, headache, insomnia
- **Rare:** Bronchospasm, angioedema, Stevens-Johnson syndrome

33: Levetiracetam

Revised 01/04/2026

Keppra

Classification

- Antiepileptic

Action

- Binds to a synaptic vesicle protein (SV2A), modulating neurotransmitter release.
- The exact mechanism is not fully understood, but it is believed to affect the release of excitatory neurotransmitters.

Indication

- Status epilepticus

Contraindications

- Hypersensitivity

Precautions

- **None**

Drug interactions

- **Phenytoin:** May increase phenytoin levels. Monitor phenytoin levels and adjust the dosage if necessary.
- **Valproic acid:** May increase valproic acid levels. Monitor valproic acid levels and adjust the dose as needed.

- **Carbamazepine:** May decrease levetiracetam levels. Monitor levetiracetam levels and adjust the dosage if necessary.

Adult Dosing and Administration

- 40 mg/kg up to 4500mg slow IVP/IOP

Pediatric Dosing and Administration

- 40 mg/kg up to 4500mg slow IVP/IOP

Onset

- ~1 hr

Duration

- 6-8hrs

Possible adverse effects

- **Common:** Dizziness, fatigue, somnolence, headache
- **Less common:** Nausea, vomiting, diarrhea, anorexia, insomnia, irritability, aggression
- **Rare:** Stevens-Johnson syndrome, toxic epidermal necrolysis, angioedema

Other Notes

34: Lidocaine

Revised 01/04/2026

Xylocaine

Classification

- Antiarrhythmic, Anesthetic

Action

- Class IB Antiarrhythmic
- Depresses phase 0 of the depolarizing action potential
- Stabilizes electrically charged cell membranes (cardiac, nerve), slowing activity

Indication

- Ventricular arrhythmias (Consult Medical Direction for administration)
- Local anesthetic
- Non-EMS use: Anesthesia / MAI adjunct (CNS depressant)

Contraindications

- Known Hypersensitivity
- Wolff-Parkinson-White Syndrome (WPW)
- Heart Block (without implanted pacemaker)

Precautions

- May significantly worsen heart blocks and slow AV nodal conduction.
- CNS depressant.

Drug interactions

- Amiodarone and Beta-blockers - Significant QT prolongation, Hypotension
- Use with caution with other CNS depressants

Adult Dosing and Administration

- VF / pulseless VT: 1 mg/kg IO / IV initial dose, repeat doses 0.5 mg /kg every 5 to 10 minutes (max total dose 3 mg/kg)
- Stable VT: 1 mg/kg IV / IO, repeat doses 0.5 mg/kg every 5 to 10 minutes (max total dose 3 mg/kg)
- EZ-IO Infusion Pain: 0.5 mg/kg IO (max 40 mg or 2mL Lidocaine 2%) over 2 minutes, allow to dwell for 60 secs, flush with 2-5 mL NS

Pediatric Dosing and Administration

- Arrhythmia: 1 mg/kg IO / IV
- EZ-IO Infusion Pain: 0.5 mg/kg IO (max 40 mg) over 2 minutes, allow to dwell for 60 seconds, flush with 2-5 mL NS

Onset

- 1-5 min

Duration

- 1.5-2 hrs

Possible Adverse Effects

- Heart block / Hypotension
- CNS Depression
- Ventricular Arrhythmias
- Numbness at the application site
- Respiratory depression/status asthmaticus

35: Magnesium Sulfate

Revised 01/04/2026

Classification

- Mineral / Electrolyte

Action

- Physiologic Electrolyte
- Aids in cell membrane electrical stability and decreases membrane excitability

Indication

- Ventricular Arrhythmias / Torsade de Pointe
- Eclampsia (Pregnancy-Related Seizures)
- Refractory asthma/bronchospasm

Contraindications

- Known Hypersensitivity
- Heart block

Precautions

- Caution in pulmonary edema
- May induce hypotension
- Caution if renal impairment

Drug interactions

- Calcitriol (used in renal failure) - increased risk of hypermagnesemia
- Narcotics and barbiturates - CNS depression

Adult Dosing and Administration

- Pulseless VF / VT / Torsades de Pointes: 2 g IV / IO slow push
- Stable Wide Complex Tachycardia Refractory: 2 g IV / IO mix in 100 ml NS and given over 10 minutes
- Refractory asthma/bronchospasm: 2 g IV / 10 mixed in 100 mL NS and given over 10 minutes
- Eclampsia: 4 g IV / IO mixed in 100ml NS and given over 10 minutes
 - If no IV / IO, rapidly administer 4 g IM

Pediatric Dosing and Administration

- 50 mg/kg (max 2 g) IV / IO mixed in 100 ml NS and given over 10 minutes
- If Pulseless refractory VF / VT / Torsades de Pointes, administer as slow IV / IO

Onset

- Immediate

Duration

- 30 minutes

Possible Adverse Effects

- Respiratory depression / respiratory paralysis
- Flushing / Sweating
- Depressed cardiac function / pulmonary edema / cardiovascular collapse

36: Metoprolol

Revised 01/04/2026

Lopressor, Toprol

Classification

- Antihypertensive, Beta-blocker

Action

- Preferentially blocks beta1 receptors

Indication

- Refractory VF / pulseless VT
- Narrow Complex Tachycardia with pulses
- Hypertension

Contraindication

- Allergy
- Bradycardia, 2° or 3° heart block, cardiogenic shock, cardiac failure
- Sick-sinus syndrome
- Severe peripheral arterial disease

Precautions

- Use very cautiously in patients with congestive heart failure
- Use cautiously in patients with a history of asthma / COPD

Drug Interactions

- Digitalis and other beta-blockers may increase the risk of bradycardia

Adult Dosing and Administration

- Narrow Complex Tachycardia: 5 mg slow IV / IO push, may repeat x1 after 5 minutes

Pediatric Dosing and Administration

- Not indicated for pediatric patients

Onset

- 10-20 minutes

Duration

- 5-8 hours

Possible Adverse Effects

- Allergy
- Bradycardia and hypotension
- Respiratory difficulty, wheezing, bronchospasm
- Congestive Heart Failure

37: Midazolam

Revised 01/04/2026

Versed

Classification

- Benzodiazepine (Short-Acting)

Action

- GABA Receptor Stimulation causes CNS inhibition and CNS depression

Indication

- Agitation / Excited delirium
- Seizures
- Cocaine or Amphetamine induced Tachycardia
- Alcohol withdrawal
- Shivering in Therapeutic Hypothermia
- Post-Intubation Sedation

Contraindications

- Known hypersensitivity
- Acute narrow-angle glaucoma

Precautions

- Monitor EtCO₂, BP, SaO₂ prior to and post administration
- Use caution in liver failure patients - may cause increased and prolonged effect
- Caution if the patient has hypotension or hypoventilation
- GIVE SLOWLY (over at least 2 minutes for adults, longer for children and the elderly)

Drug interactions

- Benzodiazepines and narcotics - additive effect (respiratory depression/hypotension)

Adult Dosing and Administration

- 5-10 mg IV/IO/IM/IN

Pediatric Dosing and Administration

- 0.2 mg/kg IV/IO/IM/IN (max single dose 10 mg)
 - The lowest volume acceptable for IN is 0.5mL

Onset

- 1-5 min

Duration

- 30 min - 5 hrs

Possible Adverse Effects

- Respiratory depression
- Hypotension, Tachycardia
- Paradoxical CNS stimulation
- Commonly produces sedation, dizziness, fatigue, and pain

38: Morphine Sulfate

Revised 01/04/2026

Classification

- Opioid analgesic (narcotic)

Actions

- Binds to and activates mu-opioid receptors in the central nervous system, resulting in inhibition of pain pathways, altered pain perception, and emotional response to pain.

Indications

- Management of moderate to severe pain, including acute and chronic pain; adjunct to anesthesia;
- Pulmonary edema-associated pain and dyspnea (off-label);
- Palliative care.

Contraindications

- Hypersensitivity to morphine or formulation components;
- significant respiratory depression;
- Acute or severe bronchial asthma;
- Paralytic ileus
- Concurrent use with MAOIs or within 14 days.

Precautions

- Use with caution in elderly, debilitated patients, those with head injury, increased intracranial pressure, respiratory disorders, hepatic or renal impairment, history of substance abuse, or hypotension.
- May cause dependence and tolerance.

Drug Interactions

- Increased CNS depression with other sedatives, alcohol, or CNS depressants.
- Risk of serotonin syndrome with serotonergic drugs.
- MAOIs may cause severe reactions.
- CYP3A4 inhibitors/inducers may affect morphine levels.

Adult Dosing and Administration

- Individualize dosing based on pain severity, response, and prior opioid exposure.
 - Oral 10–30 mg every 4 hours as needed;
 - IV 2.5–5 mg every 3–4 hours as needed. Titrate for effect.
- Available in immediate and extended-release forms.

Pediatric Dosing and Administration

- Oral: 0.2–0.5 mg/kg every 4–6 hours as needed.
- IV: 0.05–0.1 mg/kg every 2–4 hours as needed. Adjust dosing based on age, weight, and response. Use caution and monitor closely.

Onset

- Oral: 30–60 minutes;
- IV: 5–10 minutes;
- IM/subcutaneous: 10–30 minutes.

Duration

- Oral: 3–5 hours (immediate-release);
- IV: 3–4 hours; extended-release formulations last longer (8–24 hours).

Possible Adverse Effects

- Common: Constipation, nausea, vomiting, drowsiness, dizziness, pruritus.

- Serious: Respiratory depression, hypotension, urinary retention, confusion, addiction, tolerance, withdrawal symptoms.

Other notes

- Monitor for signs of misuse, abuse, and diversion. Use the lowest effective dose for the shortest duration. Naloxone can reverse opioid toxicity. Taper gradually to avoid withdrawal if discontinuing after long-term use.

39: Naloxone

Revised 01/04/2026

Narcan

Classification

- Opioid antagonist

Action

- Competes for opioid receptor sites

Indication

- Complete or partial reversal of narcotic depression (depressed mental status or respiratory rate < 10) induced by narcotics

Contraindications

- Hypersensitivity

Precautions

- The duration of action of some narcotics may exceed that of Narcan
- Use cautiously in patients with cardiovascular disease
- Use of Narcan can precipitate acute narcotic withdrawal - use cautiously in patients with known narcotic dependency
- Narcan should ONLY be used if narcotic use/overdose is suspected AND the patient has signs/symptoms of CNS and/or respiratory depression

Drug interactions

- None significant

Adult Dosing and Administration

- 0.4-4 mg IV/IO/IM/IN, repeat X 1 after 2-3 minutes to increase respirations

Pediatric Dosing and Administration

- 0.1 mg/kg IV / IO / IM / IN (max dose 2 mg), repeat x1 after 2-3 minutes if indicated
- Consult the On-Call Medical Director for additional doses

Onset

- Within 2 minutes

Duration

- 30 minutes - 2 hours

Possible Adverse Effects

- Nausea and vomiting
- Yawning and piloerection (goose-bumps)
- Tachycardia, hypertension, hypotension, cardiac arrhythmias
- Tremulousness
- Seizures

40: Nicardipine

Revised 01/04/2026

Cardene

Classification

- Nicardipine is a dihydropyridine calcium channel blocker.

Actions

- Inhibits calcium influx through L-type calcium channels in vascular smooth muscle, resulting in arterial vasodilation and reduced blood pressure.

Indications

- Hypertensive emergency or urgency (IV)
- Chronic hypertension (oral)
- Angina pectoris (oral, rarely used)

Contraindications

- Advanced aortic stenosis
- Hypersensitivity to nicardipine or its components

Precautions

- Use with caution in heart failure, hepatic impairment, or with peripheral IV access for prolonged infusions.
- May cause reflex tachycardia and hypotension.

Drug Interactions

- Additive effects with other antihypertensives

- May increase levels of cyclosporine
- Metabolized by CYP3A4: interactions with CYP3A4 inhibitors/inducers

Adult Dosing and Administration

- IV: Start at 5 mg/hr, increase by 2.5 mg/hr every 5–15 min; max 15 mg/hr. Oral: 20–40 mg three times daily.

Pediatric Dosing and Administration

- IV: 0.5–1 mcg/kg/min, titrate as needed. Maximum 3 mcg/kg/min (consult specialist).

Onset

- IV: 5–15 minutes
- Oral: 45 minutes to 2 hours

Duration

- IV: 0.5–4 hours after discontinuation
- Oral: 8 hours (sustained-release)

Possible Adverse Effects

- Headache
- Flushing
- Dizziness
- Hypotension
- Tachycardia
- Nausea
- Local phlebitis (IV)

Other notes

- Pregnancy category C.
- Central line preferred for prolonged IV use.
- Avoid abrupt withdrawal.

41: Nitroglycerin

Revised 01/04/2026

Nitro-bid, Nitro-dur

Classification

- Vasodilator

Action

- Potent smooth muscle relaxer - dilates arteries and veins
- Reduces cardiac workload
- Dilates the coronary arteries - improves the perfusion of ischemic cardiac muscle

Indication

- Chest pain associated with Acute MI or angina pectoris
- Acute pulmonary edema / CHF exacerbation

Contraindications

- Hypersensitivity
- Recent (within 24 hours) ingestion of sexual enhancement drugs
- Hypotension/shock
- Increased intracranial pressure

Precautions

- Do not administer if SBP < 100 (SBP < 120 if right ventricular MI suspected)
- Blood pressure should be monitored before and after each dose
- Do not administer nitroglycerin without an IV established (unless specifically ordered by the Medical Director)

Drug interactions

- Sexual enhancement medications (Cialis, Viagra, Levitra) can cause life-threatening hypotension.
- Beta blockers and calcium channel blockers can cause hypotension

Adult Dosing and Administration

- Chest pain: 0.4 mg SL every 5 minutes until Chest Pain-free or SBP <100
 - IV infusion at 10 mcg/min IV
 - Titrate drip rate by 5-10 mcg/min every 2-3 minutes, until Chest Pain-free or SBP <100
 - Range 5 - 800 mcg/min
- CHF Exacerbation: 0.4 mg SL every 4 minutes, maintain SBP <140
- CHF exacerbation: Bolus 1000 mcg slow IV Push
 - IV infusion at 10 mcg/min IV
 - Titrate drip rate by 5-10 mcg/min every 2-3 minutes, maintain SBP <140
 - Range 5 - 800 mcg/min

Pediatric Dosing and Administration

- Not routinely indicated in pediatric patients

Onset

- 1 to 3 minutes

Duration

- 30 to 60 minutes

Possible Adverse Effects

- Hypotension, bradycardia
- Headache/dizziness/weakness / dry mouth

- Nausea/vomiting

42: Norepinephrine Bitartrate

Revised 01/04/2026

Levophed

Classification

- catecholamine

Action

- Produces peripheral vasoconstriction by direct effects on the alpha-adrenergic receptors
- Produces inotropic stimulation and coronary artery dilation by direct effects on the beta-adrenergic receptors

Indication

- Shock / severe hypotension

Contraindications

- Known Hypersensitivity
- Hypovolemia
- Hypertension
- Profound hypoxia or hypercarbia - the risk of inducing cardiac arrhythmias
- Sulfite sensitivity

Precautions

- Hypoxia, hypercapnia, and acidosis may reduce the effectiveness and/or increase the incidence of adverse effects of norepinephrine and must be identified and corrected prior to or concurrently with the administration of the drug.
- Avoid extravasation (infiltration) of norepinephrine. Tissue necrosis may occur.

- Avoid infusion into leg veins, especially in geriatric patients or those with occlusive vascular diseases, arteriosclerosis, diabetes mellitus, or Buerger's disease.
- Use with caution in patients with sulfite sensitivity, especially if sulfites induce asthma
- Use caution when administering to patients with hyperthyroidism. Norepinephrine can cause severe hypertension with headache, photophobia, stabbing chest pain, pallor, sweating, and vomiting

Drug interactions

- MAOI's
- Tricyclic antidepressants may cause severe, prolonged hypertension
- Antihistamines - may cause severe, prolonged hypertension

Adult Dosing and Administration

- For hypotension
 - Mix 8 mg (8 mL) in 500 mL (or 4mg in 250ml) NS, infuse
 - Typically, start 4 mcg/min IV / IO, titrate 1 mcg/min - 12 mcg/min, maintain MAP >65
 - 0.1 mcg/kg/min IV / IO, range 0.05 - 2 mcg/kg/min

Pediatric Dosing and Administration

- Mix 8 mg (8 mL) in 500 mL (or 4mg in 250ml) NS, infuse
- 0.1 mcg/kg/min IV/IO, range 0.05 - mcg/kg/min to maintain SBP >90 or age-based normal

Onset

- Rapid

Duration

- Pressor action stops within 1-2 minutes after the infusion is discontinued

Possible Adverse Effects

- Hypertension
- Headache
- Anxiety
- Photophobia
- Cardiac Arrhythmias
- Extravasation necrosis
- Reflex bradycardia

Other Notes

- Closely monitor the infusion flow rate.
- Adequate intravascular volume replacement is strongly recommended concurrently with therapy. Inadequate intravascular volume can result in decreased perfusion of vital organs, including the heart, liver, and kidneys.
- Check BP every 2.5 minutes from the start of the norepinephrine infusion until the desired effect is achieved, then every 5 minutes while the infusion continues.
- Use a large-bore IV catheter (18 ga or greater) in a large peripheral vein. Watch for infiltration. If notes stop infusion immediately and notify the receiving physician.
- Discontinuing therapy: Slow infusion rate gradually and avoid abrupt withdrawal: observe the patient carefully so that therapy may be resumed if the BP falls too rapidly.
- It can increase glycogenolysis and inhibit insulin secretion, leading to hyperglycemia

43: Ondansetron

Revised 01/04/2026

Zofran, Zofran ODT

Classification

- Antiemetic

Action

- Antagonizes 5-HT₃ serotonin receptors

Indication

- Nausea
- Vomiting

Contraindications

- Known hypersensitivity
- Apomorphine use - induces profound hypotension

Precautions

- Caution in hepatic failure
- Caution with antipsychotic use

Drug interactions

- Apomorphine - induces profound hypotension, contraindicated
- Antipsychotics - QT prolongation, cardiac dysrhythmias
- Amiodarone - QT prolongation, cardiac dysrhythmias

- Antivirals - QT prolongation, cardiac dysrhythmias

Adult Dosing and Administration

- 4 mg IV (slow) / IO (ODT)

Pediatric Dosing and Administration

- 0.15 mg / kg slow IV / IO (ODT)
- Max dose 4 mg

Onset

- 5-10 min

Duration

- 4-6 hrs

Possible Adverse Effects

- Hypersensitivity / allergic reaction
- Q-T prolongation
- Transient blindness
- Extrapyrmidal reactions

Other Notes

- Oral Dissolving Tablets (ODT) and IV administration have similar efficacy

44: Oxygen

Revised 01/04/2026

Oxygen

Classification

- Gas

Actions

- Distributed by the vascular system and directly used by all tissues

Indications

- Chest Pain,
- Shortness of Breath,
- Hypoxemia of any cause,
- Respiratory emergencies,
- Cardiovascular emergencies,
- Neurologic diseases,
- Suspected carbon monoxide toxicity

Contraindications

- None in the prehospital setting.

Precautions

- None

Drug Interactions

- None

Adult Dosing and Administration

- As needed

Pediatric Dosing and Administration

- As needed

Onset

- Rapid

Duration

- N/A

Possible Adverse Effects

- None

Other notes

45: Phenylephrine

Revised 01/04/2026

Classification

- Sympathomimetic; alpha-1 adrenergic agonist

Actions

- Vasoconstriction via direct stimulation of alpha-1 adrenergic receptors, leading to increased vascular resistance and blood pressure.

Indications

- Treatment of hypotension (especially in anesthesia), nasal congestion, mydriasis induction (ophthalmic), and as a vasopressor.

Contraindications

- Severe hypertension
- Ventricular tachycardia
- Hypersensitivity to phenylephrine
- Narrow-angle glaucoma (ophthalmic use).

Precautions

- Use with caution in patients with hypertension, hyperthyroidism, bradycardia, partial heart block, severe arteriosclerosis, and the elderly.

Drug Interactions

- May interact with MAO inhibitors (risk of hypertensive crisis), beta-blockers (enhanced vasopressor response), tricyclic antidepressants (increased pressor effects), and ergot alkaloids.

Adult Dosing and Administration

- IV bolus: 50–200 mcg every 1–2 minutes as needed
- IV infusion: 0.2–2 mcg/kg/min titrated to effect.
- Opical (nasal): 0.25–1% solution, 2–3 sprays/drops every 4 hours as needed.

Pediatric Dosing and Administration

- IV bolus: 5–20 mcg/kg/dose;
- IV Infusion: 0.1–0.5 mcg/kg/min titrated to effect.
- Nasal: 0.125–0.25% solution, 1–2 drops/sprays per nostril every 4 hours as needed.

Onset

- IV: Immediate; topical (nasal): within minutes.

Duration

- IV: 15–20 minutes; topical (nasal): up to 4 hours.

Possible Adverse Effects

- Hypertension,
- Reflex bradycardia,
- Arrhythmias,
- Headache,
- Anxiety,
- Nausea,
- Vomiting
- Local irritation with topical forms.

Other notes

- Phenylephrine is less likely than other vasopressors to cause tachyarrhythmias. Monitor blood pressure closely during administration. Use with caution in patients with cardiovascular disease.

46: Procainamide

Revised 01/04/2026

Classification

- Class 1A antiarrhythmic (sodium channel blocker)

Actions

- Slows conduction velocity, prolongs action potential duration, and refractory period in atrial and ventricular myocardium by blocking sodium channels.

Indications

- Treatment of ventricular arrhythmias (e.g., ventricular tachycardia) and supraventricular arrhythmias (e.g., atrial fibrillation with rapid ventricular response, especially with WPW syndrome).

Contraindications

- Second- or third-degree AV block (without pacemaker),
- Systemic lupus erythematosus,
- Torsades de pointes
- Hypersensitivity to procainamide or similar drugs.

Precautions

- Monitor for QT and QRS prolongation, hypotension, blood dyscrasias (agranulocytosis), and symptoms of drug-induced lupus.
- Use caution in renal/hepatic impairment.

Drug Interactions

- Additive effects with other antiarrhythmics and QT-prolonging drugs.

- Increased risk of arrhythmias with certain antibiotics, antipsychotics, and antidepressants.

Adult Dosing and Administration

- Initial IV loading: 15–17 mg/kg at ≤ 50 mg/min.
- Maintenance: 1–4 mg/min IV infusion.
- Adjust for renal/hepatic impairment.

Pediatric Dosing and Administration

- IV: 3–6 mg/kg over 5 minutes, then maintenance infusion.
- Dose and administration may vary; consult pediatric references.

Onset

- Within minutes (IV administration).

Duration

- 3–6 hours (IV); longer with renal impairment.

Possible Adverse Effects

- Hypotension
- Nausea,
- Drug-induced lupus
- Agranulocytosis
- Torsades de pointes
- QRS or QT prolongation
- Rash
- Fever

Other notes

- Monitor ECG and blood counts routinely. Discontinue

47: Propofol

Revised 01/04/2026

Classification

- General anesthetic (IV)
- Sedative-hypnotic agent

Actions

- Induces and maintains anesthesia
- Produces sedation and hypnosis by potentiating GABA-A receptor activity
- Rapid onset and short duration of action

Indications

- Induction and maintenance of general anesthesia
- Sedation for mechanically ventilated adults in ICU• Procedural sedation

Contraindications

- Hypersensitivity to propofol or its components (egg, soy)
- Allergy to eggs, egg products, soybeans, or soy products

Precautions

- Use with caution in patients with hypotension, hypovolemia, or cardiac dysfunction
- May cause respiratory depression
- Potential for abuse and misuse
- Caution in elderly or debilitated patients

Drug Interactions

- Potentiates effects of other CNS depressants (e.g., opioids, benzodiazepines)
- May interact with drugs that lower blood pressure or cause bradycardia

Adult Dosing and Administration

- Induction: 1–2.5 mg/kg IV bolus
- Maintenance: 100–200 mcg/kg/min IV infusion (titrate to effect)

Pediatric Dosing and Administration

- Induction: 2.5–3.5 mg/kg IV bolus
- Maintenance: 125–300 mcg/kg/min IV infusion (titrate to effect)

Onset

- 30–60 seconds (IV)

Duration

- 3–10 minutes (dose-dependent)

Possible Adverse Effects

- Hypotension
- Respiratory depression
- Pain at the injection site
- Bradycardia
- Hypertriglyceridemia (with prolonged use)
- Propofol infusion syndrome (rare, serious)

Other notes

- Strict aseptic technique required (risk of bacterial contamination)
- No analgesic properties

- Lipid emulsion—monitor triglycerides in prolonged infusions

48: Rocuronium Bromide

Revised 01/05/2026

Rocuronium Bromide

Classification

- Non-depolarizing neuromuscular blocker

Actions

- Relaxation of skeletal muscles initiates paralysis

Indications

- For the induction of paralysis to facilitate rapid sequence intubation and to facilitate the induction of hypothermia.

Contraindications

- Hypersensitivity (e.g., anaphylaxis) to rocuronium or other neuromuscular blocking agents.

Precautions

- Paralysis

Drug Interactions

- Unknown

Adult Dosing and Administration

- 1mg/kg IV/IO

Pediatric Dosing and Administration

- 1mg/kg IV/IO

Onset

- 1-2 minutes

Duration

- 10-15 minutes

Possible Adverse Effects

- Prolonged paralysis

Other notes

- Continuous Pulse Oximetry, ETCO₂, and ECG Monitoring are required for sedated patients.

49: Sodium Bicarbonate

Revised 01/04/2026

Baking Soda, Citrocarbonate, Neut

Classification

- Alkalinizing agent

Action

- Acts as an alkalinizing agent by increasing bicarbonate ions, raising blood pH

Indication

- Hyperkalemia
- Metabolic acidosis
- Prolonged Cardiac Arrest
- Tricyclic antidepressant/salicylate overdose

Contraindications

- Metabolic or Respiratory alkalosis
- Known hypocalcemia

Precautions

- CHF/severe peripheral edema
- Renal insufficiency
- Concurrent corticosteroid therapy
- Children with DKA may have an increased risk of cerebral edema.

Drug interactions

- Must be cautious when pushing through the IV line with several other medications (calcium chloride, Amiodarone)
- Flush thoroughly or start a second IV line.

Adult Dosing and Administration

- 1 mEq/kg IV / IO, max 100 mEq

Pediatric Dosing and Administration

- Age >1 year: 1 mEq/kg IV / IO

Onset

- Immediate

Duration

- Variable depending on the patient's situation

Possible Adverse Effects

- Fluid Overload
- Alkalosis
- Hypokalemia
- Hypernatremia (elevated blood sodium levels)

Other Notes

- Watch the IV site closely.
- Extravasation may cause tissue irritation or cellulitis

50: Terbutaline

Revised 01/04/2026

Classification

- A selective beta-2 adrenergic agonist (sympathomimetic bronchodilator).

Actions

- Relaxes bronchial smooth muscle by stimulating beta-2 receptors, leading to bronchodilation. Also inhibits the release of mediators from mast cells.

Indications

- Acute bronchospasm in asthma
- Chronic obstructive pulmonary disease (COPD)
- Off-label: Preterm labor (tocolytic)

Contraindications

- Hypersensitivity to terbutaline or any component of the formulation
- Use for prolonged tocolysis (>48–72 hours) is contraindicated by the FDA

Precautions

- Use with caution in patients with cardiovascular disease, hypertension, arrhythmias, hyperthyroidism, diabetes mellitus, or seizure disorders
- May cause significant hypokalemia or hyperglycemia.

Drug Interactions

- Increased risk of arrhythmias with other sympathomimetics or MAO inhibitors
- Beta-blockers may reduce effectiveness
- May potentiate hypokalemia with diuretics

Adult Dosing and Administration

- Bronchospasm (Subcutaneous): 0.25 mg injected subcutaneously; may repeat in 15–30 minutes if needed (maximum 0.5 mg in 4 hours)
- Oral: 2.5–5 mg PO every 6 hours (not commonly used)

Pediatric Dosing and Administration

- Bronchospasm (Subcutaneous): 0.01 mg/kg (max 0.25 mg) subcutaneously; may repeat every 15–20 minutes for 3 doses
- Oral: 0.05 mg/kg/dose PO every 6 hours (max 2.5 mg/dose)

Onset

- Subcutaneous: 5–15 minutes
- Oral: 30–60 minutes

Duration

- Subcutaneous: 1.5–4 hours
- Oral: 4–6 hours

Possible Adverse Effects

- Tremor, nervousness, headache, dizziness
- Tachycardia, palpitations, arrhythmias
- Nausea, vomiting
- Hypokalemia, hyperglycemia

Other notes

- Not recommended for routine use as a tocolytic due to the risk of maternal cardiovascular events
- Monitor potassium levels during prolonged therapy.

51: Tetracaine Hydrochloride Ophthalmic, 0.5%

Revised 01/04/2026

Altacaine, Tetcaine, TetraVisc

Classification

- Local Anesthetic, ophthalmic

Action

- Inhibits Na⁺ ion channels, preventing the generation and conduction of nerve impulses

Indication

- Eye pain due to tear gas, chemical exposure, abrasion, or foreign body
- Before Morgan Lens irrigation

Contraindications

- Known Hypersensitivity or adverse reaction
- Contact Lenses (must remove first)

Precautions

- Caution in cardiac disease (heart block, abnormal rhythm) or hyperthyroidism

Drug interactions

- No known significant drug interactions

Adult Dosing and Administration

- 2 drops in the affected eye every 5 minutes, max 3 doses
- Instill drops in the retracted lower eyelid

Pediatric Dosing and Administration

- >2 y/o: instill 1 drop in the affected eye every 5 minutes, max 3 doses
- > 12 y/o see adult dosage
- Instill a drop into the retracted lower eyelid

Onset

- 30 seconds

Duration

- 10 - 20 minutes

Possible Adverse Effects

- Transient burning or stinging in the eye
- Ocular irritation, redness, chemosis, tearing, transient blurring of vision
- Prolonged use may cause corneal opacification, delayed healing, keratitis, and ulceration.

Other Notes

- Remove Contact Lenses before administration
- Do not touch the dropper tip to any surface
- Instruct the patient not to touch the eye after administration
- Prolonged, repeated use can cause serious complications, as stated above

52: Tranexamic Acid (TXA)

Revised 01/04/2026

Cyklokapron

Classification

- Antifibrinolytic Agent, topical Hemostatic agent

Action

- Forms a reversible complex that displaces plasminogen from fibrin and inhibits fibrinolysis. Inhibits plasmin proteolytic activity, thereby reducing the breakdown of clot structures that have already formed.

Indication

- SBP < 70 mmHg
- SBP < 90 mmHg with HR ≤ 110 bpm
- etCO₂ < 25 mm Hg
- Age ≥ 65 yo & SBP ≤ 100 mmHg AND HR ≥ 100 bpm
- AND severe bleeding within 3 hours.

Contraindications

- Only use with serious Hemorrhagic SHOCK bleeding <3 hrs

Precautions

- May cause hypotension with too rapid administration > 100 mg/min.

Drug interactions

- Should be administered in a separate IV from other medications if possible

Adult Dosing and Administration

- 2 grams IV in 100 CC Normal Saline over 10 minutes

Pediatric Dosing and Administration

- 10 Mg/kg Medical Director order only

Onset

- Immediate

Duration

- Half-Life 2 hours (excreted in the urine unchanged)

Possible Adverse Effects

- Headache
- Worsening cerebral edema if used in patients with Subarachnoid Hemorrhage
- CNS depression and/or Seizure
- Thrombotic complications such as DVT, PE, retinal vein/artery occlusion (rare)

Other Notes

- This must be followed by 1 gram of infused over the next 8 hours after the bolus. (125 mg/hr.)

53: Vasopressin

Revised 01/04/2026

Classification

- Antidiuretic hormone (ADH); vasopressor agent; synthetic analog of the natural pituitary hormone.

Actions

Increases water reabsorption in renal collecting ducts; causes vasoconstriction of vascular smooth muscle via V1 receptors; increases systemic vascular resistance.

Indications

- Vasodilatory shock (e.g., septic shock)
- Diabetes insipidus
- Sometimes used in cardiac arrest (asystole, pulseless electrical activity)

Contraindications

- Chronic nephritis with nitrogen retention;
- Known hypersensitivity to vasopressin or its components.

Precautions

- Use with caution in patients with coronary artery disease, heart failure, asthma, epilepsy, migraine, or impaired renal function.

Drug Interactions

- May potentiate the effects of other vasopressors.
- Decreased effect with demeclocycline, lithium, or norepinephrine.
- May interact with carbamazepine and clofibrate.

Adult Dosing and Administration

- Septic shock: 0.01–0.03 units/min IV infusion (not titrated above 0.03 units/min).
- Cardiac arrest: 40 units IV push once (alternative to epinephrine).

Pediatric Dosing and Administration

- Dosing varies by indication and age; consult specific pediatric guidelines.
- For vasodilatory shock: 0.0005–0.002 units/kg/min IV infusion (max 0.01 units/min).

Onset

- IV: 1–5 minutes.

Duration

- Duration: 10–20 minutes after IV dose; effects may persist with continuous infusion.

Possible Adverse Effects

- Hypertension
- Bradycardia
- Arrhythmias,
- Myocardial ischemia
- Abdominal cramps
- Nausea
- Hyponatremia
- Tissue necrosis with extravasation.

Other notes

- Vasopressin is not recommended as first-line therapy in shock but may be used as adjunct.
- Monitor for water intoxication and electrolyte imbalance.

19 Appendices

A: Contact Information

Revised 01/04/2026

Clinical Contact Information

Chief Medical Officer: Dr. Bryan Everitt

Medical Direction Office Phone: **210-206-0431**

North Regional Medical Director: Dr. Chad Sumrall

Clinical Operations Manager:

Clinical Quality Manager:

Clinical Education Manager:

Dispatch:

Infection Control Officer:

B: Scope of Practice

Revised 01/15/2026

APPENDIX B: SCOPE OF PRACTICE

| Scope of Practice | | | | |
|---|-----|-----|------|-----------|
| # - If credentialed | EMR | EMT | AEMT | PARAMEDIC |
| AIRWAY | | | | |
| BVM | x | x | x | x |
| Head-tilt chin lift/Jaw thrust | x | x | x | x |
| Obstruction- Manual removal from oropharynx | x | x | x | x |
| Oxygen therapy- Nasal cannula Non-rebreather Mask | • | x | x | x |
| Upper airway suctioning | • | x | x | x |
| Humidifiers | | x | x | x |
| Automatic Transport Ventilator | | | | x |
| Oral airways | x | x | x | x |
| Nasal airways | x | x | x | x |
| Supraglottic Airway (Gel® or King LTD) | | x | x | x |
| CPAP | | x | x | x |
| Chest tube monitoring | | | | x |
| Percutaneous cricothyrotomy | | | | x |
| Surgical Cricothyrotomy | | | | • |
| ETCO2/Capnography | | x | x | x |
| NG tubes | | | | x |
| OG tubes | | | | x |
| Nasotracheal endotracheal intubation | | | | x |
| Airway obstruction removal by laryngoscopy | | | | x |
| PEEP (Vent. I/peep valve BVM) | | x | x | x |
| Perform tracheal tube suctioning on endotracheal | | x | x | x |
| ASSESSMENT | | | | |
| | EMR | EMT | AEMT | PARAMEDIC |
| Pulse oximetry | • | x | x | x |
| Manual and auto BP | • | x | x | x |
| Blood glucose monitor | • | x | x | x |
| Carbon Monoxide screening with oximeter device | | x | x | x |
| EKG interpretation | | | | x |
| Interpretive 12 lead | | | | x |
| Blood chemistry analysis | | | | • |

C: Cardiac Arrest / ROSC Checklist

Revised 01/04/2026

Assign Roles

- Lead
- Airway
- Meds/Monitor
- Compressor

Quality Metrics

- Metronome Use

CPR Tool

Tempo: 110 compressions per minute

Cycle: 2 minutes

[Reference: CPR Guidelines](#)

- Most Proximal Access
- Epinephrine within 10 minutes of arrival
- ITD Use
- Pauses <10 Seconds
- EtCO2 Waveform
- Tension Pneumothorax Considered

ROSC

- Assess Vitals
 - Maintain a hand on the pulse
 - MAP >65
 - EtCO2 <45
 - Remove ITD
 - SPO2 >94%

HR >60

EKG

Prepare Transport

Secure Lines / Tubes

Head of Bed @ 30

Confirm Vitals with each movement

Consider sedation

D: STRAC Trauma Alert Criteria Red/Blue

Revised 01/04/2026

If **any** Red Criteria met, transport to Level 1 Trauma Center

If **one** Blue Criteria met, transport to L3 or L4 Trauma Center; OR, if **two or more** Blue Criteria met, transport to L1 or L3 Trauma Center.

***Paramedic intuition may serve as Red/Blue Criteria override.*

RED: Pedi ≤ 17

- R1 Patient not awake and appropriate
- R2 Active airway assistance required (ie. more than supplemental O₂), or respiratory distress
- R3 Weak carotid/femoral pulse or absent distal pulses
- R4 BP <70 plus 2X Age (BP <90 age >10)
- R5 Pelvic instability or Chest wall instability or crepitus
- R6 Acute paralysis, loss of sensation, or suspected spinal cord injury
- R7 Amputation proximal to wrist or ankle
- R8 $\geq 5\%$ BSA partial/full thickness burns
- R9 Penetrating injury to head (or depressed skull fracture), neck, torso, extremities proximal to elbow or knee, excluding superficial wounds
- R10 Crushed, degloved, mangled, or pulseless injured extremity
- R11 Two or more proximal long bone fracture sites

RED: Adult ≥ 18 , <65

- R1 GCS ≤ 13 due to trauma
- R2 Active airway assistance required (ie. more than supplemental O₂)
- R3 No radial pulse AND heart rate ≥ 120
- R4 BP <90 systolic
- R5 Pelvic instability or Chest wall instability or crepitus
- R6 Acute paralysis, loss of sensation, or suspected spinal cord injury
- R7 Amputation proximal to wrist or ankle
- R8 $\geq 10\%$ BSA partial/full thickness burns

- R9 Penetrating injury to head (or depressed skull fracture), neck, torso, extremities proximal to elbow or knee, excluding superficial wounds
- R10 Crushed, degloved, mangled, or pulseless injured extremity
- R11 Two or more proximal long bone fracture sites

RED: Geri ≥ 65

- R1 GCS ≤ 13 or change in baseline due to trauma
- R2 Active airway assistance required (ie. more than supplemental O₂)
- R3 No radial pulse
- R4 BP < 110 systolic
- R5 Pelvic instability or Chest wall instability or crepitus
- R6 Acute paralysis, loss of sensation, or suspected spinal cord injury
- R7 Amputation proximal to wrist or ankle
- R8 $\geq 5\%$ BSA partial/full thickness burns
- R9 Penetrating injury to head (or depressed skull fracture), neck, torso, extremities proximal to elbow or knee, excluding superficial wounds
- R10 Crushed, degloved, mangled, or pulseless injured extremity
- R11 Two or more proximal long bone fracture sites

BLUE: Pedi ≤ 17

- B1 Reliable history of any LOC and/or amnesia
- B2
- B3
- B4
- B5 Pregnancy > 20 weeks
- B6 Single closed long bone fracture site
- B7 Falls $> 2X$ child's height or > 10 feet
- B8
- B9 Ejection from vehicle (excludes open vehicles)
- B10 Driver w/deformed steering wheel
- B11 Death in the same vehicle
- B12 Pedestrian or bicyclist struck; or motorcyclist thrown, run over, or w/significant impact B13

- B14 Weight <10Kg (<22lbs) or RED or PURPLE Broselow Tape Zone
- B15 Suspicion of non-accidental trauma

BLUE: Adult ≥ 18 , <65

- B1 Reliable loss of consciousness >5 min.
- B2 Sustained respiratory rate ≥ 30 or ≤ 10
- B3 Sustained heart rate ≥ 120 (w/radial pulse) and BP ≥ 90 systolic
- B4 Best motor response = 5
- B5 Pregnancy >20 weeks
- B6 Fracture to humerus or femur due to motor vehicle crash
- B7 Fall from ≥ 20 feet
- B8
- B9 Ejection from vehicle (excludes open vehicles)
- B10 Driver w/deformed steering wheel
- B11 Death in same vehicle
- B12 Pedestrian or bicyclist struck; or motorcyclist thrown, run over, or w/significant impact
- B13 Patient on anticoagulantw/suspected TBI*
- B14
- B15

BLUE: Geri ≥ 65

- B1 Reliable loss of consciousness >5 min.
- B2 Sustained respiratory rate ≥ 30 or ≤ 10
- B3 Sustained heart rate ≥ 100
- B4 Best motor response = 5
- B5
- B6 Fracture to humerus or femur due to motor vehicle crash
- B7 Fall from ≥ 3 feet
- B8 **Age ≥ 65**
- B9 Ejection from vehicle (excludes open vehicles)
- B10 Driver w/deformed steering wheel
- B11 Death in same vehicle

- B12 Pedestrian or bicyclist struck; or motorcyclist thrown, run over, or w/significant impact
- B13 Patient on anticoagulant w/suspected TBI* (includes daily ASA use)
- B14
- B15 Significant injuries to two or more body-systems

Signs/Symptoms of TBI

- Witnessed or reported LOC
- Dizziness, vertigo, or 'lightheadedness'
- Changes in vision, photophobia or double vision
- Ataxia or new problems walking, standing, or maintaining balance
- Change in mental status, level of functioning or speech quality

E: Hospital Selection Guide

Revised 01/15/2026

| System | Version: May 2025 | | Trauma Designation | Adult (Age 18 and older) | | | Heart Alert | Resuscitation Center | Stroke Alert | OB | Bariatric CT (Wt/Girth) | Pediatric (Age 17 and under) | | |
|--|---|-------|--------------------|--------------------------|---------|--------|-------------|----------------------|------------------|-----|-------------------------|------------------------------|---------|---------|
| | Pediatric | Adult | | P-1 | P-2 | | | | | | | P-1 | P-2 | |
| | Service not available | | | | Medical | Trauma | | | | | | | Medical | Medical |
| | | | | | | | | | | | | | | |
| Baptist Health System | Baptist Medical Center | | L4 | YES | YES | YES | PCI | Primary | Primary | NO | 600 / 26 | NO ² | YES | YES |
| | Mission Trail Baptist Hospital | | L4 | YES | YES | YES | PCI | | Primary | YES | 450 / 26 | NO ² | YES | YES |
| | North Central Baptist Hospital | | L3 | YES | YES | YES | PCI | | Primary | YES | 450 / 26 | NO ² | NO | NO |
| | Baptist Children's at North Central | | | NO | NO | NO | NO | | NO | NO | 450 / 26 | YES | YES | YES |
| | Northeast Baptist Hospital | | L3 | YES | YES | YES | PCI | | Advanced | NO | 675 / 30 | NO ² | YES | YES |
| | Resolute Baptist Hospital | | L4 | YES | YES | YES | PCI | | Primary | YES | 675 / 27 | NO ² | YES | YES |
| | St. Luke's Baptist Hospital | | L4 | YES | YES | YES | PCI | | Comprehensive | YES | 450 / 26 | NO ² | YES | YES |
| | Westover Hills Baptist Hospital | | | YES | NO | YES | NO | | NO | YES | 450 / 27 | NO | NO | NO |
| CHRISTUS Health | CHRISTUS Children's Hospital | | L3 | NO | NO | NO | NO | | NO | YES | 660 / 28 | YES | YES | YES |
| | CHRISTUS Santa Rosa New Braunfels | | L4 | YES | YES | YES | PCI | Primary | Primary | YES | 450 / 28 | NO ² | YES | YES |
| | CHRISTUS Santa Rosa Westover Hills | | L4 | YES | YES | YES | PCI | | Primary | YES | 450 / 28 | NO ² | YES | YES |
| Methodist Healthcare System | Methodist Hospital | | L3 | YES | YES | YES | PCI | Comprehensive | Comprehensive | YES | 660 / 30 | NO ² | NO | NO |
| | Methodist Hospital Children's | | | NO | NO | NO | YES | | NO | NO | 660 / 30 | YES | YES | YES |
| | Methodist Hospital Landmark | | | NO | NO | NO | NO | | NO | NO | | NO | NO | NO |
| | Methodist Hospital Metropolitan | | L4 | YES | YES | YES | PCI | | Primary | YES | 450 / 28 | NO ² | YES | YES |
| | Methodist Hospital Northeast | | L3 | YES | YES | YES | PCI | | Primary | NO | 660 / 28 | NO ² | YES | YES |
| | Methodist Hospital Specialty and Transplant | | L4 | YES | YES | YES | NO | | NO | NO | 650 / 27 | NO ² | YES | YES |
| | Methodist Hospital Stone Oak | | L3 | YES | YES | YES | PCI | | Primary | YES | 450 / 28 | NO ² | YES | YES |
| | Methodist Hospital Texan | | L4 | YES | YES | YES | PCI | | NO | NO | 425 / 27 | NO ² | YES | YES |
| | Methodist Hospital Westover Hills | | | YES | NO | YES | PCI | | NO | YES | 625 / 29 | NO | NO | NO |
| Other Baptist/Quadrant-Central Hospitals | Guadalupe Regional Medical Center | | L4 | YES | YES | YES | NO | | NO | YES | 600 / 32 | NO ² | YES | YES |
| | San Antonio Military Medical Center * | | L1 | YES | YES | YES | PCI | | NO | YES | 500 / 30 | NO ² | YES | YES |
| | South Texas Veteran's Health Care Center ** | | | NO | NO | YES | NO | | NO | NO | 650 / 28 | NO | NO | NO |
| | University Hospital | | L1 | YES | YES | YES | PCI | Comprehensive | Comprehensive | YES | 650 / 27 | NO ² | NO | NO |
| | University Children's | | L1 | NO | NO | NO | YES | | YES ¹ | NO | 650 / 27 | YES | YES | YES |

- o Resuscitation - Primary/Comprehensive for Resuscitation Centers
- o Stroke Alert: Level I Comprehensive - Comprehensive Stroke Center certified facility (VAN Positive); Level II (Advanced) Thrombectomy Capable Stroke Center (VAN Positive); Level III =Primary Stroke Center certified facility Level (VAN Negative patients)
- o Sexual assault patients 18 yr or greater (NO Red/Blue Trauma Criteria) transport to closest appropriate ED/FSED (Hospital will call MEDCOM to initiate SANE exam)
- o Sexual assault patients 17 yr or younger transport to Christus Children's (NO Red Trauma Criteria)
- o *SAMMC accepts only military beneficiaries;
- o VA beneficiaries only
- o 1-Accepts Pediatric Stroke; 2-Except P1 Override/Patients in Extremis

| System | Version: May 2025 | | | | | | Adult (Age 18 and older) | | | | Pediatric (Age 17 and under) | | | | | | | | | |
|---|---|--------|---------|--------|-----------------------|---------|--------------------------|--------|---------|-------------|------------------------------|--------------|----------|------------------------|---------|--------|---------|--------|---------|-----|
| | Pediatric | | Adult | | Service not available | | P-1 | P-2 | P-3 | Heart Alert | Resusc | Stroke Alert | OB | Bariatric CI (MO/Qtib) | P-1 | | P-2 | | P-3 | |
| | Medical | Trauma | Medical | Trauma | Medical | Medical | | | | | | | | | Medical | Trauma | Medical | Trauma | Medical | |
| | Medical | Trauma | Medical | Trauma | Medical | Medical | Medical | Trauma | Medical | Trauma | Medical | | | | | | | | | |
| Micro-Hospital, Satellite ECU, & Freestanding Emergency Centers | Baptist Neighborhood Hospital at Converse | NO | NO | NO | YES | YES | NO | NO | NO | NO | NO | NO | NO | 400 / 27 | NO | NO | NO | NO | YES | YES |
| | Baptist Neighborhood Hospital at Hixson | NO | NO | NO | YES | YES | NO | NO | NO | NO | NO | NO | NO | 400 / 27 | NO | NO | NO | NO | YES | YES |
| | Baptist Neighborhood Hospital at Kelly | NO | NO | NO | YES | YES | NO | NO | NO | NO | NO | NO | NO | 400 / 27 | NO | NO | NO | NO | YES | YES |
| | Baptist Neighborhood Hospital at Overlook | NO | NO | NO | YES | YES | NO | NO | NO | NO | NO | NO | NO | 400 / 27 | NO | NO | NO | NO | YES | YES |
| | Baptist Neighborhood Hospital at Schertz | NO | NO | NO | YES | YES | NO | NO | NO | NO | NO | NO | NO | 400 / 27 | NO | NO | NO | NO | YES | YES |
| | Baptist Neighborhood Hospital at Shavano Park | NO | NO | NO | YES | YES | NO | NO | NO | NO | NO | NO | NO | 400 / 27 | NO | NO | NO | NO | YES | YES |
| | Baptist Neighborhood Hospital at Thousand Oaks | NO | NO | NO | YES | YES | NO | NO | NO | NO | NO | NO | NO | 400 / 27 | NO | NO | NO | NO | YES | YES |
| | Baptist Neighborhood Hospital at Westover Hills | NO | NO | NO | YES | YES | NO | NO | NO | NO | NO | NO | NO | 400 / 27 | NO | NO | NO | NO | YES | YES |
| | Baptist Neighborhood Hospital at Zanesville | NO | NO | NO | YES | YES | NO | NO | NO | NO | NO | NO | NO | 400 / 27 | NO | NO | NO | NO | YES | YES |
| | CHRISTUS Children's EC - Westover Hills | NO | NO | NO | YES | YES | NO | NO | NO | NO | NO | NO | NO | 500 / 30 | NO | NO | NO | NO | YES | YES |
| | CHRISTUS Emergency Center - Alan | NO | NO | NO | YES | YES | NO | NO | NO | NO | NO | NO | NO | 300 / 27 | NO | NO | NO | NO | YES | YES |
| | CHRISTUS Emergency Center - Crosslake (New Braunfels) | NO | NO | NO | YES | YES | NO | NO | NO | NO | NO | NO | NO | 300 / 27 | NO | NO | NO | NO | YES | YES |
| | Methodist ER / Alamo Heights | NO | NO | NO | YES | YES | NO | NO | NO | NO | NO | NO | NO | 400 / 27 | NO | NO | NO | NO | YES | YES |
| | Methodist ER / Suburbs | NO | NO | NO | YES | YES | NO | NO | NO | NO | NO | NO | NO | 400 / 27 | NO | NO | NO | NO | YES | YES |
| | Methodist ER / City Base | NO | NO | NO | YES | YES | NO | NO | NO | NO | NO | NO | NO | 400 / 27 | NO | NO | NO | NO | YES | YES |
| | Methodist ER / Converse | NO | NO | NO | YES | YES | NO | NO | NO | NO | NO | NO | NO | 400 / 27 | NO | NO | NO | NO | YES | YES |
| | Methodist ER / De Zavala | NO | NO | NO | YES | YES | NO | NO | NO | NO | NO | NO | NO | 400 / 27 | NO | NO | NO | NO | YES | YES |
| | Methodist ER / Helotes | NO | NO | NO | YES | YES | NO | NO | NO | NO | NO | NO | NO | 400 / 27 | NO | NO | NO | NO | YES | YES |
| | Methodist ER / Legacy Trails | NO | NO | NO | YES | YES | NO | NO | NO | NO | NO | NO | NO | 400 / 27 | NO | NO | NO | NO | YES | YES |
| | Methodist ER / Nacogdoches | NO | NO | NO | YES | YES | NO | NO | NO | NO | NO | NO | NO | 400 / 27 | NO | NO | NO | NO | YES | YES |
| Methodist ER / New Braunfels | NO | NO | NO | YES | YES | NO | NO | NO | NO | NO | NO | NO | 400 / 27 | NO | NO | NO | NO | YES | YES | |
| Willard Hall Emergency Department* | NO | NO | NO | YES | YES | NO | NO | NO | NO | NO | NO | NO | 400 / 27 | NO | NO | NO | NO | YES | YES | |

- Exclusion criteria DO NOT transport these patient types to Freestanding Emergency Centers*
 - NO ALERT PATIENTS: Heart Alert/STEMI, Stroke Alert, Sepsis Alert, Cardiac Arrest/ROSC
 - NO SIGNIFICANT TRAUMA: Any Red/Blue Trauma Criteria
 - NO GERIATRIC TRAUMA (>65) including ground level falls, no suspected hip fracture, no significant trauma (any red/blue criteria)
 - Medical Patients: Chest pain (specific restrictions per individual agency EMS Medical Director), syncope (per individual agen EMS Medical Director), GI bleed, dialysis-related concerns, altered mental status, new onset seizures or status epilepticus, suspected CO poisoning.
 - Pregnant patients >20 weeks gestation
 - Patients <12 months old, except CHOSA Westover Hills FSED
 - Psychiatric patients who are violent or aggressive or require sedation
 - Overdoses or under emergency detention order
 - Priority 1 or 2 patients needing sexual assault forensic exam services
 - Patients who have caused blood-borne exposure to police/fire/EMS crews
 - Other patients inappropriate for Freestanding Emergency Center by paramedic intuition
- 1-Military Beneficiary Only, No OB
- *Freestanding Emergency Center Letter of Attestation to Participate in the STRAC Emergency Healthcare System; May 2022, Final

F: Freestanding Emergency Center Transport Criteria

Revised 01/04/2026

Patients Who May Be Transported to Approved Freestanding Emergency Centers:

- Patients who meet "Priority 3" medical criteria - low acuity, BLS calls
- Patients with minor trauma (no red/blue criteria no Geriatric)
- SOME patients who meet Priority 2 criteria (see exclusion criteria below)

Exclusion criteria - DO NOT transport these patient types to Freestanding Emergency Centers*:

- NO **ALERT** PATIENTS
 - Heart Alert / STEMI
 - Stroke Alert
 - Sepsis Alert
 - Cardiac Arrest / ROSC
- NO SIGNIFICANT TRAUMA
 - Any red/blue Trauma criteria
 - Geriatric (age 65 or greater) falls
 - Suspected hip fracture
- Medical Patients
 - Chest pain age >35 years
 - Syncope/Dizzy >65 years or abnormal EKG findings (cQT interval >480ms, L/R axis deviation, QRS>130ms)
 - GI Bleeds
 - Dialysis-related concerns
 - Altered mental status
 - New onset seizures or status epilepticus
- Pregnant patients >20 weeks gestation
- Patients <12 months old
- Psychiatric patients who are violent or aggressive or require sedation
- Overdoses or under emergency detention order

- Patients who have caused blood-borne exposure to police/fire/EMS crews
- Discharge from the hospital in the last 30 days
- Recent surgery in the last 30 day
- Other patients inappropriate for Freestanding Emergency Center by paramedic intuition

H: Handoff/Time Out Procedure

Revised 01/04/2026

Introduction

- Your Name and Credentials
- Patient Name/Age

Mechanism / Medical Complaint

- What did the patient call for?
- What symptoms do they have?

Injuries / Exam Findings

- What has been found?
- What has not been examined?

Significant Vitals

- What vitals have been obtained?
- What does the ECG show?
- What has not been evaluated?

Treatment / Plan

- What treatments have been given?
- What is the current plan?

Read Back

- What questions does the team have?
- Was the information accurate?

Pearls

- Each hand-off is a crucial time for patient safety and should be conducted in a quiet, respectful manner to ensure accurate information transfer. All patient transfers will be conducted in MIST format and will include an introduction and a readback.
- A readback should be requested at each handoff to ensure accurate information transfer.
- Questions are an important part of the hand-off and should be addressed to completion to prevent information loss.
- All treatments and findings will be documented in Pulsara and transferred to the receiving provider

I: Mass Casualty Declaration / Regional Alarm Procedures

Revised 01/04/2026

Overview

Bear County Hospitals, as tertiary care centers for much of the STRAC system, rely on early notification of acute patient influxes to balance the system's load and improve patient care times. Additionally, the availability of a vast system of staged resources for 'No-notification' incidents, including Whole Blood and TEMP bags, underscores the need for a clearly defined resource deployment system. Therefore, the development and utilization of a standardized notification method for multiple patient incidents is of utmost importance.

STRAC has developed a process via MedCom for deploying predefined resource packages, empowering Incident Commanders to react quickly to 'no notification' incidents of various sizes and natures. For instance, in an incident with 9-40 patients, an Ambus, five ambulances, and logistic support will be deployed as a standard MCI Box Alarm. It's crucial to remember that early resource requests are essential, as it can take significant time to notify and deploy resources, especially if they need to come from an outlying location. These resources can always be canceled if the situation changes. Furthermore, Incident Commanders can request specific resources and pre-planned response packages in addition to the automatic alarm resources deployed on a level 2 or 3 MCI.

This procedure does not supersede previously established Mutual Aid agreements. Mutual aid resources should be requested early in the incident as they will be closest and can help with initial triage and transport. The MCI Alarm serves as a supplementation to mutual aid response.

This procedure outlines specific Communications by the Incident Commander with Bexar County Fire Dispatch, ensuring early notification and clear resource requests. This clear and common communication is critical to effective emergency response.

Procedures

- a) On arrival at an incident, the Incident Commander should perform an initial survey and gather a specific number or estimated number of patients.
- b) As soon as the Incident Commander recognizes that they are ready to declare a mass casualty incident, they should notify Bear County Fire Dispatch using the following terminology.

- (i) "Fire Dispatch, Command will be declaring a level [X] MCI. [*We are requesting a [Blood Push-back/Heat Response/Air Medical Strike Team] package*]. At this time, we have approximately [#] patients".
- (ii) Optional resource packages, such as Blood Push-back/Heat Response/Air Medical Strike Team, should only be requested when required.
- c) Notify Bexar County Fire Dispatch of mutual aid needs:
 - (iii) "Fire Dispatch, please request [Mutual aid agency] to respond to the incident."
- d) Notify Bexar County Fire Dispatch of any additional MedCom resources needed besides the predefined MCI Alarm.
 - (iv) "Fire Dispatch, notify MedCom we are requesting an additional [Ambus/Ambulance strike team]."
 - (v) Mutual aid should be used outside of these request
- e) Incident commanders will confirm the creation of an incident on Pulsara by MEDCOM and notify Bexar County Fire Dispatch that the incident has been created and named.
 - (vi) "Fire Dispatch, please ask MEDCOM, to create [Name of the incident] on Pulsara."
 - (vii) PULSARA AND TX WRISTBANDS ARE EXPECTED TO BE USED FOR ALL MCI INCIDENTS**
 - (viii) If Pulsara is unavailable, notify dispatch of the total number and level of patients.
- f) When resources are deemed unnecessary, notify Fire Dispatch to cancel units as required.

Communications

- g) Once an MCI is declared, MEDCOM will be added to the incident, and a phone call will be made notifying MEDCOM of the following information.
 - (i) Incident Type
 - (ii) Level of Activation
 - (iii) Additional Needs
 - (iv) Estimated number of personnel
 - (v) Location/Address
 - (vi) Communication Channel
- h) Notify Incident command of MEDCOM activation

J: ET Tube Stack

Revised 01/15/2026

ET Tube Stack

When setting up the ET or SGA from the BVM or ventilator to the tube, providers should set up in the following order:

- a) BVM / Vent
- b) EtCO₂
- c) Viral Filter
- d) Nebulizer Elbow
- e) ET/SGA

K: Capacity Checklist

Revised 01/04/2026

Is the Patient is able to express in their own words:

- An understanding of the nature of their illness,
 - Yes
 - No
- An understanding of the risks of refusal including death,
 - Yes
 - No
- An understanding of alternatives to EMS treatment and/or transport,
 - Yes
 - No
- Provide rationale (reason) for refusal and debate this rational
 - Yes
 - No

Any **NO** on the checklist indicates the patient lacks capacity and should be treated under implied consent.

If unsure about any component of the checklist consult **medical direction**.

Pearls

- Checklist can only be employed on patients alert and oriented to time, place, self, and situation and not deem non-competent per legal documentation
- Documentation of the use of the checklist are required in all refusal. Narrative should include patients own answers to each of the questions above.
- Rational for refusing care must indicate reasonable evaluation of the circumstances and risk. Providers should attempt to address the patients obstructions from receiving care.

L: Lift Assist Checklist

Revised 01/04/2026

Suspected Medical Cause of the Fall or Inability to Mobilize?

(Dizziness, Lightheaded, syncope, new weakness or balance problems, dehydration/poor oral intake, visual disturbance, recent illness, or infection)

Yes

No

Is there a change from Baseline Mental Status for Patient?

Yes

No

Signs of New Trauma (Pain or Injury)?

Yes

No

Patient currently taking Blood Thinners (not including ASA)?

Yes

No

Any Loss of Consciousness?

Yes

No

Heart Rate > 100?

Yes

No

Systolic BP < 100 or > 200?

Yes

No

Diastolic BP > 140?

Yes

No

Respiratory Rate > 20?

Yes

No

SpO₂ < 90% (On Room Air or Baseline O₂ settings)?

Yes

No

Does the patient have limited ROM? Do they require assistance to ambulate?

Yes

No

IF ANY OF THE ABOVE ARE ANSWERED YES, ENCOURAGE TRANSPORT FOR FURTHER EVALUATION.

M: High-Quality Mechanical CPR

Revised 01/04/2026

1. Start Manual CPR
 - Set up equipment
- 2. 2 min CPR**
3. Role Patient or sit up to access the back
 - Place Pads Anterior/Posterior
 - Place Backboard
- 4. 2 min CPR**
5. Rhythm Check
 - Start mechanical CPR
 - Confirm and mark the position
 - Secure head and arm straps
6. Assess Quality
 - Palpable Pulse
 - Increase in EtCO₂
 - Measurable SpO₂ Pleth Wave
 - **If Poor Quality**
 - Move slightly to the left of the sternum
 - Consider moving superiorly and inferiorly
 - Reposition any devices causing poor skin/plunger contact

Pearls

- All CPR pauses will be less than 10 seconds; if >10 seconds, restart manual CPR
- While CPR is being performed, confirm the position of the backboard
- When using LUCAS, the Plunger apparatus can be attached to the backboard in an open position while CPR is being performed and connected to the far side during rhythm check.
- The position of the compressor plunger/strap must be marked on the skin to ensure proper position.
- All securing devices must be used when using mechanical CPR to ensure proper positioning

N: LVAD Emergency Guide

Revised 01/04/2026

Appendix N: LVAD Emergency Guide



EMERGENCY GUIDE

2020-2021



International Consortium of Circulatory Assist Clinicians

This guide was created in 2008 by the innovation of VAD Coordinators from some of the largest and most successful VAD implantation hospitals in the United States. ICCAC has ensured that this document continues to be a current resource for not only emergency medical services but to all healthcare workers providing care to the mechanical circulatory support patient population. The purpose is to be a quick emergency guide and should not replace the manufacturers' instructions for use as the primary source of information for each device listed in this guide.

Disclaimer: The information provided by International Consortium of Circulatory Assist Clinicians is for educational and convenience purposes only to illustrate concepts and considerations and may not cover or be complete for all situations. They are general resources to consider and adopt as you deem appropriate. International Consortium of Circulatory Assist Clinicians makes no claims, promises or guarantees about the appropriateness or completeness of the content, examples or information for any intended use. In addition, the information provided to you does not constitute legal, business or medical advice, and should not be relied on as such. You are solely responsible for understanding and complying with all applicable laws, rules and regulations associated with the subject matter of the information contained herein, including but not limited to laws, rules and regulations relating to marketing and business practices, medical practice and judgment, advertising, data privacy and security. Please also refer to the manufacturers' prescribing information and instructions for use for the indications, contraindications, warnings, risks, and precautions associated with any medications and devices referenced in these materials. International Consortium of Circulatory Assist Clinicians recommends that you consult your legal and business advisors for guidance.

APX N

LVAD patients, regardless of complaint, should be transported to the hospital that manages their LVAD. If the patient wishes to go to a different hospital, contact OMD.

LVAD patients should be flagged in the CAD when identified.

P: P Checklist

Revised 01/04/2026

Prepare Equipment

- Oxygen
- Airway Size +1/-1
- OPA/NPA
- Rescue Airway
- Suction On/Flowing
- VL Functioning
- Cricothyrotomy supplies
- Medications

Preplan

- Time Out/ Agreement
- Confirm Paralytic Dose
- Confirm Hypotension Plan
- Confirm Induction Dose
- Plan for aborting the procedure

Position

- Patient in sniffing position
- Availability for the elevation of the head

Preoxygenate

- High Flow Apneic Oxygenation
- SpO₂ > 94%

Pressure

- Blood Pressure Monitor
- Cardiac Monitor
- MAP >65 mmHg

Punch Out

- Tube Conformation via EtCO₂ Waveform
- Sedation
- Evaluate MAP
- Evaluate SPO₂

Q: Key Performance Indicators

Revised 01/04/2026

Key Performance Indicators for Quality Out of Hospital Care

*Organizations without controlled medications are exempt from this quality measure

**This only applies to transport organizations.

Airway

- A-01 Document the total number of pass attempts in advanced airways
 - Goal: 100% First-pass success for all advanced airway attempts
- A-02 Document blood pressure and pulse oximetry 5 minutes before and 5 minutes after advanced airway attempt
 - Goal: Successful 1st pass attempt without hypoxia (SpO₂ <90 or hypotension SPB <90)
- A-03 Document the uses of waveform capnography as advanced airway placement confirmation
 - Goal: 100% confirmation of EtCO₂ waveform

Asthma

- As-01 Document the treatment of any primary or secondary impression of asthma or COPD or patient with documented lung assessment of wheezing with bronchodilator within 5 minutes of arrival.
 - Goal: 100% of patients treated with bronchodilator (albuterol or epinephrine)

Cardiac

- C-01: Document the EKG obtained within 5 minutes of arrival at the patient's side for the patient complaining of chest pain, shortness of breath, lightheadedness/dizziness, palpitations, or weakness.
 - Goal: 100% of patients with complaints requiring EKG are obtained
- C-02: Document aspirin administration for all patients with complaints of Chest pain or STEMI on the monitor
 - Goal: 100% of patients with STEMI or chest pain receive aspirin

- C-03: Document the time of notification of STEMI Alert for all patients with suspected STEMI
 - Goal: Notification within 10 minutes of EKG showing STEMI
- **C-04: Scene time for STEMI < 10 minutes
 - Goal: To be transported within 10 minutes of first medical contact for STEMI patients.

Cardiac Arrest

- Ca-01: Document CPR within 2 minutes of arrival at the patient
 - Goal: 100% of patients should have manual CPR documented within 2 minutes of CPR
- Ca-02: Document the first epinephrine within 10 minutes of arrival at the patient's side.
 - Goal: 100% of patients receive epinephrine within 10 minutes of arrival at the patient's side.
- Ca-03: Document any pulse oximetry before witnessed arrest.
 - Goal: Post-arrival cardiac or respiratory arrest patients must have pulse oximetry documented before arrest.
- Ca-04: Document the justification for the least proximal site for IV or IO access in cardiac arrest.
 - Goal: Obtain the most proximal site for access in patients in cardiac arrest. (IV, Humeral IO, Femur IO, Tibial IO)
- Ca-05: Documentation of post-ROSC checklist for patients gaining ROSC
 - Goal: 100% documentation of post-ROSC checklist
- Ca-06: Documentation of blood pressure and oxygenation 5 minutes following ROSC
 - Goal: Documentation of SBP >90 or MAP>65 and SPO2 >90% five minutes following ROSC

Hypoglycemia

- D-01: Document the treatment of hypoglycemia within 10 minutes of documentation of blood glucose level <60.
 - Goal: 100% treatment of hypoglycemic patients

- D-02: Document a BGL on all patients with documented altered mental status, GCS <15, or primary or secondary impression of altered mental status, confusion, stroke, seizure, disorientation, or similar impression.
 - Goal: 100% evaluation of BGL for patients with altered mental status

Lift Assist/Fall

- L-01: Document the Lift assist checklist for all lift assists or falls where the patient is not where they intend to be.
 - Goal: All patients who are not where they intend to be requesting lifting assistance have a lift assist checklist completed
- L-02: Document medical control contact for all patients with positive Lift assist checklist findings and refusing transportation
 - Goal: 100% contact with medical control of all high-risk lift assist or fall patients.
- L-03: Document distribution of Primary Care Letter to patients with whom lift assist checklist was documented and refusing transport.
 - Goal: Document the issuing of PCP letters to all patients refusing transport that have a lift assist checklist documented.

Respiratory

- R-01: Document a respiratory rate, lung assessment, and SpO₂ for any patient with primary or secondary complaints of shortness of breath, wheezing, or difficulty breathing.
 - Goal: Must have an initial respiratory assessment documented and one within 5 minutes of starting treatment for respiratory complaint (i.e., oxygen administration, airway support)
- R-02: Document the administration of oxygen for any patient with documented SpO₂ of 92% or less
 - Goal: 100% of patients receive oxygen within 5 minutes of arrival if SpO₂ is <92%.

Pediatrics

- P-01: Patients under 18 will have a weight documented using a pediatric weight application or tape.
 - Goal: 100% documentation of pediatric weights
- P-02: Pediatric patients will have pain documented in all complaints of trauma or abdominal pain and receive pain medications.

- Goal: 100% pain scale documentation for pediatric patients. All patients with elevated pain scores receive pain medications.

Protocol Deviation

- Pr-01: Documentation of reason or orders given for deviation from protocol.
 - Goal: Documentation of the reasoning for deviation from protocol or quality measures. Also, document what orders were given by medical control to authorize this deviation.

Safety

- **S-01: Document the use of lights and sirens from the scene and document justification of that decision (i.e., traffic, patient decline)
 - Goal: Limit RLS transport to <5% of all calls and require strict justification of the decision
- **S-02: Documentation of the use of pediatric restrained devices during transport of patients < 8 years of age.
 - Goal: All pediatric patients will be transported using a pediatric restraint device. No patient will be transported in the parent's lap.
- S-03: Document weight for all patients receiving a weight-based medication.
 - Goal: All patients receiving a weight-based medication will have a weight documented.

Sepsis

- Sep-01: All patients where the primary or secondary impression is sick person, abdominal pain, mental status change, fever, cough, breathing problems, rash, wound, or any other complaint suggesting infection where two requirements for Sepsis Alert are documented (GCS <15, HR >90, SBP<100, or RR>20) also have EtCO2 documented.
 - Goal: All potential sepsis patients will have an EtCO2 obtained and documented
- Sep-02: Patients meeting Sepsis Alert criteria will have IV fluids initiated within 10 minutes of arrival unless documenting exclusion for signs of fluid overload.
 - Goal: Sepsis patients will receive IV fluids unless specifically documenting the concern for overload.
- Sep-03: Patients meeting Sepsis Alert criteria will have antibiotics initiated within 15 minutes of arrival.

- Goal: Sepsis patient will receive early antibiotics
- Sep-04: Patients meeting Sepsis Alert criteria and MAP <65 will have pressor support started.
 - Goal: Septic Shock patients will receive early vasopressor support.
- Sep-05: Document the time of notification of Sepsis Alert for all patients with suspected sepsis.
 - Goal: Notification within 10 minutes of positive sepsis screen.
- **Sep-06: Scene time for Sepsis Alert < 10 minutes
 - Goal: To be transported within 10 minutes of first patient contact for Sepsis Alert patients

Seizure

- *Se-01: A patient with seizure activity received benzodiazepine if an active seizure was documented.
 - Goal: All seizure patients will receive a dose of benzodiazepine if active seizure is noted.
- Se-02: All patients with primary or secondary impressions of seizure have blood glucose levels documented.
 - Goal: All seizure patients will have documented blood glucose levels and be treated if <60.

Stroke

- St-01 A patient and primary or secondary impression of stroke will have a stroke assessment documented.
 - Goal: All patients with suspected stroke will have a documented stroke assessment
- St-02: All patients with primary or secondary impressions of stroke have blood glucose levels documented.
 - Goal: All stroke patients will have documented blood glucose levels and be treated if <60.
- St-03: Document the last known well time for all patients with suspected stroke
 - Goal: Documentation of the last known well of all suspected stroke patient
- St-04: Document the time of notification of Stroke Alert for all patients with suspected stroke.
 - Goal: Notification within 10 minutes of positive stroke screen

- **St-05: Scene time for Stroke Alert < 10 minutes
 - Goal: To be transported within 10 minutes of first patient contact for Stroke Alert patients.

TBI

- Tb-01: Document oxygen level, ETCO₂, and systolic blood pressure for any patient with trauma and GCS < 14.
 - Goal: All patients with trauma and depressed CGS will have SpO₂, EtCO₂, and SBP documented.

Trauma

- T-01: All patients with primary or secondary impressions related to trauma will have pain assessment documented.
 - Goal: 100% of patients with trauma complaints will have pain scale documented
- T-02: All patients with primary or secondary impressions related to trauma will have pain addressed and documented to be lower after receiving pain medications.
 - Goal: 100% of patients with trauma complaints will have a pain scale documented to be lower than the first assessment.
- T-04: Document the time of notification of the Trauma alert for all patients with trauma meeting 2 Blue or 1 Red Criteria
 - Goal: Notification within 10 minutes of meeting trauma criteria
- **T-05: Scene time for Trauma Alert < 10 minutes
 - Goal: To be transported within 10 minutes of first patient contact for Trauma Alert patients.
- T-06: Patients with trauma will have GCS, systolic blood pressure, heart rate, and respiratory rate documented.
 - Goal: 100% of patients with trauma documentation

Transfer

- Tr-01: All patients transferred to another agency should have a time documented.
 - Goal: 100% of patients will have the time of transfer documented.

Refusal

- R-01: All patients refusing medical care or transport should have two sets of vital signs documented.
 - Goal: All patients refusing care will have documentation of vitals trend
- R-02: All patients meeting mandatory medical direction contact requirements will have a medical direction contact documented and descriptions of the orders given document.
 - Goal: Document all medical direction contacts for mandatory medical direction contacts will be documented

Ultrasound:

- **US-01: Document US use in cases where primary impression or secondary impression is chest pain, shortness of breath, chest trauma, or cardiac arrest where total time with the patient is >20 minutes.
 - Goal: Document the utilization of the US for indicated cases.

S: Tools

Revised 01/04/2026

Reference
[Reference Pediatric & Adult Vital Signs](#)

Reference
[Reference Pediatric Airway Size](#)

20 MEL

MEL-00: Overview

Revised 01/04/2026

The Minimum Equipment List (MEL) defines the essential equipment and supplies that must be present on an ambulance for it to be considered in service. Compliance with the MEL is dictated by current protocols and state and local regulations. Providers are required to operate from their assigned bags, restock bags from the ambulance inventory (the "wall"), and replenish the wall from the central supply closet to ensure inventory is rotated properly. All supplies should be used and replaced according to the "First-In/First-Out" (FIFO) method to maintain freshness and readiness. Hoarding supplies or exceeding the established Periodic Automatic Replenishment (PAR) levels on vehicles is strictly prohibited. During times of supply shortages, alternative concentrations may be substituted to fulfill MEL requirements, but the minimum dose or volume specified on the MEL must always be maintained without exception.

MEL-01: BLS

Revised 01/12/2026

ELS First-In Bag

| Item | Par | MEL | Item | Par | MEL |
|-------------------------|-----|-----|------------------------------------|-----|-----|
| Front Right | | | Main Compartment | | |
| BP Cuff Adult | 1 | 1 | Owl 1 | 1 | 1 |
| Stethoscope | 1 | 1 | Owl 1.5 | 1 | 1 |
| Thermometer | 1 | 1 | Owl 2 | 1 | 1 |
| SpO2 Monitor | 1 | 1 | Owl 3 | 1 | 1 |
| Glucometer | 1 | 1 | Owl 4 | 1 | 1 |
| | | | Owl 5 | 1 | 1 |
| Lancets | 5 | 1 | Owl 6 | 1 | 1 |
| Alcohol pads | 5 | 1 | Portable Suction | 1 | 1 |
| Test Strips (container) | 1 | 1 | CPAP | 1 | 1 |
| Band-Aid | 5 | 1 | Peckens BVM | 1 | 1 |
| Front Left | | | Infant BVM | 1 | 1 |
| 10F APM | 2 | 1 | Adult BVM | 1 | 1 |
| 20F APM | 2 | 1 | PEEP Valve | 1 | - |
| 20F APM | 2 | 1 | Adult Colorimetric ET/CO2 Detector | 2 | 1 |
| 20F APM | 2 | 1 | Ped Colorimetric ET/CO2 Detector | 1 | - |
| 20F APM | 2 | 1 | Med Box | 1 | 1 |
| 20F APM | 2 | 1 | Aspirin 81 mg (Bottle) | 1 | 1 |
| 20F APM | 2 | 1 | Acetaminophen 325 mg (Tablet) | 4 | - |
| 30F APM | 2 | 1 | Ibuprofen 400 mg (Tablet) | 4 | - |
| 30F APM | 2 | 1 | Epinephrine 1 mg/100 mcg | 3 | 1 |
| 30F APM | 2 | 1 | Diphenhydramine 25 mg (Tablet) | 6 | - |
| 40mm CPA (Pink) | 1 | 1 | Cexamethasone 10 mg | 2 | - |
| 60mm CPA (Black) | 1 | 1 | Ondansetron 4 mg (CO2) | 6 | - |
| 80 mm CPA (Green) | 1 | 1 | Nitroglycerine 0.4 mg (Bottle) | 1 | - |
| 90mm CPA (Yellow) | 1 | 1 | Naloxone 2 mg | 2 | 1 |
| 100mm CPA (Red) | 1 | 1 | Oral Glucose (1.5g) | 2 | 1 |
| Lubricating jelly | 5 | 1 | 1 cc Syringe | 2 | 1 |
| Side Left | | | 3 cc Syringe | 2 | 1 |
| Adult Nasal Cannula | 2 | 1 | 5 cc Syringe | 2 | - |
| Nebulizer | 2 | 1 | 10-cc Flush | 2 | 1 |
| Adultend 2.5mg | 4 | 2 | MAC | 2 | 1 |
| Adult Non-Respirator | 2 | 1 | 80 TYPNPA Oral-Cannula Device | 3 | 1 |
| Rear Pocket | | | 21G 1.5 inch Needle | 3 | 1 |
| 3 inch Potted Gauze | 2 | 1 | Sharps Shuttle | 1 | 1 |
| 4 inch Potted Gauze | 1 | - | Pediatric Acetaminophen (Bottle) | 1 | - |
| 2 inch Coban | 2 | - | | | |
| 1 inch Tape | 1 | 1 | | | |
| 3 inch Tape | 1 | - | | | |
| SAM Splint | 1 | - | | | |
| Triangle Bandage | 4 | 2 | | | |
| 4 inch Elastic Bandage | 3 | 1 | | | |
| Chest Seal | 2 | 2 | | | |
| Stetco Kit | 3 | 1 | | | |
| 6x10 ABD Pads | 1 | - | | | |
| Cool Pack | 1 | - | | | |
| Tourniquet | 2 | 1 | | | |
| Trauma Shears | 1 | 1 | | | |
| Sharps | 1 | - | | | |
| Side Right | | | | | |
| Ped Nasal Cannula | 2 | 1 | | | |
| Ped Non-Respirator | 2 | 1 | | | |
| Respirator Tape | 1 | 1 | | | |

Red Lettered = Min Equipment List

BLS Unit Layout

| Item | Par | MEL | Item | Par | MEL | Item | Par | MEL |
|-----------------------------|-----|-----|--------------------------------|-----|-----|------------------------------------|-----|-----|
| Outer Compartments | | | Shelf B | | | Cabinet 3 | | |
| Driver Side (Front-Back) | | | 10 cc NS Flush | | | Shelf A | | |
| Compartment 1 | | | Sterile Water 500 ml | | | PEEP Valve | | |
| Man O2 | 1 | 1 | Band-aid (Box) | | | CPAP | | |
| Traffic Triangle (set of 3) | 1 | 1 | Pediatric Splints | | | Gel 1 | | |
| Broom | 1 | - | Alcohol Pads (Box) | | | Gel 1.5 | | |
| Compartment 2 | | | Cabinet 2 | | | Gel 2 | | |
| Star Chair | 1 | - | Shelf A | | | Gel 3 | | |
| Compartment 3 | | | Gel Non Sterile Gauze (5,1x7) | | | Gel 4 | | |
| C-Collars Adult | 2 | 1 | 3 inch Rolled Gauze | | | Gel 5 | | |
| C-Collars Ped | 2 | 1 | 6x6 Sterile Gauze | | | Adult S/M | | |
| Head Blocks | 2 | 1 | 3 inch Regular Tape | | | Ped S/M | | |
| Long Spine Board | 1 | 1 | 1 inch Cloth Tape | | | Infant S/M | | |
| Scoop Stretcher | 1 | - | 1 inch Clear Tape | | | Adult Colorimetric ET/CO2 Detector | | |
| KED or Short Board | 1 | 1 | Abdominal Pads | | | Ped Colorimetric ET/CO2 Detector | | |
| Long Splints | 2 | 1 | Trauma Dressing | | | | | |
| Medium Splints | 2 | 1 | Burn Sheet | | | | | |
| Short Splints | 2 | 1 | Cold Pack | | | | | |
| Passenger Side (Front-Back) | | | Hot Pack | | | | | |
| Compartment 1 | | | Shelf B | | | | | |
| Shelf A | | | 4 inch Rolled Gauze | | | 4 - | | |
| | | | 4 inch Elastic Bandage | | | 4 2 | | |
| Shelf B | | | Tourniquet | | | 2 1 | | |
| Stretcher Battery | | | Chest Seal | | | 6 4 | | |
| Spare AED Batters | | | Triangle Bandage | | | 12 10 | | |
| Shelf C | | | Trauma Shears | | | 1 1 | | |
| | | | Razors | | | 2 - | | |
| Compartment 2 | | | Pelvic Binder | | | 2 1 | | |
| Personal/Tactical Gear | | | Narcain 2mg | | | 3 1 | | |
| Wall Compartment | | | 1 cc Syringe | | | 4 1 | | |
| Cabinet 1 | | | 1 cc Syringe | | | 4 1 | | |
| Shelf A | | | 5 cc Syringe | | | 4 - | | |
| | | | MAD | | | 2 1 | | |
| | | | 80 TWINPAK Dual Cannula Device | | | 3 1 | | |
| | | | 21G 1.5 inch Needle | | | 3 1 | | |

MEL-02: ALS/MICU

Revised 01/04/2026

First-In ALS Bag

| Item | Par | MEL | Item | Par | MEL |
|--------------------------------|-----|-----|---|-----|-----|
| Left Side Pocket | | | Middle Main | | |
| D10 250 ml | 1 | 1 | KSI Pouch | 1 | |
| Normal Saline 100 cc | 1 | - | Etiomidate 40 mg | 2 | 1 |
| Normal Saline 500 cc | 1 | 1 | Rocuronium 100 mg | 2 | 1 |
| Main Compartment | | | Nebulizer | | |
| Right Orange Pouch | | | Adult E9000 Nasal Cannula | | |
| 25 mm 10 Needle | 2 | - | Adult Non-Respirator | 1 | 1 |
| 45 mm 10 Needle | 2 | - | Ipratropium Bromide 0.5 mg | 2 | 1 |
| 10 cc NS Flush | 2 | - | Albuterol 2.5 mg | 8 | 2 |
| Left Orange Pouch | | | Pediatric Acetaminophen (Bottle) | | |
| Pressure Bag | 1 | - | Pediatric Ibuprofen (Bottle) | 1 | - |
| Normal Saline 500 cc | 1 | 1 | Right Main | | |
| 10 gts Set | 1 | 1 | Naloxone 2 mg | 3 | 1 |
| IV Start Kit | 2 | 1 | Sodium Bicarbonate 8.4% 50 meq | 2 | 1 |
| 18 g Angiocath | 2 | 1 | Epinephrine 1:10,000 1 mg | 4 | 2 |
| IV Extension Set | 2 | 1 | Lidocaine 2% 100 mg | 2 | - |
| 10 cc NS Flush | 2 | 1 | Calcium Chloride 1 g | 2 | 1 |
| Med Box | | | Atropine 1 mg | | |
| Aspirin 81 mg (Bottle) | 1 | 1 | Front Pocket | | |
| Adenosine 12 mg | 2 | 1 | 1 cc Syringe | 2 | 1 |
| Amiodarone 150 mg | 3 | 2 | 18g Needle | 3 | 1 |
| Acetaminophen 650 mg (Tablet) | 4 | - | 21g 1.5 in Needle | 3 | 1 |
| Ibuprofen 400 mg (Tablet) | 4 | - | 80 TWINPAK Dual Cannula Device | 3 | 1 |
| Epinephrine 1:1000 1mg | 7 | 2 | SPEAR | 2 | 1 |
| Diphenhydramine 25 mg (IV) | 4 | 1 | 14g Angiocatheter | 2 | - |
| Diphenhydramine 25 mg (Tablet) | 6 | - | 16g Angiocatheter | 2 | 1 |
| Dexamethasone 10 mg | 2 | 1 | 22g Angiocatheter | 2 | - |
| Calcium Gluconate 1 g | 3 | - | 24g Angiocatheter | 2 | 1 |
| Roxapron 1 g | 2 | - | 18g Angiocatheter | 4 | 1 |
| Diltiazem 25 mg | 2 | 1 | 20g Angiocatheter | 4 | 1 |
| Ketorolac 15 mg | 1 | - | 10 cc NS Flush | 6 | 2 |
| Metoprolol 5 mg | 2 | - | Extension Sets | 2 | 1 |
| Labetalol 100 mg | 1 | 1 | Start Kits | 2 | 1 |
| Magnesium Sulfate 5 g | 1 | 1 | 6x6 gauze | 6 | - |
| Ondansetron 4 mg (IV) | 2 | - | Drape Flow | 2 | - |
| Ondansetron 4 mg (OOS) | 6 | - | 60 gts Sets | 2 | 1 |
| Nonepinephrine 4 mg | 2 | 1 | 10 gts Sets | 2 | 1 |
| Tranexamic Acid 1 g | 2 | 1 | Sharps Shuttle | 1 | 1 |
| Nitroglycerine 0.4 mg (Bottle) | 1 | 1 | 10 blade scalpel | 1 | - |
| Drug Labels | 5 | 1 | Trauma Shears | 1 | 1 |
| Sharps | 1 | - | Right Side Pocket | | |
| Left Main | | | 3 cc Syringe | | |
| Glucometer | 1 | 1 | 5 cc Syringe | 3 | - |
| Lancets | 5 | 1 | 10 cc Syringe | 3 | 1 |
| Alcohol pads | 5 | - | 60 cc Syringe | 1 | - |
| Test Strips (container) | 1 | 1 | MAC | 2 | 1 |
| PedSage | 1 | - | | | |
| Acetaminophen 1 g (IV) | 1 | - | Red Lettered = Min Equipment List | | |
| Glucose Gel 15 g | 2 | 1 | | | |
| Manual BP | 1 | - | Must be labeled with special expiration tag | | |
| Tourniquet | 1 | 1 | | | |

Respiratory Bag

| Item | Qty | MEL | Item | Qty | MEL |
|-------------------------|-----|-----|--------------------------|-----|-----|
| Left Side Pocket | | | Front Pocket | | |
| Pediatric Nasal Cannula | 1 | 1 | Pediatric BVM | 2 | 1 |
| Pediatric NRB | 1 | 1 | Infant BVM | 1 | 1 |
| Nebulizer | 1 | 1 | Adult Mask | 1 | 1 |
| Main Compartment | | | Right Side Pocket | | |
| Top Flap | | | Cricothyotomy Kit | 1 | 1 |
| | | | PEEP Valve | 2 | 1 |
| iGel 1 | 1 | 1 | Nebulizer to BVM Adaptor | 2 | 1 |
| iGel 1.5 | 1 | 1 | NPR 30 | 2 | 1 |
| iGel 2 | 1 | 1 | NPR 32 | 2 | 1 |
| Main | | | Trauma Scissors | 1 | 1 |
| iGel 3 | 1 | 1 | Right Side Pocket | | |
| iGel 4 | 1 | 1 | Nebulizer | 1 | 1 |
| iGel 5 | 1 | 1 | Adult NRB | 1 | 1 |
| Portable Suction | 1 | 1 | Adult Nasal Cannula | 1 | 1 |
| CPAP | 1 | 1 | Adult ETCO2 NC | 1 | - |
| Stethoscope | 1 | 1 | Intra ETCO2 | 2 | 1 |
| Intubate 3 or Airtraq | 1 | - | | | |
| Intubate 4 or Airtraq | 1 | - | | | |
| Intubation Kit | 1 | - | | | |
| 26F NPA | 1 | - | | | |
| 28F NPA | 1 | - | | | |
| 36F NPA | 1 | - | | | |
| 40mm OPA (Pink) | 1 | 1 | | | |
| 60mm OPA (Black) | 1 | 1 | | | |
| 80 mm OPA (Green) | 1 | 1 | | | |
| 90mm OPA (Yellow) | 1 | 1 | | | |
| 100mm OPA (Red) | 1 | 1 | | | |
| Adult Tube Tamer | 1 | 1 | | | |
| Pediatric Tube Tamer | 1 | 1 | | | |
| Bougie | 1 | 1 | | | |
| Pa3 Bougie | 1 | - | | | |
| Large Mayo's Forceps | 1 | - | | | |
| Small Mayo's Forceps | 1 | - | | | |
| C Batteries | 2 | - | | | |
| ET Size 2 | 1 | 1 | | | |
| ET Size 3 | 1 | 1 | | | |
| ET Size 4 | 1 | 1 | | | |
| ET Size 5 | 1 | 1 | | | |
| ET Size 6 | 1 | 1 | | | |
| ET Size 7 | 1 | 1 | | | |
| ET Size 8 | 1 | 1 | | | |
| SPEAR | 2 | 1 | | | |
| Miter Size 0 | 1 | - | | | |
| Miter Size 1 | 1 | - | | | |
| Miter Size 2 | 1 | - | | | |
| Mac Size 1 | 1 | - | | | |
| Mac Size 2 | 1 | - | | | |
| Mac Size 3 | 1 | - | | | |
| Mac Size 4 | 1 | - | | | |
| Handle | 1 | 1 | | | |
| Lubricant | 5 | 1 | | | |

Red Lettered = Min Equipment List

Trauma Bag

| Item | | Par |
|------------------------------------|----|-----|
| Left Side Pocket | | |
| 3 inch Rolled Gauze | 2 | 1 |
| 2 inch Coban | 2 | - |
| 1 inch Tape | 1 | 1 |
| 3 inch Tape | 1 | - |
| Main Compartment | | |
| Top Flap | | |
| Tranexamic Acid 5g | 2 | 1 |
| iPAK Dual Cannula Device or Filter | 2 | 1 |
| 10 cc Syringe | 2 | 1 |
| Left Main | | |
| SAM Splint | 1 | - |
| 4 inch Rolled Gauze | 1 | - |
| Middle Main | | |
| Pelvic Binder | 1 | - |
| iFAC | 4 | 1 |
| Chest Seal | 1 | - |
| 4 inch Elastic Bandage | 1 | - |
| Triagle Bandage | 1 | - |
| 4 inch Rolled Gauze | 1 | - |
| Tourniquet | 1 | - |
| Right Main | | |
| 6x10 ABD Pads | 1 | - |
| Cold Pack | 1 | - |
| Tourniquet | 2 | 1 |
| Front Pocket | | |
| Triagle Bandage | 2 | 1 |
| 4 inch Elastic Bandage | 3 | - |
| Chest Seals | 3 | - |
| Sterile 4 x4 | 3 | 1 |
| Lube x 4 | 2 | 1 |
| NPA 28 | 2 | 1 |
| NPA 30 | 2 | 1 |
| NPA 32 | 2 | 1 |
| Trauma Shears | 1 | 1 |
| SPEARS | 4 | 1 |
| Right Side Pocket | | |
| Red Triage Tape | 1 | - |
| Yellow Triage Tape | 1 | - |
| Green Triage Tape | 1 | - |
| Black Triage Tape | 1 | - |
| TX State Wristbands | 25 | 25 |

Red Lettered = Min Equipment List

ALSMCU Unit Layout

| Item | Par | MEL | Item | Par | MEL | Item | Par | MEL |
|------------------------------------|-----|-----|------------------------------|-----|-----|-------------------------------|-----|-----|
| Outer Compartments | | | Shelf B | | | Shelf B | | |
| Driver Side (Front-Back) | | | 14g Angiocatheter | 4 | - | 4 inch Rolled Gauze | 1 | - |
| Compartment 1 | | | 16g Angiocatheter | 4 | 2 | 4 inch Elastic Bandage | 4 | 2 |
| Man O2 | 1 | 1 | 20g Angiocatheter | 4 | - | Tourniquet | 2 | 1 |
| Traffic Triangle (self) | 1 | 1 | 24g Angiocatheter | 4 | 2 | PAK | 1 | - |
| Broom | 1 | - | 18g Angiocatheter | 8 | 2 | Chest Seal | 6 | 4 |
| Compartment 2 | | | 20g Angiocatheter | 8 | 2 | SPEAR | 2 | 1 |
| Trauma Bag | 1 | - | IV Start Kit | 8 | 2 | Triangle Bandage | 12 | 10 |
| Star Chair | 1 | - | 10 cc NS Flush | 10 | 2 | Trauma Shears | 1 | 1 |
| Compartment 3 | | | O10 250 ml | 2 | 1 | Rickys | 2 | - |
| C-collars Adult | 2 | 1 | Sterile Water 500 ml | 2 | 1 | Pelvic Binder | 1 | - |
| C-Collars Ped | 2 | 1 | Acetaminophen 1 g (IV) | 1 | - | Narcan 2mg | 3 | 1 |
| Head Blocks | 2 | 1 | Extension Sets | 5 | 2 | Suture Bicarbonate 10 mg | 2 | 1 |
| Long Spine Board | 1 | 1 | Pediatric Sprints | 2 | - | Eganaphrine 1:10,000 1 mg | 4 | 2 |
| Scalp Stretcher | 1 | - | Alcohol Pads | 10 | 5 | Lidocaine 2% 100 mg | 2 | - |
| KED or Short Board | 1 | 1 | Band-Aid (Box) | 2 | 1 | Calcium Chloride 1 g | 2 | 1 |
| Long Sprints | 2 | 1 | Cabinet 2 | | | Atropine 1 mg | 2 | 1 |
| Medium Sprints | 2 | 1 | Shelf A | | | 1 cc Syringe | 4 | 1 |
| Short Sprints | 2 | 1 | 4x4 Non Sterile Gauze (Loaf) | 2 | 1 | 3 cc Syringe | 4 | 1 |
| Passenger Side (Front-Back) | | | 3 inch Rolled Gauze | 5 | 2 | 5 cc Syringe | 4 | - |
| Compartment 1 | | | 4x4 Sterile Gauze | 50 | 25 | 10 cc Syringe | 4 | 1 |
| Shelf A | | | 2 inch Coban | 2 | - | 60 cc Syringe | 2 | - |
| Portable Suction | 1 | - | 2 inch Regular Tape | 2 | 1 | MAD | 2 | 1 |
| Shelf B | | | 2 inch Cloth Tape | 2 | - | 80 TWYPAK Ocul Cannula Device | 3 | 1 |
| Stretcher Battery | 1 | - | 1 inch Cloth Tape | 2 | 1 | 21G 1.5 inch Needle | 3 | 1 |
| Airway Bag | 1 | - | 1 inch Clear Tape | 2 | - | 18G Filter Needle | 3 | 1 |
| Shelf C | | | Abdominal Pads | 8 | - | | | |
| Defibtech | 1 | - | Trauma Dressing | 3 | 2 | | | |
| Compartment 2 | | | Burn Sheet | 5 | 4 | | | |
| Personal/Tactical Gear | | | Cold Pack | 2 | 1 | | | |
| Wall Compartment | | | Hot Pack | 2 | 1 | | | |
| Cabinet 1 | | | | | | | | |
| Shelf A | | | | | | | | |
| | | | Normal Saline 500 ml | 3 | 1 | | | |
| | | | Normal Saline 100 ml | 3 | 1 | | | |
| | | | 10 gts Set | 1 | 1 | | | |
| | | | 60 gts Set | 1 | 1 | | | |
| | | | 25 mm IO Needle | 1 | - | | | |
| | | | 45 mm IO Needle | 1 | - | | | |

Reference

CPR Guidelines**Section: Infant**

| Name | Description |
|---|---|
| Compression / Ventilation (without advanced airway) | 1 rescuer — 30:2 2 or more rescuers — 15:2 |
| Compression / Ventilation (with advanced airway) | Continuous compressions at a rate of 100-120/min Give 1 breath every 6 seconds (10 breaths/min) |
| Compression Rate | 100-120 chest compressions per / minute for CPR |
| Compression Depth | At least one-third of the diameter of the chest About 1½ inches (4 cm) |
| Hand Placement | One rescuer: 2 fingers in the center of the chest, just below the nipple line Two or more rescuers: 2 thumbs — encircling hands in the center of the chest just below the nipple |
| Rescue Breathing Rate | 1 Breath every 3-5 Seconds (12-20 Breaths per minute) |
| Recognition of Cardiac Arrest | Check for responsiveness No breathing or only gasping (no normal breathing) No definite pulse felt within 10 seconds |
| Minimizing Interruptions | Limit interruptions in chest compressions to less than 10 seconds |

Section: Child

| Name | Description |
|---|--|
| Compression / Ventilation (without advanced airway) | 1 rescuer — 30:2 2 or more rescuers — 15:2 |
| Compression / Ventilation (with advanced airway) | Continuous compressions at a rate of 100-120/min Give 1 breath every 6 seconds (10 breaths/min) |
| Compression Rate | 100-120 chest compressions per / minute for CPR |
| Compression Depth | At least one-third of the diameter of the chest. About 2 inches (5 cm) |
| Hand Placement | 2 hands or 1 hand (optional for a very small child) on the lower half of the breastbone (sternum) |
| Rescue Breathing Rate | 1 Breath every 3-5 Seconds (12-20 Breaths per minute) |

| | |
|-------------------------------|--|
| | per minute) |
| Recognition of Cardiac Arrest | Check for responsiveness No breathing or only gasping (no normal breathing) No definite pulse felt within 10 seconds |
| Minimizing Interruptions | Limit interruptions in chest compressions to less than 10 seconds |

Section: Adult

| Name | Description |
|---|--|
| Compression / Ventilation (without advanced airway) | 1 or 2 rescuers — 30:2 |
| Compression / Ventilation (with advanced airway) | Continuous compressions at a rate of 100-120/min Give 1 breath every 6 seconds (10 breaths/min) |
| Compression Rate | 100-120 chest compressions per / minute for CPR |
| Compression Depth | At least 2 inches (5 cm) |
| Hand Placement | 2 hands-on the lower half of the breastbone (sternum) |
| Rescue Breathing Rate | 1 Breath Every 6 Seconds (10 Breaths per minute) |
| Recognition of Cardiac Arrest | Check for responsiveness No breathing or only gasping (no normal breathing) No definite pulse felt within 10 seconds |
| Minimizing Interruptions | Limit interruptions in chest compressions to less than 10 seconds |

Reference

CPR Guidelines**Section: Infant**

| Name | Description |
|---|---|
| Compression / Ventilation (without advanced airway) | 1 rescuer — 30:2 2 or more rescuers — 15:2 |
| Compression / Ventilation (with advanced airway) | Continuous compressions at a rate of 100-120/min Give 1 breath every 6 seconds (10 breaths/min) |
| Compression Rate | 100-120 chest compressions per / minute for CPR |
| Compression Depth | At least one-third of the diameter of the chest About 1½ inches (4 cm) |
| Hand Placement | One rescuer: 2 fingers in the center of the chest, just below the nipple line Two or more rescuers: 2 thumbs — encircling hands in the center of the chest just below the nipple |
| Rescue Breathing Rate | 1 Breath every 3-5 Seconds (12-20 Breaths per minute) |
| Recognition of Cardiac Arrest | Check for responsiveness No breathing or only gasping (no normal breathing) No definite pulse felt within 10 seconds |
| Minimizing Interruptions | Limit interruptions in chest compressions to less than 10 seconds |

Section: Child

| Name | Description |
|---|--|
| Compression / Ventilation (without advanced airway) | 1 rescuer — 30:2 2 or more rescuers — 15:2 |
| Compression / Ventilation (with advanced airway) | Continuous compressions at a rate of 100-120/min Give 1 breath every 6 seconds (10 breaths/min) |
| Compression Rate | 100-120 chest compressions per / minute for CPR |
| Compression Depth | At least one-third of the diameter of the chest. About 2 inches (5 cm) |
| Hand Placement | 2 hands or 1 hand (optional for a very small child) on the lower half of the breastbone (sternum) |
| Rescue Breathing Rate | 1 Breath every 3-5 Seconds (12-20 Breaths |

| | |
|-------------------------------|--|
| | per minute) |
| Recognition of Cardiac Arrest | Check for responsiveness No breathing or only gasping (no normal breathing) No definite pulse felt within 10 seconds |
| Minimizing Interruptions | Limit interruptions in chest compressions to less than 10 seconds |

Section: Adult

| Name | Description |
|---|--|
| Compression / Ventilation (without advanced airway) | 1 or 2 rescuers — 30:2 |
| Compression / Ventilation (with advanced airway) | Continuous compressions at a rate of 100-120/min Give 1 breath every 6 seconds (10 breaths/min) |
| Compression Rate | 100-120 chest compressions per / minute for CPR |
| Compression Depth | At least 2 inches (5 cm) |
| Hand Placement | 2 hands-on the lower half of the breastbone (sternum) |
| Rescue Breathing Rate | 1 Breath Every 6 Seconds (10 Breaths per minute) |
| Recognition of Cardiac Arrest | Check for responsiveness No breathing or only gasping (no normal breathing) No definite pulse felt within 10 seconds |
| Minimizing Interruptions | Limit interruptions in chest compressions to less than 10 seconds |

Score

Glasgow Coma Scale (GCS) - Adult

Glasgow Coma Scale

Questions

Eyes

1. Open (+4)
2. To Verbal (+3)
3. To Pain (+2)
4. Closed (+1)

Verbal

1. Oriented (+5)
2. Confused (+4)
3. Inappropriate words (+3)
4. Incomprehensible sounds (+2)
5. No verbal response (+1)

Motor

1. Obeys commands (+6)
2. Localizing response to pain (+5)
3. Withdrawal response to pain (+4)
4. Flexion to pain (+3)
5. Extension to pain (+2)
6. No motor response (+1)

Results

8+: Severe Brain Injury

12+: Moderate Brain Injury

15+: Mild Brain Injury

Reference

CPR Guidelines**Section: Infant**

| Name | Description |
|---|---|
| Compression / Ventilation (without advanced airway) | 1 rescuer — 30:2 2 or more rescuers — 15:2 |
| Compression / Ventilation (with advanced airway) | Continuous compressions at a rate of 100-120/min Give 1 breath every 6 seconds (10 breaths/min) |
| Compression Rate | 100-120 chest compressions per / minute for CPR |
| Compression Depth | At least one-third of the diameter of the chest About 1½ inches (4 cm) |
| Hand Placement | One rescuer: 2 fingers in the center of the chest, just below the nipple line Two or more rescuers: 2 thumbs — encircling hands in the center of the chest just below the nipple |
| Rescue Breathing Rate | 1 Breath every 3-5 Seconds (12-20 Breaths per minute) |
| Recognition of Cardiac Arrest | Check for responsiveness No breathing or only gasping (no normal breathing) No definite pulse felt within 10 seconds |
| Minimizing Interruptions | Limit interruptions in chest compressions to less than 10 seconds |

Section: Child

| Name | Description |
|---|--|
| Compression / Ventilation (without advanced airway) | 1 rescuer — 30:2 2 or more rescuers — 15:2 |
| Compression / Ventilation (with advanced airway) | Continuous compressions at a rate of 100-120/min Give 1 breath every 6 seconds (10 breaths/min) |
| Compression Rate | 100-120 chest compressions per / minute for CPR |
| Compression Depth | At least one-third of the diameter of the chest. About 2 inches (5 cm) |
| Hand Placement | 2 hands or 1 hand (optional for a very small child) on the lower half of the breastbone (sternum) |
| Rescue Breathing Rate | 1 Breath every 3-5 Seconds (12-20 Breaths |

| | |
|-------------------------------|--|
| | per minute) |
| Recognition of Cardiac Arrest | Check for responsiveness No breathing or only gasping (no normal breathing) No definite pulse felt within 10 seconds |
| Minimizing Interruptions | Limit interruptions in chest compressions to less than 10 seconds |

Section: Adult

| Name | Description |
|---|--|
| Compression / Ventilation (without advanced airway) | 1 or 2 rescuers — 30:2 |
| Compression / Ventilation (with advanced airway) | Continuous compressions at a rate of 100-120/min Give 1 breath every 6 seconds (10 breaths/min) |
| Compression Rate | 100-120 chest compressions per / minute for CPR |
| Compression Depth | At least 2 inches (5 cm) |
| Hand Placement | 2 hands-on the lower half of the breastbone (sternum) |
| Rescue Breathing Rate | 1 Breath Every 6 Seconds (10 Breaths per minute) |
| Recognition of Cardiac Arrest | Check for responsiveness No breathing or only gasping (no normal breathing) No definite pulse felt within 10 seconds |
| Minimizing Interruptions | Limit interruptions in chest compressions to less than 10 seconds |

Score

Lift Assist/Ground Level Fall Checklist

Questions

Suspected Medical Cause of the Fall or Inability to Mobilize?

(Dizziness, Lightheaded, syncope, new weakness or balance problems, dehydration/poor oral intake, visual disturbance, recent illness, or infection)

1. Yes (+1)
2. No (0)

Is there a change from Baseline Mental Status for Patient?

1. Yes (+1)
2. No (0)

Signs of New Trauma (Pain or Injury)?

1. Yes (+1)
2. No (0)

Patient currently taking Blood Thinners (not including ASA)?

1. Yes (+1)
2. No (0)

Any Loss of Consciousness?

1. Yes (+1)
2. No (0)

Heart Rate > 100?

1. Yes (+1)
2. No (0)

Systolic BP < 100 or > 200?

1. Yes (+1)
2. No (0)

Diastolic BP > 140?

1. Yes (+1)
2. No (0)

Respiratory Rate > 20?

1. Yes (+1)
2. No (0)

EtCO₂ <25?

1. Yes (+1)
2. No (0)

SpO2 < 90% (On Room Air or Baseline O2 settings)?

1. Yes (+1)
2. No (0)

Does the patient have new limited ROM? Do they have a new require assistance to ambulate?

1. Yes (+1)
2. No (0)

Results

12+: High Risk Fall

CHANGE CALL TYPE TO MEDICAL, RECOMMEND PATIENT TO GO TO HOSPITAL CONTACT MEDICAL DIRECTOR FOR REFUSAL

0+: Low Risk Fall

Patient should receive fall prevention.

Score

APGAR

A simple method of quickly assessing a newborn's health and vital signs.

Questions

Activity

1. Absent (0)
2. Flexed limbs (+1)
3. Active (+2)

Pulse

1. Absent (0)
2. <100 bpm (+1)
3. ≥100 bpm (+2)

Grimace

Reflex irritability

1. Floppy (0)
2. Minimal response to stimulation (+1)
3. Prompt response to stimulation (+2)

Appearance

1. Blue, pale (0)
2. Pink body, blue extremities (+1)
3. Pink (+2)

Respiration

1. Absent (0)
2. Slow and irregular (+1)
3. Vigorous cry (+2)

Results

3+: Critical

Resuscitation required.

6+: Below normal

Indicates medical intervention likely required.

10+: Normal

Continue to monitor.

Reference

CPR Guidelines**Section: Infant**

| Name | Description |
|---|---|
| Compression / Ventilation (without advanced airway) | 1 rescuer — 30:2 2 or more rescuers — 15:2 |
| Compression / Ventilation (with advanced airway) | Continuous compressions at a rate of 100-120/min Give 1 breath every 6 seconds (10 breaths/min) |
| Compression Rate | 100-120 chest compressions per / minute for CPR |
| Compression Depth | At least one-third of the diameter of the chest About 1½ inches (4 cm) |
| Hand Placement | One rescuer: 2 fingers in the center of the chest, just below the nipple line Two or more rescuers: 2 thumbs — encircling hands in the center of the chest just below the nipple |
| Rescue Breathing Rate | 1 Breath every 3-5 Seconds (12-20 Breaths per minute) |
| Recognition of Cardiac Arrest | Check for responsiveness No breathing or only gasping (no normal breathing) No definite pulse felt within 10 seconds |
| Minimizing Interruptions | Limit interruptions in chest compressions to less than 10 seconds |

Section: Child

| Name | Description |
|---|--|
| Compression / Ventilation (without advanced airway) | 1 rescuer — 30:2 2 or more rescuers — 15:2 |
| Compression / Ventilation (with advanced airway) | Continuous compressions at a rate of 100-120/min Give 1 breath every 6 seconds (10 breaths/min) |
| Compression Rate | 100-120 chest compressions per / minute for CPR |
| Compression Depth | At least one-third of the diameter of the chest. About 2 inches (5 cm) |
| Hand Placement | 2 hands or 1 hand (optional for a very small child) on the lower half of the breastbone (sternum) |
| Rescue Breathing Rate | 1 Breath every 3-5 Seconds (12-20 Breaths |

| | |
|-------------------------------|--|
| | per minute) |
| Recognition of Cardiac Arrest | Check for responsiveness No breathing or only gasping (no normal breathing) No definite pulse felt within 10 seconds |
| Minimizing Interruptions | Limit interruptions in chest compressions to less than 10 seconds |

Section: Adult

| Name | Description |
|---|--|
| Compression / Ventilation (without advanced airway) | 1 or 2 rescuers — 30:2 |
| Compression / Ventilation (with advanced airway) | Continuous compressions at a rate of 100-120/min Give 1 breath every 6 seconds (10 breaths/min) |
| Compression Rate | 100-120 chest compressions per / minute for CPR |
| Compression Depth | At least 2 inches (5 cm) |
| Hand Placement | 2 hands-on the lower half of the breastbone (sternum) |
| Rescue Breathing Rate | 1 Breath Every 6 Seconds (10 Breaths per minute) |
| Recognition of Cardiac Arrest | Check for responsiveness No breathing or only gasping (no normal breathing) No definite pulse felt within 10 seconds |
| Minimizing Interruptions | Limit interruptions in chest compressions to less than 10 seconds |

Reference

CPR Guidelines**Section: Infant**

| Name | Description |
|---|---|
| Compression / Ventilation (without advanced airway) | 1 rescuer — 30:2 2 or more rescuers — 15:2 |
| Compression / Ventilation (with advanced airway) | Continuous compressions at a rate of 100-120/min Give 1 breath every 6 seconds (10 breaths/min) |
| Compression Rate | 100-120 chest compressions per / minute for CPR |
| Compression Depth | At least one-third of the diameter of the chest About 1½ inches (4 cm) |
| Hand Placement | One rescuer: 2 fingers in the center of the chest, just below the nipple line Two or more rescuers: 2 thumbs — encircling hands in the center of the chest just below the nipple |
| Rescue Breathing Rate | 1 Breath every 3-5 Seconds (12-20 Breaths per minute) |
| Recognition of Cardiac Arrest | Check for responsiveness No breathing or only gasping (no normal breathing) No definite pulse felt within 10 seconds |
| Minimizing Interruptions | Limit interruptions in chest compressions to less than 10 seconds |

Section: Child

| Name | Description |
|---|--|
| Compression / Ventilation (without advanced airway) | 1 rescuer — 30:2 2 or more rescuers — 15:2 |
| Compression / Ventilation (with advanced airway) | Continuous compressions at a rate of 100-120/min Give 1 breath every 6 seconds (10 breaths/min) |
| Compression Rate | 100-120 chest compressions per / minute for CPR |
| Compression Depth | At least one-third of the diameter of the chest. About 2 inches (5 cm) |
| Hand Placement | 2 hands or 1 hand (optional for a very small child) on the lower half of the breastbone (sternum) |
| Rescue Breathing Rate | 1 Breath every 3-5 Seconds (12-20 Breaths |

| | |
|-------------------------------|--|
| | per minute) |
| Recognition of Cardiac Arrest | Check for responsiveness No breathing or only gasping (no normal breathing) No definite pulse felt within 10 seconds |
| Minimizing Interruptions | Limit interruptions in chest compressions to less than 10 seconds |

Section: Adult

| Name | Description |
|---|--|
| Compression / Ventilation (without advanced airway) | 1 or 2 rescuers — 30:2 |
| Compression / Ventilation (with advanced airway) | Continuous compressions at a rate of 100-120/min Give 1 breath every 6 seconds (10 breaths/min) |
| Compression Rate | 100-120 chest compressions per / minute for CPR |
| Compression Depth | At least 2 inches (5 cm) |
| Hand Placement | 2 hands-on the lower half of the breastbone (sternum) |
| Rescue Breathing Rate | 1 Breath Every 6 Seconds (10 Breaths per minute) |
| Recognition of Cardiac Arrest | Check for responsiveness No breathing or only gasping (no normal breathing) No definite pulse felt within 10 seconds |
| Minimizing Interruptions | Limit interruptions in chest compressions to less than 10 seconds |

Score

APGAR

A simple method of quickly assessing a newborn's health and vital signs.

Questions

Activity

1. Absent (0)
2. Flexed limbs (+1)
3. Active (+2)

Pulse

1. Absent (0)
2. <100 bpm (+1)
3. ≥100 bpm (+2)

Grimace

Reflex irritability

1. Floppy (0)
2. Minimal response to stimulation (+1)
3. Prompt response to stimulation (+2)

Appearance

1. Blue, pale (0)
2. Pink body, blue extremities (+1)
3. Pink (+2)

Respiration

1. Absent (0)
2. Slow and irregular (+1)
3. Vigorous cry (+2)

Results

3+: Critical

Resuscitation required.

6+: Below normal

Indicates medical intervention likely required.

10+: Normal

Continue to monitor.

Score

APGAR

A simple method of quickly assessing a newborn's health and vital signs.

Questions

Activity

1. Absent (0)
2. Flexed limbs (+1)
3. Active (+2)

Pulse

1. Absent (0)
2. <100 bpm (+1)
3. ≥100 bpm (+2)

Grimace

Reflex irritability

1. Floppy (0)
2. Minimal response to stimulation (+1)
3. Prompt response to stimulation (+2)

Appearance

1. Blue, pale (0)
2. Pink body, blue extremities (+1)
3. Pink (+2)

Respiration

1. Absent (0)
2. Slow and irregular (+1)
3. Vigorous cry (+2)

Results

3+: Critical

Resuscitation required.

6+: Below normal

Indicates medical intervention likely required.

10+: Normal

Continue to monitor.

Reference

CPR Guidelines**Section: Infant**

| Name | Description |
|---|---|
| Compression / Ventilation (without advanced airway) | 1 rescuer — 30:2 2 or more rescuers — 15:2 |
| Compression / Ventilation (with advanced airway) | Continuous compressions at a rate of 100-120/min Give 1 breath every 6 seconds (10 breaths/min) |
| Compression Rate | 100-120 chest compressions per / minute for CPR |
| Compression Depth | At least one-third of the diameter of the chest About 1½ inches (4 cm) |
| Hand Placement | One rescuer: 2 fingers in the center of the chest, just below the nipple line Two or more rescuers: 2 thumbs — encircling hands in the center of the chest just below the nipple |
| Rescue Breathing Rate | 1 Breath every 3-5 Seconds (12-20 Breaths per minute) |
| Recognition of Cardiac Arrest | Check for responsiveness No breathing or only gasping (no normal breathing) No definite pulse felt within 10 seconds |
| Minimizing Interruptions | Limit interruptions in chest compressions to less than 10 seconds |

Section: Child

| Name | Description |
|---|--|
| Compression / Ventilation (without advanced airway) | 1 rescuer — 30:2 2 or more rescuers — 15:2 |
| Compression / Ventilation (with advanced airway) | Continuous compressions at a rate of 100-120/min Give 1 breath every 6 seconds (10 breaths/min) |
| Compression Rate | 100-120 chest compressions per / minute for CPR |
| Compression Depth | At least one-third of the diameter of the chest. About 2 inches (5 cm) |
| Hand Placement | 2 hands or 1 hand (optional for a very small child) on the lower half of the breastbone (sternum) |
| Rescue Breathing Rate | 1 Breath every 3-5 Seconds (12-20 Breaths |

| | |
|-------------------------------|--|
| | per minute) |
| Recognition of Cardiac Arrest | Check for responsiveness No breathing or only gasping (no normal breathing) No definite pulse felt within 10 seconds |
| Minimizing Interruptions | Limit interruptions in chest compressions to less than 10 seconds |

Section: Adult

| Name | Description |
|---|--|
| Compression / Ventilation (without advanced airway) | 1 or 2 rescuers — 30:2 |
| Compression / Ventilation (with advanced airway) | Continuous compressions at a rate of 100-120/min Give 1 breath every 6 seconds (10 breaths/min) |
| Compression Rate | 100-120 chest compressions per / minute for CPR |
| Compression Depth | At least 2 inches (5 cm) |
| Hand Placement | 2 hands-on the lower half of the breastbone (sternum) |
| Rescue Breathing Rate | 1 Breath Every 6 Seconds (10 Breaths per minute) |
| Recognition of Cardiac Arrest | Check for responsiveness No breathing or only gasping (no normal breathing) No definite pulse felt within 10 seconds |
| Minimizing Interruptions | Limit interruptions in chest compressions to less than 10 seconds |

Reference

Pediatric Airway Size**Section: Neonate / 0-28 days / 3-5 kg**

| Name | Description |
|--------------|--------------------|
| ET Tube | 3.0 Cuffed |
| iGel | Size 1 |
| Laryngoscope | 0-1 |
| Tube Depth | 10 cm |

Section: Infant / 1-6 months / 6-7 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 3.0 Cuffed |
| iGel | Size 1.5 |
| Laryngoscope | 0-1 |
| Tube Depth | 12 cm |

Section: Infant / 6-12 months / 8-9 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 4.0 Cuffed |
| iGel | 1.5 |
| Laryngoscope | 1 |
| Tube Depth | 13 cm |

Section: Toddler / 1-2 years / 10-11 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 4.0 Cuffed |
| iGel | Size 2 |
| Laryngoscope | 1 |
| Tube Depth | 13 cm |

Section: Toddler to Preschooler / 2-4 years / 12-14 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 4.0 Cuffed |
| iGel | Size 2 |
| Laryngoscope | 2 |
| Tube Depth | 14 cm |

Section: Preschooler to Young Child / 4-6 years / 15-18 kg

| Name | Description |
|-------------|--------------------|
| ET Tube | 5.0 Cuffed |

| | |
|--------------|--------|
| iGel | Size 2 |
| Laryngoscope | 2 |
| Tube Depth | 15 cm |

Section: School Age / 6-8 years / 19-23 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 5.0 Cuffed |
| iGel | Size 2 |
| Laryngoscope | 2 |
| Tube Depth | 17 cm |

Section: Older School Age / 8-10 years / 24-29 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 6.0 Cuffed |
| iGel | Size 2.5 |
| Laryngoscope | 3 |
| Tube Depth | 20 cm |

Section: Adolescent / 10-12+ years / 30-36 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 6.0 Cuffed |
| iGel | Size 2.5 |
| Laryngoscope | 3 |
| Tube Depth | 21 cm |

Section: Adult / 15+ years

| Name | Description |
|--------------|--------------------|
| ET Tube | 7.0 Cuffed |
| iGel | Size 3 |
| Laryngoscope | 3 |
| Tube Depth | 28 cm |

Reference

Pediatric Airway Size**Section: Neonate / 0-28 days / 3-5 kg**

| Name | Description |
|--------------|--------------------|
| ET Tube | 3.0 Cuffed |
| iGel | Size 1 |
| Laryngoscope | 0-1 |
| Tube Depth | 10 cm |

Section: Infant / 1-6 months / 6-7 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 3.0 Cuffed |
| iGel | Size 1.5 |
| Laryngoscope | 0-1 |
| Tube Depth | 12 cm |

Section: Infant / 6-12 months / 8-9 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 4.0 Cuffed |
| iGel | 1.5 |
| Laryngoscope | 1 |
| Tube Depth | 13 cm |

Section: Toddler / 1-2 years / 10-11 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 4.0 Cuffed |
| iGel | Size 2 |
| Laryngoscope | 1 |
| Tube Depth | 13 cm |

Section: Toddler to Preschooler / 2-4 years / 12-14 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 4.0 Cuffed |
| iGel | Size 2 |
| Laryngoscope | 2 |
| Tube Depth | 14 cm |

Section: Preschooler to Young Child / 4-6 years / 15-18 kg

| Name | Description |
|-------------|--------------------|
| ET Tube | 5.0 Cuffed |

| | |
|--------------|--------|
| iGel | Size 2 |
| Laryngoscope | 2 |
| Tube Depth | 15 cm |

Section: School Age / 6-8 years / 19-23 kg

| Name | Description |
|--------------|-------------|
| ET Tube | 5.0 Cuffed |
| iGel | Size 2 |
| Laryngoscope | 2 |
| Tube Depth | 17 cm |

Section: Older School Age / 8-10 years / 24-29 kg

| Name | Description |
|--------------|-------------|
| ET Tube | 6.0 Cuffed |
| iGel | Size 2.5 |
| Laryngoscope | 3 |
| Tube Depth | 20 cm |

Section: Adolescent / 10-12+ years / 30-36 kg

| Name | Description |
|--------------|-------------|
| ET Tube | 6.0 Cuffed |
| iGel | Size 2.5 |
| Laryngoscope | 3 |
| Tube Depth | 21 cm |

Section: Adult / 15+ years

| Name | Description |
|--------------|-------------|
| ET Tube | 7.0 Cuffed |
| iGel | Size 3 |
| Laryngoscope | 3 |
| Tube Depth | 28 cm |

Reference

CPR Guidelines**Section: Infant**

| Name | Description |
|---|---|
| Compression / Ventilation (without advanced airway) | 1 rescuer — 30:2 2 or more rescuers — 15:2 |
| Compression / Ventilation (with advanced airway) | Continuous compressions at a rate of 100-120/min Give 1 breath every 6 seconds (10 breaths/min) |
| Compression Rate | 100-120 chest compressions per / minute for CPR |
| Compression Depth | At least one-third of the diameter of the chest About 1½ inches (4 cm) |
| Hand Placement | One rescuer: 2 fingers in the center of the chest, just below the nipple line Two or more rescuers: 2 thumbs — encircling hands in the center of the chest just below the nipple |
| Rescue Breathing Rate | 1 Breath every 3-5 Seconds (12-20 Breaths per minute) |
| Recognition of Cardiac Arrest | Check for responsiveness No breathing or only gasping (no normal breathing) No definite pulse felt within 10 seconds |
| Minimizing Interruptions | Limit interruptions in chest compressions to less than 10 seconds |

Section: Child

| Name | Description |
|---|--|
| Compression / Ventilation (without advanced airway) | 1 rescuer — 30:2 2 or more rescuers — 15:2 |
| Compression / Ventilation (with advanced airway) | Continuous compressions at a rate of 100-120/min Give 1 breath every 6 seconds (10 breaths/min) |
| Compression Rate | 100-120 chest compressions per / minute for CPR |
| Compression Depth | At least one-third of the diameter of the chest. About 2 inches (5 cm) |
| Hand Placement | 2 hands or 1 hand (optional for a very small child) on the lower half of the breastbone (sternum) |
| Rescue Breathing Rate | 1 Breath every 3-5 Seconds (12-20 Breaths |

| | |
|-------------------------------|--|
| | per minute) |
| Recognition of Cardiac Arrest | Check for responsiveness No breathing or only gasping (no normal breathing) No definite pulse felt within 10 seconds |
| Minimizing Interruptions | Limit interruptions in chest compressions to less than 10 seconds |

Section: Adult

| Name | Description |
|---|--|
| Compression / Ventilation (without advanced airway) | 1 or 2 rescuers — 30:2 |
| Compression / Ventilation (with advanced airway) | Continuous compressions at a rate of 100-120/min Give 1 breath every 6 seconds (10 breaths/min) |
| Compression Rate | 100-120 chest compressions per / minute for CPR |
| Compression Depth | At least 2 inches (5 cm) |
| Hand Placement | 2 hands-on the lower half of the breastbone (sternum) |
| Rescue Breathing Rate | 1 Breath Every 6 Seconds (10 Breaths per minute) |
| Recognition of Cardiac Arrest | Check for responsiveness No breathing or only gasping (no normal breathing) No definite pulse felt within 10 seconds |
| Minimizing Interruptions | Limit interruptions in chest compressions to less than 10 seconds |

Reference

Pediatric & Adult Vital Signs**Section: Neonate / 0-28 days / 3-5 kg**

| Name | Description |
|--------------------------|--------------------|
| Heart Rate | 120-160 bpm |
| Respiratory Rate | 40-60 breaths/min |
| Systolic Blood Pressure | 60-85 mmHg |
| Diastolic Blood Pressure | 33-55 mmHg |

Section: Infant / 1-6 months / 6-7 kg

| Name | Description |
|--------------------------|--------------------|
| Heart Rate | 110-160 bpm |
| Respiratory Rate | 30-50 breaths/min |
| Systolic Blood Pressure | 70-100 mmHg |
| Diastolic Blood Pressure | 50-65 mmHg |

Section: Infant / 6-12 months / 8-9 kg

| Name | Description |
|--------------------------|--------------------|
| Heart Rate | 100-160 bpm |
| Respiratory Rate | 30-45 breaths/min |
| Systolic Blood Pressure | 80-110 mmHg |
| Diastolic Blood Pressure | 50-70 mmHg |

Section: Toddler / 1-2 years / 10-11 kg

| Name | Description |
|--------------------------|--------------------|
| Heart Rate | 90-150 bpm |
| Respiratory Rate | 25-40 breaths/min |
| Systolic Blood Pressure | 85-107 mmHg |
| Diastolic Blood Pressure | 40-67 mmHg |

Section: Toddler to Preschooler / 2-4 years / 12-14 kg

| Name | Description |
|--------------------------|--------------------|
| Heart Rate | 89-145 bpm |
| Respiratory Rate | 25-39 breaths/min |
| Systolic Blood Pressure | 87-112 mmHg |
| Diastolic Blood Pressure | 44-74 mmHg |

Section: Preschooler to Young Child / 4-6 years / 15-18 kg

| Name | Description |
|-------------|--------------------|
| Heart Rate | 80-130 bpm |

| | |
|--------------------------|-------------------|
| Respiratory Rate | 20-30 breaths/min |
| Systolic Blood Pressure | 90-115 mmHg |
| Diastolic Blood Pressure | 50-80 mmHg |

Section: School Age / 6-8 years / 19-23 kg

| Name | Description |
|--------------------------|-------------------|
| Heart Rate | 75-120 bpm |
| Respiratory Rate | 18-25 breaths/min |
| Systolic Blood Pressure | 95-120 mmHg |
| Diastolic Blood Pressure | 55-80 mmHg |

Section: Older School Age / 8-10 years / 24-29 kg

| Name | Description |
|--------------------------|-------------------|
| Heart Rate | 70-110 bpm |
| Respiratory Rate | 16-22 breaths/min |
| Systolic Blood Pressure | 100-125 mmHg |
| Diastolic Blood Pressure | 60-85 mmhg |

Section: Adolescent / 10-12+ years / 30-36 kg

| Name | Description |
|--------------------------|-------------------|
| Heart Rate | 60-100 bpm |
| Respiratory Rate | 12-20 breaths/min |
| Systolic Blood Pressure | 110-131 mmHg |
| Diastolic Blood Pressure | 64-83 mmHg |

Section: Adult / 15+ years

| Name | Description |
|--------------------------|-------------------|
| Heart Rate | 60-100 bpm |
| Respiratory Rate | 12-20 breaths/min |
| Systolic Blood Pressure | 110-130 mmHg |
| Diastolic Blood Pressure | 60-85 mmHg |

Reference

Pediatric Airway Size**Section: Neonate / 0-28 days / 3-5 kg**

| Name | Description |
|--------------|--------------------|
| ET Tube | 3.0 Cuffed |
| iGel | Size 1 |
| Laryngoscope | 0-1 |
| Tube Depth | 10 cm |

Section: Infant / 1-6 months / 6-7 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 3.0 Cuffed |
| iGel | Size 1.5 |
| Laryngoscope | 0-1 |
| Tube Depth | 12 cm |

Section: Infant / 6-12 months / 8-9 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 4.0 Cuffed |
| iGel | 1.5 |
| Laryngoscope | 1 |
| Tube Depth | 13 cm |

Section: Toddler / 1-2 years / 10-11 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 4.0 Cuffed |
| iGel | Size 2 |
| Laryngoscope | 1 |
| Tube Depth | 13 cm |

Section: Toddler to Preschooler / 2-4 years / 12-14 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 4.0 Cuffed |
| iGel | Size 2 |
| Laryngoscope | 2 |
| Tube Depth | 14 cm |

Section: Preschooler to Young Child / 4-6 years / 15-18 kg

| Name | Description |
|-------------|--------------------|
| ET Tube | 5.0 Cuffed |

| | |
|--------------|--------|
| iGel | Size 2 |
| Laryngoscope | 2 |
| Tube Depth | 15 cm |

Section: School Age / 6-8 years / 19-23 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 5.0 Cuffed |
| iGel | Size 2 |
| Laryngoscope | 2 |
| Tube Depth | 17 cm |

Section: Older School Age / 8-10 years / 24-29 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 6.0 Cuffed |
| iGel | Size 2.5 |
| Laryngoscope | 3 |
| Tube Depth | 20 cm |

Section: Adolescent / 10-12+ years / 30-36 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 6.0 Cuffed |
| iGel | Size 2.5 |
| Laryngoscope | 3 |
| Tube Depth | 21 cm |

Section: Adult / 15+ years

| Name | Description |
|--------------|--------------------|
| ET Tube | 7.0 Cuffed |
| iGel | Size 3 |
| Laryngoscope | 3 |
| Tube Depth | 28 cm |

Reference

Pediatric Airway Size**Section: Neonate / 0-28 days / 3-5 kg**

| Name | Description |
|--------------|--------------------|
| ET Tube | 3.0 Cuffed |
| iGel | Size 1 |
| Laryngoscope | 0-1 |
| Tube Depth | 10 cm |

Section: Infant / 1-6 months / 6-7 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 3.0 Cuffed |
| iGel | Size 1.5 |
| Laryngoscope | 0-1 |
| Tube Depth | 12 cm |

Section: Infant / 6-12 months / 8-9 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 4.0 Cuffed |
| iGel | 1.5 |
| Laryngoscope | 1 |
| Tube Depth | 13 cm |

Section: Toddler / 1-2 years / 10-11 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 4.0 Cuffed |
| iGel | Size 2 |
| Laryngoscope | 1 |
| Tube Depth | 13 cm |

Section: Toddler to Preschooler / 2-4 years / 12-14 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 4.0 Cuffed |
| iGel | Size 2 |
| Laryngoscope | 2 |
| Tube Depth | 14 cm |

Section: Preschooler to Young Child / 4-6 years / 15-18 kg

| Name | Description |
|-------------|--------------------|
| ET Tube | 5.0 Cuffed |

| | |
|--------------|--------|
| iGel | Size 2 |
| Laryngoscope | 2 |
| Tube Depth | 15 cm |

Section: School Age / 6-8 years / 19-23 kg

| Name | Description |
|--------------|-------------|
| ET Tube | 5.0 Cuffed |
| iGel | Size 2 |
| Laryngoscope | 2 |
| Tube Depth | 17 cm |

Section: Older School Age / 8-10 years / 24-29 kg

| Name | Description |
|--------------|-------------|
| ET Tube | 6.0 Cuffed |
| iGel | Size 2.5 |
| Laryngoscope | 3 |
| Tube Depth | 20 cm |

Section: Adolescent / 10-12+ years / 30-36 kg

| Name | Description |
|--------------|-------------|
| ET Tube | 6.0 Cuffed |
| iGel | Size 2.5 |
| Laryngoscope | 3 |
| Tube Depth | 21 cm |

Section: Adult / 15+ years

| Name | Description |
|--------------|-------------|
| ET Tube | 7.0 Cuffed |
| iGel | Size 3 |
| Laryngoscope | 3 |
| Tube Depth | 28 cm |

Score

Glascow Coma Scale (GCS) - Infant

For <1 year old

Questions

Eyes

1. Open (+4)
2. To shout (+3)
3. To pain (+2)
4. Closed, no response (+1)

Verbal

1. Smiles / coos appropriately (+5)
2. Cries and is consolable (+4)
3. Persistent inappropriate crying and/or screaming (+3)
4. Grunts, agitated, and restless (+2)
5. No response (+1)

Motor

1. Normal spontaneous movements (+6)
2. Localizing response to pain (+5)
3. Withdrawal response to pain (+4)
4. Flexion-abnormal (+3)
5. Extension (+2)
6. No motor response (+1)

Results

8+: Severe Brain Injury

12+: Moderate Brain Injury

15+: Mild Brain Injury

Score**Glascow Coma Scale (GCS) - Pediatric 2-5yo**

For 2-5 years old, if >5 use adult GCS.

Questions**Eyes**

1. Open (+4)
2. To verbal (+3)
3. To pain (+2)
4. Closed, no response (+1)

Verbal

1. Appropriate words / phrases (+5)
2. Inappropriate words (+4)
3. Persistent cries and screams (+3)
4. Grunts (+2)
5. No response (+1)

Motor

1. Obeys (+6)
2. Localizing response to pain (+5)
3. Withdrawal response to pain (+4)
4. Flexion-abnormal (decorticate) (+3)
5. Extension (decerebrate) (+2)
6. No motor response (+1)

Results

8+: Severe Brain Injury

12+: Moderate Brain Injury

15+: Mild Brain Injury

Score

Glascow Coma Scale (GCS) - Infant

For <1 year old

Questions

Eyes

1. Open (+4)
2. To shout (+3)
3. To pain (+2)
4. Closed, no response (+1)

Verbal

1. Smiles / coos appropriately (+5)
2. Cries and is consolable (+4)
3. Persistent inappropriate crying and/or screaming (+3)
4. Grunts, agitated, and restless (+2)
5. No response (+1)

Motor

1. Normal spontaneous movements (+6)
2. Localizing response to pain (+5)
3. Withdrawal response to pain (+4)
4. Flexion-abnormal (+3)
5. Extension (+2)
6. No motor response (+1)

Results

8+: Severe Brain Injury

12+: Moderate Brain Injury

15+: Mild Brain Injury

Score**Glascow Coma Scale (GCS) - Pediatric 2-5yo**

For 2-5 years old, if >5 use adult GCS.

Questions**Eyes**

1. Open (+4)
2. To verbal (+3)
3. To pain (+2)
4. Closed, no response (+1)

Verbal

1. Appropriate words / phrases (+5)
2. Inappropriate words (+4)
3. Persistent cries and screams (+3)
4. Grunts (+2)
5. No response (+1)

Motor

1. Obeys (+6)
2. Localizing response to pain (+5)
3. Withdrawal response to pain (+4)
4. Flexion-abnormal (decorticate) (+3)
5. Extension (decerebrate) (+2)
6. No motor response (+1)

Results

8+: Severe Brain Injury

12+: Moderate Brain Injury

15+: Mild Brain Injury

Reference

Pediatric Airway Size**Section: Neonate / 0-28 days / 3-5 kg**

| Name | Description |
|--------------|--------------------|
| ET Tube | 3.0 Cuffed |
| iGel | Size 1 |
| Laryngoscope | 0-1 |
| Tube Depth | 10 cm |

Section: Infant / 1-6 months / 6-7 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 3.0 Cuffed |
| iGel | Size 1.5 |
| Laryngoscope | 0-1 |
| Tube Depth | 12 cm |

Section: Infant / 6-12 months / 8-9 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 4.0 Cuffed |
| iGel | 1.5 |
| Laryngoscope | 1 |
| Tube Depth | 13 cm |

Section: Toddler / 1-2 years / 10-11 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 4.0 Cuffed |
| iGel | Size 2 |
| Laryngoscope | 1 |
| Tube Depth | 13 cm |

Section: Toddler to Preschooler / 2-4 years / 12-14 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 4.0 Cuffed |
| iGel | Size 2 |
| Laryngoscope | 2 |
| Tube Depth | 14 cm |

Section: Preschooler to Young Child / 4-6 years / 15-18 kg

| Name | Description |
|-------------|--------------------|
| ET Tube | 5.0 Cuffed |

| | |
|--------------|--------|
| iGel | Size 2 |
| Laryngoscope | 2 |
| Tube Depth | 15 cm |

Section: School Age / 6-8 years / 19-23 kg

| Name | Description |
|--------------|-------------|
| ET Tube | 5.0 Cuffed |
| iGel | Size 2 |
| Laryngoscope | 2 |
| Tube Depth | 17 cm |

Section: Older School Age / 8-10 years / 24-29 kg

| Name | Description |
|--------------|-------------|
| ET Tube | 6.0 Cuffed |
| iGel | Size 2.5 |
| Laryngoscope | 3 |
| Tube Depth | 20 cm |

Section: Adolescent / 10-12+ years / 30-36 kg

| Name | Description |
|--------------|-------------|
| ET Tube | 6.0 Cuffed |
| iGel | Size 2.5 |
| Laryngoscope | 3 |
| Tube Depth | 21 cm |

Section: Adult / 15+ years

| Name | Description |
|--------------|-------------|
| ET Tube | 7.0 Cuffed |
| iGel | Size 3 |
| Laryngoscope | 3 |
| Tube Depth | 28 cm |

Reference

CPR Guidelines**Section: Infant**

| Name | Description |
|---|---|
| Compression / Ventilation (without advanced airway) | 1 rescuer — 30:2 2 or more rescuers — 15:2 |
| Compression / Ventilation (with advanced airway) | Continuous compressions at a rate of 100-120/min Give 1 breath every 6 seconds (10 breaths/min) |
| Compression Rate | 100-120 chest compressions per / minute for CPR |
| Compression Depth | At least one-third of the diameter of the chest About 1½ inches (4 cm) |
| Hand Placement | One rescuer: 2 fingers in the center of the chest, just below the nipple line Two or more rescuers: 2 thumbs — encircling hands in the center of the chest just below the nipple |
| Rescue Breathing Rate | 1 Breath every 3-5 Seconds (12-20 Breaths per minute) |
| Recognition of Cardiac Arrest | Check for responsiveness No breathing or only gasping (no normal breathing) No definite pulse felt within 10 seconds |
| Minimizing Interruptions | Limit interruptions in chest compressions to less than 10 seconds |

Section: Child

| Name | Description |
|---|--|
| Compression / Ventilation (without advanced airway) | 1 rescuer — 30:2 2 or more rescuers — 15:2 |
| Compression / Ventilation (with advanced airway) | Continuous compressions at a rate of 100-120/min Give 1 breath every 6 seconds (10 breaths/min) |
| Compression Rate | 100-120 chest compressions per / minute for CPR |
| Compression Depth | At least one-third of the diameter of the chest. About 2 inches (5 cm) |
| Hand Placement | 2 hands or 1 hand (optional for a very small child) on the lower half of the breastbone (sternum) |
| Rescue Breathing Rate | 1 Breath every 3-5 Seconds (12-20 Breaths |

| | |
|-------------------------------|--|
| | per minute) |
| Recognition of Cardiac Arrest | Check for responsiveness No breathing or only gasping (no normal breathing) No definite pulse felt within 10 seconds |
| Minimizing Interruptions | Limit interruptions in chest compressions to less than 10 seconds |

Section: Adult

| Name | Description |
|---|--|
| Compression / Ventilation (without advanced airway) | 1 or 2 rescuers — 30:2 |
| Compression / Ventilation (with advanced airway) | Continuous compressions at a rate of 100-120/min Give 1 breath every 6 seconds (10 breaths/min) |
| Compression Rate | 100-120 chest compressions per / minute for CPR |
| Compression Depth | At least 2 inches (5 cm) |
| Hand Placement | 2 hands-on the lower half of the breastbone (sternum) |
| Rescue Breathing Rate | 1 Breath Every 6 Seconds (10 Breaths per minute) |
| Recognition of Cardiac Arrest | Check for responsiveness No breathing or only gasping (no normal breathing) No definite pulse felt within 10 seconds |
| Minimizing Interruptions | Limit interruptions in chest compressions to less than 10 seconds |

Reference

Pediatric & Adult Vital Signs**Section: Neonate / 0-28 days / 3-5 kg**

| Name | Description |
|--------------------------|--------------------|
| Heart Rate | 120-160 bpm |
| Respiratory Rate | 40-60 breaths/min |
| Systolic Blood Pressure | 60-85 mmHg |
| Diastolic Blood Pressure | 33-55 mmHg |

Section: Infant / 1-6 months / 6-7 kg

| Name | Description |
|--------------------------|--------------------|
| Heart Rate | 110-160 bpm |
| Respiratory Rate | 30-50 breaths/min |
| Systolic Blood Pressure | 70-100 mmHg |
| Diastolic Blood Pressure | 50-65 mmHg |

Section: Infant / 6-12 months / 8-9 kg

| Name | Description |
|--------------------------|--------------------|
| Heart Rate | 100-160 bpm |
| Respiratory Rate | 30-45 breaths/min |
| Systolic Blood Pressure | 80-110 mmHg |
| Diastolic Blood Pressure | 50-70 mmHg |

Section: Toddler / 1-2 years / 10-11 kg

| Name | Description |
|--------------------------|--------------------|
| Heart Rate | 90-150 bpm |
| Respiratory Rate | 25-40 breaths/min |
| Systolic Blood Pressure | 85-107 mmHg |
| Diastolic Blood Pressure | 40-67 mmHg |

Section: Toddler to Preschooler / 2-4 years / 12-14 kg

| Name | Description |
|--------------------------|--------------------|
| Heart Rate | 89-145 bpm |
| Respiratory Rate | 25-39 breaths/min |
| Systolic Blood Pressure | 87-112 mmHg |
| Diastolic Blood Pressure | 44-74 mmHg |

Section: Preschooler to Young Child / 4-6 years / 15-18 kg

| Name | Description |
|-------------|--------------------|
| Heart Rate | 80-130 bpm |

| | |
|--------------------------|-------------------|
| Respiratory Rate | 20-30 breaths/min |
| Systolic Blood Pressure | 90-115 mmHg |
| Diastolic Blood Pressure | 50-80 mmHg |

Section: School Age / 6-8 years / 19-23 kg

| Name | Description |
|--------------------------|-------------------|
| Heart Rate | 75-120 bpm |
| Respiratory Rate | 18-25 breaths/min |
| Systolic Blood Pressure | 95-120 mmHg |
| Diastolic Blood Pressure | 55-80 mmHg |

Section: Older School Age / 8-10 years / 24-29 kg

| Name | Description |
|--------------------------|-------------------|
| Heart Rate | 70-110 bpm |
| Respiratory Rate | 16-22 breaths/min |
| Systolic Blood Pressure | 100-125 mmHg |
| Diastolic Blood Pressure | 60-85 mmhg |

Section: Adolescent / 10-12+ years / 30-36 kg

| Name | Description |
|--------------------------|-------------------|
| Heart Rate | 60-100 bpm |
| Respiratory Rate | 12-20 breaths/min |
| Systolic Blood Pressure | 110-131 mmHg |
| Diastolic Blood Pressure | 64-83 mmHg |

Section: Adult / 15+ years

| Name | Description |
|--------------------------|-------------------|
| Heart Rate | 60-100 bpm |
| Respiratory Rate | 12-20 breaths/min |
| Systolic Blood Pressure | 110-130 mmHg |
| Diastolic Blood Pressure | 60-85 mmHg |

Reference

Pediatric Airway Size**Section: Neonate / 0-28 days / 3-5 kg**

| Name | Description |
|--------------|--------------------|
| ET Tube | 3.0 Cuffed |
| iGel | Size 1 |
| Laryngoscope | 0-1 |
| Tube Depth | 10 cm |

Section: Infant / 1-6 months / 6-7 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 3.0 Cuffed |
| iGel | Size 1.5 |
| Laryngoscope | 0-1 |
| Tube Depth | 12 cm |

Section: Infant / 6-12 months / 8-9 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 4.0 Cuffed |
| iGel | 1.5 |
| Laryngoscope | 1 |
| Tube Depth | 13 cm |

Section: Toddler / 1-2 years / 10-11 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 4.0 Cuffed |
| iGel | Size 2 |
| Laryngoscope | 1 |
| Tube Depth | 13 cm |

Section: Toddler to Preschooler / 2-4 years / 12-14 kg

| Name | Description |
|--------------|--------------------|
| ET Tube | 4.0 Cuffed |
| iGel | Size 2 |
| Laryngoscope | 2 |
| Tube Depth | 14 cm |

Section: Preschooler to Young Child / 4-6 years / 15-18 kg

| Name | Description |
|-------------|--------------------|
| ET Tube | 5.0 Cuffed |

| | |
|--------------|--------|
| iGel | Size 2 |
| Laryngoscope | 2 |
| Tube Depth | 15 cm |

Section: School Age / 6-8 years / 19-23 kg

| Name | Description |
|--------------|-------------|
| ET Tube | 5.0 Cuffed |
| iGel | Size 2 |
| Laryngoscope | 2 |
| Tube Depth | 17 cm |

Section: Older School Age / 8-10 years / 24-29 kg

| Name | Description |
|--------------|-------------|
| ET Tube | 6.0 Cuffed |
| iGel | Size 2.5 |
| Laryngoscope | 3 |
| Tube Depth | 20 cm |

Section: Adolescent / 10-12+ years / 30-36 kg

| Name | Description |
|--------------|-------------|
| ET Tube | 6.0 Cuffed |
| iGel | Size 2.5 |
| Laryngoscope | 3 |
| Tube Depth | 21 cm |

Section: Adult / 15+ years

| Name | Description |
|--------------|-------------|
| ET Tube | 7.0 Cuffed |
| iGel | Size 3 |
| Laryngoscope | 3 |
| Tube Depth | 28 cm |