AMR KANSAS CITY

MEDICAL PROTOCOLS

Interfacility Transport & 911 Emergency Response

EFFECTIVE 2026

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Authorized under Kansas Board of Emergency Medical Services

TABLE OF CONTENTS

Click any entry to navigate directly to that section. Page numbers reflect the final assembled document.

SECTION VII — SPECIALTY & ACCOMPANIED CRITICAL CARE TRANSPORTS

APPENDICES

SECTION VIII — 911 MUTUAL AID PROTOCOLS

SECTION IX — OPERATIONAL POLICIES

UNIVERSAL GUIDELINES

AUTHORIZATION OF PROTOCOLS

These protocols constitute the standing medical orders for AMR Kansas City EMS providers. They represent the authorized clinical framework for interfacility transport operations in the Kansas City service area and are issued under the authority of the Medical Director.

Responsibilities of key personnel under these protocols:

1. The Medical Director authorizes standing orders for EMT, AEMT, and Paramedic providers; approves all therapeutics, equipment, and supplies used in patient care; provides indirect medical oversight; establishes transport destination criteria; and sets practice parameters for interfacility transport medicine.
2. Clinical Educators and Field Supervisors ensure providers are prepared to function competently under these protocols through education and quality assurance, and provide feedback on clinical trends to keep protocols current.
3. EMS Providers are responsible for knowing their authorized scope of practice, functioning within credentialed limits, and escalating to Direct Medical Oversight when clinical situations exceed standing order authority.

> *Standing orders may be implemented when clinically indicated, prior to contact with Direct Medical Oversight. When an acute medication shortage occurs, the Medical Director may temporarily authorize an appropriate substitute until resolution is achieved.*

SCOPE OF PRACTICE

Each EMS provider is responsible for knowing their authorized patient care activities and for ensuring they do not exceed their local scope of practice as designated by their credentialing level. AMR Kansas City operates three credentialing tiers:

EMT	AEMT	PM
Emergency Medical Technician	Advanced EMT	Paramedic

✓ = *Authorized* — = *Not Authorized at this credential level*

AIRWAY AND VENTILATION	EMT	AEMT	PM
Chin Lift / Jaw Thrust	✓	✓	✓
Nasopharyngeal Airway (NPA)	✓	✓	✓
Oropharyngeal Airway (OPA)	✓	✓	✓
Suction — Upper Airway	✓	✓	✓

AIRWAY AND VENTILATION	EMT	AEMT	PM
Suction — Trachea / Stoma (Deep Suctioning)	—	✓	✓
Nasal Cannula	✓	✓	✓
Non-Rebreather Mask	✓	✓	✓
Bag-Valve-Mask (BVM) Ventilation	✓	✓	✓
BVM with PEEP Valve	✓	✓	✓
CPAP (Flow-Safe II)	✓	✓	✓
Supraglottic Airway (SGA / iGel)	✓	✓	✓
ETCO2 Monitoring	✓	✓	✓
Pulse Oximetry	✓	✓	✓
Orotracheal Intubation	—	—	✓
Ventilator Management (LTV 1200)	—	—	✓
Cricothyrotomy (Surgical)	—	—	✓
Needle Decompression — Chest	—	—	✓

Suction — Trachea / Stoma (Deep Suctioning): This row refers specifically to deep tracheal and deep stoma suctioning, defined as passage of a suction catheter beyond the stoma or glottis into the lower airway. This technique is reserved for AEMT and Paramedic providers due to the risk of hypoxia, bronchospasm, and airway trauma. EMTs are authorized to perform oropharyngeal (upper airway) suctioning and surface-level stoma suctioning as part of routine airway management. This restriction is consistent with Medical Director standing orders and the advanced airway management scope defined under KSA 65-6120(b).

CIRCULATION AND CARDIAC	EMT	AEMT	PM
CPR	✓	✓	✓
Mechanical Compression Device	✓	✓	✓
AED	✓	✓	✓
Manual Defibrillation	—	✓	✓
ECG — Limb Lead Acquisition	✓	✓	✓
ECG — 12-Lead Acquisition	✓	✓	✓
ECG — Limb Lead Interpretation	—	✓	✓
ECG — 12-Lead Interpretation	—	✓	✓
Transcutaneous Pacing	—	—	✓

CIRCULATION AND CARDIAC	EMT	AEMT	PM
Synchronized Cardioversion	—	—	✓
Arterial Line Monitoring (only)	—	—	✓
LVAD Monitoring (passive)	✓	✓	✓

VASCULAR ACCESS	EMT	AEMT	PM
Peripheral IV	—	✓	✓
Intraosseous (IO) — EZ-IO	—	✓	✓
External Jugular IV	—	—	✓
Pre-existing Central Line — Access	—	—	✓
Pre-existing Central Line — Flush	—	—	✓
Dialysis AV Graft / Fistula (last resort only)	—	—	✓
Infusion Pump Monitoring (hospital-supplied)	✓	✓	✓
IV Fluid Administration — Isotonic	✓	✓	✓
IV Medication Administration — Push	—	✓	✓
IV Medication Administration — Infusion	—	—	✓
IO Medication Administration	—	✓	✓
Vasopressor Titration	—	—	✓

MEDICATION ADMINISTRATION ROUTES	EMT	AEMT	PM
Oral (PO)	✓	✓	✓
Sublingual (SL)	✓	✓	✓
Inhalation / Nebulized	✓	✓	✓
Intramuscular (IM)	✓	✓	✓
Intranasal (IN)	✓	✓	✓
Intravenous (IV) — Push	—	✓	✓
Intravenous (IV) — Infusion	—	—	✓
Intraosseous (IO)	—	✓	✓
Topical / Dermal (Prescription Transdermal Medications)	—	—	✓

MEDICATION ADMINISTRATION ROUTES	EMT	AEMT	PM

Topical / Dermal — Scope Clarification: The Paramedic-only designation for this row applies exclusively to prescription transdermal medications (e.g., nitroglycerin patches, fentanyl patches, clonidine patches) encountered during interfacility transport. These agents require Paramedic-level assessment and medication management authority. This row does not restrict EMT or AEMT use of topical wound care agents (antiseptics, hemostatic gauze, wound dressings), which remain within EMT scope under hemorrhage control and wound care protocols as standard BLS interventions.

MONITORING AND ASSESSMENT	EMT	AEMT	PM
Blood Glucose Monitoring	✓	✓	✓
12-Lead ECG Acquisition	✓	✓	✓
Cardiac Rhythm Monitoring	✓	✓	✓
Capnography (ETCO2)	✓	✓	✓
Cincinnati Stroke Screen	✓	✓	✓
Phlebotomy	—	✓	✓
Chest Tube Monitoring (passive)	—	✓	✓
Infusion Dual Verification	✓	✓	✓

Chest Tube Monitoring — Crew Staffing Requirement: Passive chest tube monitoring is reserved for AEMT and Paramedic providers per Medical Director standing order, reflecting the clinical complexity and risk of unrecognized system failure in the interfacility transport environment. Any transport involving a patient with an active chest tube drainage system requires a minimum crew level of AEMT. EMT-only crews are not authorized to accept or transport patients with an in-place chest tube unless accompanied by an AEMT, Paramedic, or qualified clinical escort. If crew configuration does not meet this standard, contact the sending facility and Direct Medical Oversight prior to transport acceptance. See Procedure V-17B for full chest tube monitoring protocol.

PROCEDURAL AND OTHER	EMT	AEMT	PM
Physical / XD Four-Point Restraints	✓	✓	✓
Behavioral Sedation (per protocol)	—	—	✓
Assisted Childbirth	✓	✓	✓
Wound Irrigation	✓	✓	✓
Hemorrhage Control — Direct Pressure	✓	✓	✓
Tourniquet Application	✓	✓	✓
Extremity Splinting	✓	✓	✓

PROCEDURAL AND OTHER	EMT	AEMT	PM
Spinal Motion Restriction	✓	✓	✓

AEMT providers hold an intermediate scope that includes peripheral IV access, IO access, IV/IO medication push, manual defibrillation, and ECG limb lead interpretation. AEMTs may not initiate IV infusions, access central lines, manage ventilators independently, or administer sedation. When working alongside a Paramedic, the AEMT functions within their own credentialed scope and does not inherit Paramedic authority. | EMT — IV Fluid Administration (Isotonic): The ✓ for EMTs under "IV Fluid Administration — Isotonic" reflects authorization to administer isotonic crystalloid fluids through a pre-existing access site only (KSA 65-6121; KBEMS Approved Medication List). EMTs are not authorized to initiate peripheral IV or IO access. If no vascular access is in place and IV fluids are clinically indicated, the EMT must request AEMT or Paramedic assistance or contact Direct Medical Oversight.

MEDICAL DIRECTOR AUTHORIZATION — 12-Lead ECG Interpretation (AEMT): AEMTs are authorized under AMR Kansas City medical direction to interpret 12-lead ECGs for the purpose of identifying STEMI and initiating early STEMI-related interventions within their credentialed formulary. This authorization is issued by Medical Director Dr. Ameet Deshmukh pursuant to the medical director's authority to establish practice parameters under KSA 65-6144 and KAR 109, and is specific to AMR Kansas City operations. It does not extend AEMT medication scope beyond what is authorized at the state level. Thrombolytic therapy (e.g., tPA) and anticoagulation infusions (e.g., heparin) encountered during interfacility STEMI transfers are hospital-supplied infusions and remain outside AEMT scope. Management of those agents during transport is Paramedic only. AEMTs should not interpret 12-leads beyond STEMI recognition without Paramedic or DMO consultation. Documentation of this medical director authorization is maintained on file with AMR Kansas City Quality Assurance and has been communicated to the Kansas Board of Emergency Medical Services.

INTRODUCTION TO PATIENT GUIDELINES

These guidelines provide AMR Kansas City EMS providers with a clear, evidence-based framework for managing clinical presentations encountered in the interfacility transport environment. All providers are expected to exercise clinical judgment and apply these protocols in the context of the individual patient encounter.

Treatment and interventions are not necessarily sequential. They are intended to be considered in light of the clinical environment and the patient's presentation. Each patient care event is unique.

HOW TO USE THIS DOCUMENT

- UNIVERSAL CARE GUIDELINES are included to reduce redundancy across protocols. They apply to every patient encounter unless a specific protocol states otherwise.
- Unless explicitly stated, all guidelines apply to both adult and pediatric patients. Age, size, and comorbidities are considered throughout where clinically relevant.
- Scope tier labels (EMT, AEMT, PM) appear in each protocol to identify which interventions are authorized at each level. AEMT-specific interventions are highlighted in blue throughout the document.
- Generic medication names are used throughout. Full drug information is found in the Ambulance Medication Formulary section.

- Appendices contain standardized reference material to which multiple protocols refer.

TARGET AUDIENCE

Licensed Kansas EMS providers credentialed by the Medical Director to provide interfacility transport care for AMR Kansas City. Credential levels: Emergency Medical Technician (EMT), Advanced Emergency Medical Technician (AEMT), and Paramedic (PM).

VASCULAR ACCESS

PATIENT CARE GOALS

1. Successfully achieve vascular access when clinically indicated.
2. Select the safest, most appropriate method based on patient condition and provider scope.

KEY CONSIDERATIONS

Use clinical judgment when selecting access method, determining attempt limits, and weighing benefits against risks such as patient discomfort and transport delay.

Acceptable methods in order of preference:

Method	Notes
Peripheral IV	First-line for most patients. AEMT and Paramedic authorized. Includes antecubital, forearm, and hand sites. External jugular (EJ) access is Paramedic only.
Intraosseous (IO) — EZ-IO	Indicated for hemodynamically unstable patients or cardiac arrest when peripheral IV is not rapidly achievable. AEMT and Paramedic authorized. Acceptable sites: proximal humerus, proximal tibia, distal tibia (medial malleolus).
Pre-existing Central Line Access	Paramedic only. For unstable or arrest patients with externally accessible ports (tunneled catheters, Hickman, Groshong, Broviac, PICC lines). Withdraw 5 mL blood from any port prior to use to clear heparin lock. Confirm patency before administration.
Dialysis AV Graft / Fistula	LAST RESORT ONLY — Paramedic only. After failed IV and IO attempts in an unstable or cardiac arrest patient. Be prepared for hemorrhage. A pressure bag may be required for fluid administration. Notify receiving facility immediately.

OBTAINING BLOOD SAMPLES

Blood samples for laboratory analysis may be obtained for patients with time-critical diagnoses as determined by the receiving hospital, in accordance with Medical Director-approved procedures. AEMT and Paramedic providers are authorized for phlebotomy.

Blood samples may be drawn at the request of law enforcement only if all of the following conditions are met:

- Patient care and patient condition will not be compromised.
- The risk to provider and patient is minimal.
- Obtaining the sample does not inappropriately delay transport or patient care.
- Law enforcement presents appropriate documentation such as a judicial order.

MEDICATION ADMINISTRATION AND VERIFICATION

PATIENT CARE GOALS

1. Ensure every patient receives the correct, unexpired medication via the correct route at the right dose for the right indication.
2. Prevent medication errors through systematic verification before every administration.

> *The Medication Cross-Check MUST be performed PRIOR to administration of ANY medication: correct patient — correct medication — correct dose — correct route — correct time.*

PRINCIPLES OF SAFE MEDICATION ADMINISTRATION

1. No medication shall be administered to a patient with a known hypersensitivity to that medication or drug class.
2. Medications prepared for administration must not be mixed in the same syringe with any other medication.
3. Medication infusions initiated by a sending hospital may be continued in transport. Titration outside the listed formulary requires written orders from the sending facility and the attending RN or physician.
4. Any medication approved for IV administration may also be administered via the IO route when IV access is unavailable.
5. IM medications should be administered in the lateral thigh. The deltoid is acceptable when the lateral thigh is inaccessible or not feasible.
6. A maximum volume of 1 mL total (ideally no more than 0.5 mL per nostril) may be administered via the intranasal (IN) route.
7. NEVER administer the contents of an unlabeled syringe, or any syringe without first visualizing the vial from which it was drawn.
8. Draw up only the amount of medication intended for that specific administration when possible. Discard unused portions per protocol.

> *AEMT providers are authorized to administer medications via IV push and IO routes within their formulary. AEMTs may not initiate or titrate IV infusions. When an AEMT is the primary provider, contact the Paramedic or Direct Medical Oversight before administering any medication outside standing order authority.*

PEDIATRIC DOSING

For pediatric patients measured with a length-based tape, administer medications using the corresponding color-coded Broselow Tape reference. For pediatric patients whose height exceeds the length-based system, use adult dosing. For patients below the shortest length on the tape, use the minimum dose indicated. Reference the Pediatric Drug Dosing Quick Reference table in Section VIII-G (preceding Protocol VIII-G1).

DIRECT MEDICAL OVERSIGHT

Direct Medical Oversight (DMO) refers to real-time physician consultation with EMS providers during an active patient encounter. Providers should contact DMO when the clinical situation exceeds standing order authority, when a protocol specifically requires consultation, or when the provider has clinical uncertainty about the appropriate course of action.

> *When in doubt, contact Direct Medical Oversight. Early consultation improves patient outcomes and provides medicolegal protection for the provider.*

PATIENT AND PROVIDER SAFETY DURING TRANSPORT

LIGHTS AND SIRENS

Routine use of emergency lights and sirens is not warranted in interfacility transport and unnecessarily jeopardizes the patient, EMS providers, and the public. When lights and sirens are used, every effort should be made to maintain speeds appropriate to vehicle and road conditions. IFT calls are not emergencies by default. Escalation to lights-and-sirens transport requires clinical justification and should be communicated to the receiving facility.

RESTRAINTS DURING TRANSPORT

- Every patient must be appropriately restrained during transport using the ambulance cot restraint system.
- Pediatric patients, including newly born infants, must be secured using an appropriate pediatric restraint device.
- EMS providers must be appropriately restrained at all times during transport. Standing in the patient compartment while the vehicle is in motion is prohibited except when clinical necessity requires it.
- Physical and chemical restraints applied for behavioral safety must be documented with clinical justification, monitoring intervals, and response. See Behavioral Sedation Procedure.

HIGH-RISK TRANSPORT IDENTIFICATION

The following transport types are designated high-risk and require pre-departure verification per the High-Risk Transport Checklist (Appendix B):

- Intubated or ventilated patients
- Vasopressor-dependent patients
- Active sedation infusions
- Blood product administration

- Chest tube patients
- Psychiatric patients requiring restraint
- Transports exceeding 60 minutes in duration
- Mechanical circulatory support (LVAD, IABP, Impella, ECMO)

LONG-DISTANCE TRANSPORT RISK MITIGATION

- For transports exceeding 60 minutes, oxygen supply must equal at least twice the calculated requirement for the anticipated transport duration.
- Infusion pump and ventilator battery levels must be verified before departure. Spare batteries must be available for transports exceeding 90 minutes.
- For transports exceeding 3 hours, supervisor notification is required prior to departure.

ABUSE, NEGLECT, AND HUMAN TRAFFICKING

EMS providers are mandatory reporters in the state of Kansas. Any reasonable suspicion of abuse, neglect, or human trafficking involving a child or vulnerable adult must be reported to the appropriate authorities in accordance with Kansas law and AMR policy.

> *Document all objective findings thoroughly and accurately. Avoid leading questions. Your PCR documentation may be the most critical piece of evidence in a subsequent investigation.*

INDICATORS OF ABUSE OR NEGLECT

- Injuries inconsistent with the reported mechanism of injury.
- Multiple injuries in various stages of healing.
- Unexplained delays in seeking medical care.
- Caregiver unwilling to allow private conversation with the patient.
- Patient appears fearful, withdrawn, or avoids eye contact with caregiver.
- Patient appears malnourished, unbathed, or in an unsanitary living environment.

INDICATORS OF HUMAN TRAFFICKING

- Patient does not speak on their own behalf; another person controls all communication.
- Patient appears disoriented regarding current location, date, or how they arrived.
- Evidence of physical abuse, branding, or tattooing without consent.
- Patient lacks control of their own identification documents.
- Inconsistent or scripted-sounding history.
- Patient expresses fear of law enforcement or of being returned to a specific location.

If safe to do so, attempt to speak with the patient privately away from the accompanying person. Document findings objectively using the patient's own words where possible. Notify law enforcement and follow AMR reporting protocols.

> *You are not required to confirm trafficking or abuse to make a report. Reasonable suspicion is the threshold. Report and document. Let investigators determine the facts.*

SECTION II — IFT CLINICAL PROTOCOLS

Each protocol is organized with consistent structure: Clinical Overview, Common Active Therapies at Transfer, Standing Orders (tiered by EMT / AEMT / PM), Transport Monitoring Priorities, Anticipated Deterioration, Diversion Triggers, and Documentation Priorities. Standing orders represent the minimum expected interventions for each credential level. Clinical judgment applies throughout.

A. CARDIAC CONDITIONS

II-1. BRADYCARDIA

CLINICAL OVERVIEW

Bradycardia is defined as a heart rate insufficient to maintain adequate cardiac output. In the IFT setting, patients are often transferring after initial stabilization but remain at risk for recurrent hemodynamic compromise.

Transfer is required when pacemaker capability, cardiology consultation, or advanced hemodynamic management is unavailable at the sending facility.

Patients may have received atropine, IV fluids, transcutaneous pacing, vasopressors, or temporary transvenous pacemaker placement prior to transfer.

COMMON ACTIVE THERAPIES AT TRANSFER

Transcutaneous pacing, norepinephrine infusion, IV fluids, continuous ECG monitoring.

STANDING ORDERS

EMT	AEMT	PM
1. Apply cardiac monitor and obtain rhythm strip. **2.** Establish and maintain oxygen therapy; target SpO2 ≥94%. **3.** Maintain IV access patency if already established. **4.** Monitor blood pressure every 5 minutes. **5.** Notify Paramedic immediately of any hemodynamic change or pacing capture loss.	**1.** All EMT steps. **2.** Establish peripheral IV if not present. **3.** Obtain 12-lead ECG; identify rhythm and report to Paramedic. **4.** Administer normal saline 250 mL IV bolus if SBP <90 mmHg and no signs of pulmonary edema. **5.** Contact DMO for additional orders if patient deteriorates prior to Paramedic intervention.	**1.** All EMT and AEMT steps. **2.** Atropine 1 mg IV every 3–5 min (max 3 mg) for symptomatic bradycardia without pacing. **3.** Initiate or confirm transcutaneous pacing if atropine fails or patient is unstable. **4.** Titrate norepinephrine to maintain MAP ≥65 mmHg if vasopressor support is present. **5.** Prepare for transvenous pacing escalation if transcutaneous pacing fails to capture. **6.** Contact DMO for refractory cases.

TRANSPORT MONITORING PRIORITIES

- Continuous rhythm monitoring; document pacing settings and capture confirmation.
- MAP ≥65 mmHg adults; age-appropriate systolic BP per PALS for pediatrics.
- Mental status reassessment every 5 minutes.
- Pacing capture and threshold confirmation every 15 minutes.

ANTICIPATED DETERIORATION

- Progression to high-grade AV block or complete heart block.
- Loss of pacing capture with hemodynamic instability.
- Cardiogenic shock.
- Ventricular dysrhythmia.

DIVERSION TRIGGERS

> *IMMEDIATE DIVERSION REQUIRED: Loss of pulse, failure of pacing capture with instability unresponsive to intervention, refractory hypotension, or sustained ventricular dysrhythmia.*

DOCUMENTATION PRIORITIES

- Rhythm interpretation and strips at departure and at any change.
- Pacing settings: rate, output, capture status.
- Hemodynamic trends and response to therapy.
- Medications administered with doses and times.

II-2. SUPRAVENTRICULAR TACHYCARDIA (SVT)

CLINICAL OVERVIEW

SVT represents a rapid supraventricular rhythm that may impair ventricular filling and reduce cardiac output. In the IFT setting, patients may have been partially rate-controlled or recently cardioverted.

Transfer required for refractory SVT, electrophysiology consultation, or ongoing rate management beyond sending facility capability.

Patients may have received vagal maneuvers, adenosine, rate-control medications, or synchronized cardioversion prior to transfer.

COMMON ACTIVE THERAPIES AT TRANSFER

Cardiac monitoring, IV access maintenance, antiarrhythmic infusion if initiated, supplemental oxygen as indicated.

STANDING ORDERS

EMT	AEMT	PM
1. Apply cardiac monitor; obtain and document rhythm strip. **2.** Apply oxygen; target SpO2 ≥94%. **3.** Monitor blood pressure every 5 minutes. **4.** Maintain IV access patency. **5.** Notify Paramedic immediately if patient becomes hemodynamically unstable.	**1.** All EMT steps. **2.** Establish peripheral IV if not present. **3.** Obtain 12-lead ECG; identify rhythm and report findings to Paramedic. **4.** Administer normal saline 250 mL IV bolus if hypotension develops without pulmonary edema signs.	**1.** All EMT and AEMT steps. **2.** Adenosine 6 mg rapid IV push for stable narrow-complex SVT; may repeat at 12 mg x1 if no conversion. **3.** Confirm IV placement and flush immediately before and after adenosine. **4.** For unstable SVT (hypotension, altered mental status, ischemic chest pain): synchronized cardioversion at 50–100 J. **5.** Contact DMO for persistent or recurrent SVT.

TRANSPORT MONITORING PRIORITIES

- Continuous ECG; document rhythm before and after any intervention.
- Blood pressure reassessment after each medication dose.
- Chest pain and mental status monitoring throughout transport.
- Monitor for recurrence or degeneration to atrial fibrillation.

ANTICIPATED DETERIORATION

- Recurrence of SVT after initial conversion.
- Transition to atrial fibrillation with rapid ventricular response.
- Hemodynamic instability.

DIVERSION TRIGGERS

> *IMMEDIATE DIVERSION REQUIRED: Hemodynamic instability unresponsive to intervention, altered mental status, ischemic chest pain, or rhythm degeneration.*

DOCUMENTATION PRIORITIES

- Rhythm strips at departure, after each intervention, and at arrival.
- Medications administered with dose, route, and response.
- Stability trend and vital sign intervals.

II-3. ATRIAL FIBRILLATION WITH RAPID VENTRICULAR RESPONSE

CLINICAL OVERVIEW

A-fib with RVR is characterized by an irregularly irregular rhythm with ventricular rate sufficient to impair cardiac output. Loss of atrial kick combined with rapid rate reduces preload and stroke volume.

Transfer required for refractory rate control, cardiology evaluation, or anticoagulation management unavailable at the sending facility.

Patients may have received rate-control agents (diltiazem, beta-blocker), anticoagulation initiation, or synchronized cardioversion prior to transfer.

COMMON ACTIVE THERAPIES AT TRANSFER

Cardiac monitoring, IV rate-control infusion if initiated, anticoagulation infusion, oxygen as indicated.

STANDING ORDERS

EMT	AEMT	PM
1. Apply cardiac monitor; document rhythm strip. **2.** Apply oxygen; target SpO2 ≥94%. **3.** Monitor blood pressure every 5 minutes. **4.** Maintain IV access and infusion continuity. **5.** Notify Paramedic of any rate change or hemodynamic deterioration.	**1.** All EMT steps. **2.** Establish peripheral IV if not present. **3.** Obtain 12-lead ECG; identify and report rhythm to Paramedic. **4.** Administer normal saline 250 mL IV bolus if hypotension present without pulmonary edema.	**1.** All EMT and AEMT steps. **2.** Continue and monitor rate-control infusion per sending facility orders. **3.** For hemodynamically unstable A-fib with RVR: synchronized cardioversion at 200 J biphasic (AHA 2025; escalate if unsuccessful). **4.** Do not initiate new rate-control agents if patient is hypotensive without DMO consultation. **5.** Maintain anticoagulation infusion per sending orders; do not adjust rate without DMO order. **6.** Contact DMO for recurrence or hemodynamic instability.

TRANSPORT MONITORING PRIORITIES

- Continuous ECG; document ventricular rate trend.
- Blood pressure tolerance to rate-control agents every 5 minutes.
- Mental status and chest pain reassessment.
- Infusion verification and dual-check at departure.

ANTICIPATED DETERIORATION

- Hypotension from aggressive rate control.
- Recurrence of RVR after initial control.
- Ischemic symptoms or ST changes.

DIVERSION TRIGGERS

> *IMMEDIATE DIVERSION REQUIRED: Hemodynamic instability unresponsive to therapy, acute ischemic chest pain, or altered mental status.*

DOCUMENTATION PRIORITIES

- Ventricular rate trend throughout transport.
- Medications and infusions administered with rates and times.
- Response to therapy and vital sign intervals.

II-4. WIDE COMPLEX TACHYCARDIA

CLINICAL OVERVIEW

Wide complex tachycardia should be presumed ventricular tachycardia in the adult population unless definitively proven otherwise. VT may compromise cardiac output and deteriorate into ventricular fibrillation.

Transfer required for electrophysiology evaluation, antiarrhythmic management, or advanced cardiac care unavailable at the sending facility.

Antiarrhythmic therapy may have been initiated (amiodarone or lidocaine); synchronized cardioversion may have been performed if unstable.

COMMON ACTIVE THERAPIES AT TRANSFER

Continuous ECG monitoring, antiarrhythmic infusion if initiated, IV access maintenance.

STANDING ORDERS

EMT	AEMT	PM
1. Apply cardiac monitor; document rhythm strip. **2.** Apply oxygen; target SpO2 ≥94%. **3.** Maintain IV access and infusion continuity. **4.** Monitor blood pressure every 5 minutes. **5.** Notify Paramedic immediately of any deterioration or pulse loss.	**1.** All EMT steps. **2.** Establish peripheral IV if not present. **3.** Obtain 12-lead ECG; document and report to Paramedic. **4.** If patient loses pulse: initiate CPR immediately. **5.** Perform manual defibrillation if pulseless VT/VF and Paramedic is unavailable or incapacitated.	**1.** All EMT and AEMT steps. **2.** Amiodarone 150 mg IV over 10 min for stable VT; or lidocaine 1–1.5 mg/kg IV bolus. **3.** For pulseless VT/VF: defibrillate at 200 J biphasic; initiate ACLS sequence. **4.** For unstable VT with pulse: synchronized cardioversion at 100 J. **5.** Continue antiarrhythmic infusion per sending orders if already initiated. **6.** Contact DMO for refractory or recurrent VT.

> *Treat wide complex tachycardia as ventricular tachycardia until proven otherwise. Do not delay treatment awaiting rhythm confirmation.*

TRANSPORT MONITORING PRIORITIES

- Continuous rhythm monitoring; document any morphology changes.
- Blood pressure and mental status every 5 minutes.
- Monitor for pulse loss with every rhythm check.
- Antiarrhythmic infusion rate verification.

ANTICIPATED DETERIORATION

- Progression to unstable VT or pulseless VT.
- Ventricular fibrillation.
- Cardiogenic shock.

DIVERSION TRIGGERS

> *IMMEDIATE DIVERSION REQUIRED: Sustained VT with instability, loss of pulse, ventricular fibrillation, or refractory hypotension.*

DOCUMENTATION PRIORITIES

- Rhythm strips at departure, after each intervention, and at arrival.
- Medication doses, rates, and response.
- Any defibrillation or cardioversion attempts with joules delivered.

II-5. ACUTE CORONARY SYNDROME (NSTEMI / STEMI)

CLINICAL OVERVIEW

ACS encompasses NSTEMI and STEMI. NSTEMI involves partial coronary occlusion with myocardial injury without ST elevation. STEMI represents complete coronary occlusion with transmural ischemia requiring urgent reperfusion. Both carry significant risk for deterioration during transport.

Transfer required for PCI capability, cardiology evaluation, catheterization laboratory access, or post-intervention ICU care unavailable at the sending facility.

Aspirin administered, anticoagulation (heparin) initiated, nitroglycerin administered, antiarrhythmic therapy may be in place. For STEMI, thrombolytics may have been administered if PCI was unavailable.

COMMON ACTIVE THERAPIES AT TRANSFER

Heparin infusion, nitroglycerin infusion (Paramedic managed), oxygen therapy, amiodarone infusion if indicated.

STANDING ORDERS

EMT	AEMT	PM
1. Apply cardiac monitor; obtain and document rhythm strip.	**1.** All EMT steps.	**1.** All EMT and AEMT steps.

EMT	AEMT	PM
2. Apply oxygen only if SpO2 <94%; avoid hyperoxia. **3.** Maintain IV access and infusion continuity; do not adjust infusion rates. **4.** Administer aspirin 324 mg PO chewed if not already given and no contraindication. **5.** Monitor blood pressure every 5 minutes; notify Paramedic of any SBP <100 mmHg. **6.** Keep patient calm and minimize exertion.	**2.** Establish peripheral IV if not present. **3.** Obtain 12-lead ECG; identify STEMI pattern and notify Paramedic and receiving facility immediately. **4.** Repeat 12-lead ECG if chest pain changes or recurs. **5.** Administer normal saline 250 mL IV bolus if hypotension present and no pulmonary edema. **6.** Note: heparin and nitroglycerin infusions are hospital-supplied and Paramedic-managed. AEMT does not adjust these rates.	**2.** Nitroglycerin 0.4 mg SL every 5 min x3 if SBP ≥100 mmHg and chest pain present; hold if RV infarct suspected. **3.** Continue and monitor heparin infusion per sending orders; verify concentration and rate. **4.** For recurrent ischemia or ST elevation: notify receiving facility and update ETA. **5.** For ventricular dysrhythmia: treat per Wide Complex Tachycardia protocol. **6.** For cardiogenic shock: initiate norepinephrine per Cardiogenic Shock protocol. **7.** Contact DMO for any significant change in clinical status.

AEMT 12-lead interpretation is authorized for STEMI identification only. Thrombolytic (tPA) and heparin infusions are Paramedic-managed hospital-supplied drips and remain outside AEMT medication scope regardless of STEMI status.

TRANSPORT MONITORING PRIORITIES

- Continuous ECG with ST-segment awareness; document any ST changes.
- Blood pressure every 5 minutes; MAP ≥65 mmHg target.
- Chest pain reassessment using 0–10 scale every 5–10 minutes.
- Mental status and peripheral perfusion.
- Heparin infusion verification and dual-check.

ANTICIPATED DETERIORATION

- Ventricular dysrhythmias.
- Cardiogenic shock.
- Recurrent or escalating ischemia.
- Pulmonary edema.

DIVERSION TRIGGERS

IMMEDIATE DIVERSION REQUIRED: Sustained ventricular dysrhythmia, refractory hypotension, acute respiratory failure, or cardiac arrest.

DOCUMENTATION PRIORITIES

- Time-sensitive transfer details including aspirin time and any thrombolytic administration.

- 12-lead ECG findings and any changes during transport.
- Infusion rates at departure and any changes.
- Hemodynamic trends and chest pain response.

II-6. ACUTE PULMONARY EDEMA / DECOMPENSATED HEART FAILURE

CLINICAL OVERVIEW

Acute pulmonary edema results from elevated left ventricular filling pressures causing alveolar fluid accumulation and hypoxia. Patients may be partially stabilized but remain at risk for rapid respiratory deterioration during transport.

Transfer required for ICU-level monitoring, advanced cardiac management, or mechanical ventilatory support unavailable at the sending facility.

Non-invasive ventilation initiated, diuretics administered, vasodilators started, oxygen therapy applied.

COMMON ACTIVE THERAPIES AT TRANSFER

Nitroglycerin infusion (Paramedic managed), CPAP/BiPAP via Flow-Safe II, oxygen therapy, recent diuretic administration.

STANDING ORDERS

EMT	AEMT	PM
1. Apply cardiac monitor; document rhythm strip. **2.** Apply oxygen; titrate to SpO2 ≥94%. **3.** Assist with CPAP setup and mask seal if in use. **4.** Position patient upright (head of stretcher elevated to 90 degrees). **5.** Monitor blood pressure every 5 minutes. **6.** Notify Paramedic immediately of worsening respiratory effort or SpO2 decline.	**1.** All EMT steps. **2.** Establish peripheral IV if not present. **3.** Initiate CPAP at 5–10 cmH2O if not already applied and patient is alert and cooperative. **4.** Do not administer fluid bolus in suspected pulmonary edema without Paramedic or DMO direction.	**1.** All EMT and AEMT steps. **2.** Nitroglycerin 0.4 mg SL every 5 min if SBP ≥100 mmHg and no RV infarct suspected. **3.** Titrate nitroglycerin infusion per sending orders to maintain SBP ≥100 mmHg. **4.** For impending respiratory failure: prepare for intubation. **5.** Contact DMO for escalation beyond standing order authority.

TRANSPORT MONITORING PRIORITIES

- Respiratory rate and work of breathing continuously.
- SpO2 trend; target ≥94%.
- Blood pressure every 5 minutes; MAP ≥65 mmHg.
- CPAP mask seal and patient tolerance.

- Mental status as a marker of oxygenation adequacy.

ANTICIPATED DETERIORATION

- Respiratory fatigue leading to failure.
- Hypotension from vasodilator therapy.
- Arrhythmia.
- Requirement for intubation.

DIVERSION TRIGGERS

> *IMMEDIATE DIVERSION REQUIRED: Refractory hypoxia unresponsive to CPAP and oxygen, impending respiratory arrest, or severe hypotension.*

DOCUMENTATION PRIORITIES

- CPAP settings and patient tolerance.
- Oxygen requirement trend throughout transport.
- Hemodynamic response to vasodilator therapy.
- Respiratory rate and work of breathing at intervals.

II-7. CARDIOGENIC SHOCK

CLINICAL OVERVIEW

Cardiogenic shock represents pump failure resulting in inadequate cardiac output and systemic hypoperfusion. Patients are at high risk for cardiac arrest and multi-organ failure during transport.

Transfer required for advanced hemodynamic support, mechanical circulatory assistance, or catheterization capability unavailable at the sending facility.

Vasopressor or inotrope infusion initiated, airway may be secured, invasive monitoring may be present.

COMMON ACTIVE THERAPIES AT TRANSFER

Norepinephrine infusion, inotropic support (Paramedic managed), antiarrhythmics, mechanical support monitoring if present.

STANDING ORDERS

EMT	AEMT	PM
1. Apply cardiac monitor; document rhythm strip. **2.** Apply oxygen; target SpO2 ≥94%.	**1.** All EMT steps. **2.** Establish peripheral IV if not present.	**1.** All EMT and AEMT steps. **2.** Titrate norepinephrine infusion to maintain MAP ≥65 mmHg per sending orders.

EMT	AEMT	PM
3. Maintain IV access and all infusion continuity; do not interrupt vasopressors. **4.** Monitor blood pressure every 3–5 minutes. **5.** Notify Paramedic immediately of any SBP <80 mmHg, rhythm change, or mental status decline.	**3.** Obtain 12-lead ECG; identify and report rhythm. **4.** Do not administer fluid bolus in cardiogenic shock without Paramedic or DMO direction.	**3.** For cardiac arrest: initiate ACLS; continue vasopressor infusion. **4.** For ventricular dysrhythmia: treat per Wide Complex Tachycardia protocol. **5.** Minimize vasopressor interruptions during all patient movement. **6.** Contact DMO for escalating vasopressor requirements or additional therapy needs.

TRANSPORT MONITORING PRIORITIES

- Continuous ECG and perfusion assessment.
- Blood pressure every 3–5 minutes; MAP ≥65 mmHg target.
- Mental status as end-organ perfusion marker.
- Vasopressor infusion rate and access site every 15 minutes.
- Mechanical circulatory support device function if applicable.

ANTICIPATED DETERIORATION

- Escalating vasopressor requirement.
- Ventricular dysrhythmias.
- Pulmonary edema.
- Cardiac arrest.

DIVERSION TRIGGERS

> *IMMEDIATE DIVERSION REQUIRED: Refractory hypotension despite vasopressor titration, sustained dysrhythmia, device failure, or cardiac arrest.*

DOCUMENTATION PRIORITIES

- Vasopressor concentration, rate, and any titration.
- Hemodynamic trends at regular intervals.
- Response to therapy.
- Vascular access type and patency checks.

II-8. POST-CARDIAC ARREST SYNDROME

CLINICAL OVERVIEW

Patients with return of spontaneous circulation (ROSC) remain at high risk for recurrent arrest and multisystem instability. Post-arrest myocardial stunning and systemic inflammatory response significantly increase instability risk during transport.

Transfer required for ICU-level post-resuscitation care, targeted temperature management, or cardiac catheterization.

Airway secured, sedation initiated, vasopressors started, temperature management may be in progress.

COMMON ACTIVE THERAPIES AT TRANSFER

Sedation infusion (midazolam or ketamine for intubated adults only, Paramedic managed), norepinephrine infusion, antiarrhythmics, ventilator support.

STANDING ORDERS

EMT	AEMT	PM
1. Apply cardiac monitor; document rhythm strip. **2.** Maintain oxygen and ventilation; assist with BVM if ventilator requires transition. **3.** Maintain all IV access and infusion continuity; do not interrupt vasopressors or sedation. **4.** Monitor blood pressure every 3–5 minutes. **5.** Notify Paramedic immediately of any rhythm change, loss of pulse, or SpO2 decline.	**1.** All EMT steps. **2.** Establish peripheral IV if not present. **3.** Obtain 12-lead ECG; identify rhythm and report to Paramedic. **4.** If re-arrest occurs: initiate CPR immediately and notify Paramedic.	**1.** All EMT and AEMT steps. **2.** Confirm ventilator settings: tidal volume 6–8 mL/kg ideal body weight, PEEP 5 cmH2O, FiO2 titrated to SpO2 94–98%. **3.** Titrate norepinephrine to MAP ≥65 mmHg per sending orders. **4.** Maintain sedation infusion per sending orders; use ketamine infusion for intubated adult patients. **5.** For re-arrest: initiate ACLS; continue vasopressor; reassess reversible causes. **6.** Contact DMO for any significant instability or titration needs.

> *Avoid hyperoxia post-ROSC. Titrate FiO2 to SpO2 94–98%. Hyperoxia independently worsens neurologic outcomes after cardiac arrest.*

TRANSPORT MONITORING PRIORITIES

- Continuous ECG; ETCO2 if available.
- Blood pressure every 3–5 minutes; MAP ≥65 mmHg target.
- SpO2 and ventilator synchrony continuously.
- Neurologic reassessment: pupils, response to stimulus.
- Temperature management device function if active.

ANTICIPATED DETERIORATION

- Re-arrest.

- Refractory hypotension.
- Hypoxia despite ventilatory management.
- Ventricular dysrhythmia.

DIVERSION TRIGGERS

> *IMMEDIATE DIVERSION REQUIRED: Loss of pulse, sustained ventricular dysrhythmia, refractory hypotension, or inability to maintain oxygenation.*

DOCUMENTATION PRIORITIES

- Pre-transfer arrest details including rhythm, duration, and interventions.
- Airway status and ventilator settings at departure.
- Infusion verification and rates.
- Stability trend and neurologic status.

B. NEUROLOGIC CONDITIONS

II-9. ACUTE ISCHEMIC STROKE

CLINICAL OVERVIEW

Acute ischemic stroke results from interruption of cerebral blood flow leading to neurologic deficit. Arterial occlusion causes ischemic penumbra formation. Time-sensitive intervention may salvage viable brain tissue.

Transfer required for thrombectomy, thrombolytic therapy, or comprehensive stroke center management unavailable at the sending facility.

Neuroimaging completed. Blood pressure parameters established. Thrombolytics may have been administered or are under consideration.

COMMON ACTIVE THERAPIES AT TRANSFER

Blood pressure monitoring, IV access maintenance, oxygen therapy if indicated. tPA infusion if initiated is Paramedic-managed.

STANDING ORDERS

EMT	AEMT	PM
1. Apply cardiac monitor; document rhythm strip. **2.** Apply oxygen only if SpO2 <94%; avoid routine supplemental oxygen.	**1.** All EMT steps. **2.** Establish peripheral IV if not present.	**1.** All EMT and AEMT steps. **2.** Maintain blood pressure per sending physician parameters;

EMT	AEMT	PM
3. Maintain IV access and infusion continuity. **4.** Monitor blood pressure every 5 minutes; document trend. **5.** Notify Paramedic of any neurologic change, vomiting, or airway concern. **6.** Position head of stretcher at 0–30 degrees unless airway management requires otherwise.	**3.** Obtain 12-lead ECG; report findings to Paramedic. **4.** Check blood glucose; treat hypoglycemia if glucose <70 mg/dL with dextrose 10%. **5.** Note: tPA is a hospital-supplied drug and Paramedic-managed. AEMT does not adjust tPA infusion rates.	typically SBP ≤180/105 mmHg if tPA given. **3.** Monitor tPA infusion per sending orders; do not adjust without explicit order. **4.** For airway compromise: intubate; note that intubation should be clinically necessary before proceeding. **5.** Contact DMO or receiving stroke team for any neurologic deterioration or BP management questions.

> *Do not routinely lower blood pressure in ischemic stroke without specific sending physician orders. Permissive hypertension maintains penumbra perfusion.*

TRANSPORT MONITORING PRIORITIES

- Neurologic reassessment every 5 minutes: GCS, focal deficits, speech.
- Blood pressure trend per sending physician parameters.
- Airway protection vigilance; aspiration risk is high.
- Blood glucose level.

ANTICIPATED DETERIORATION

- Neurologic decline from edema or hemorrhagic conversion.
- Vomiting with aspiration risk.
- Airway compromise.
- Refractory hypotension.

DIVERSION TRIGGERS

> *IMMEDIATE DIVERSION REQUIRED: Airway compromise, rapid neurologic deterioration, or refractory hypotension.*

DOCUMENTATION PRIORITIES

- Baseline neurologic exam at departure.
- Time last known well if available.
- Blood pressure trend and management.
- Any change in neurologic deficits during transport with time documented.

II-10. NEUROLOGIC DETERIORATION (ICH / SAH / TBI / MENINGITIS)

CLINICAL OVERVIEW

This protocol covers IFT of patients with intracranial hemorrhage (ICH), subarachnoid hemorrhage (SAH), traumatic brain injury (TBI), and CNS infection (meningitis/encephalitis). While etiologies differ, core transport priorities are shared: prevent secondary brain injury from hypoxia, hypotension, and herniation.

Transfer required for neurosurgical capability, neurointerventional services, ICU-level monitoring, or specialty infectious disease management unavailable at the sending facility.

Neuroimaging completed. Airway may be secured. Blood pressure parameters defined. Anticoagulation reversal, steroids, antibiotics, or antiepileptics may be initiated.

COMMON ACTIVE THERAPIES AT TRANSFER

Antihypertensive infusion if ordered, sedation if intubated, antibiotic infusion (facility-initiated for meningitis), oxygen therapy.

STANDING ORDERS

EMT	AEMT	PM
1. Apply cardiac monitor; document rhythm strip. **2.** Apply oxygen; target SpO2 ≥94%. **3.** Maintain IV access and infusion continuity. **4.** Monitor blood pressure every 5 minutes. **5.** Notify Paramedic immediately of GCS decline, pupillary change, vomiting, or seizure. **6.** Elevate head of stretcher 30 degrees unless contraindicated.	**1.** All EMT steps. **2.** Establish peripheral IV if not present. **3.** Check blood glucose; treat hypoglycemia if glucose <70 mg/dL with dextrose 10%. **4.** Obtain 12-lead ECG; report findings. **5.** For seizure activity: notify Paramedic; prepare midazolam for Paramedic administration.	**1.** All EMT and AEMT steps. **2.** Maintain blood pressure per sending physician parameters; SBP ≥90 mmHg minimum in TBI. **3.** For active seizure: midazolam 2–5 mg IV; may repeat once at 5 minutes. **4.** For intubated patients: confirm ventilator settings; avoid hyperventilation unless herniation is imminent. **5.** Titrate antihypertensive infusion per sending orders; avoid aggressive BP lowering in TBI. **6.** Contact DMO for herniation signs, refractory seizure, or hemodynamic instability.

> *Prevent the secondary injury triad in TBI: avoid hypoxia (SpO2 <94%), avoid hypotension (SBP <90 mmHg), avoid hyperventilation (target ETCO2 35–40 mmHg). Each independently worsens neurologic outcomes.*

TRANSPORT MONITORING PRIORITIES

- Neurologic reassessment every 5 minutes: GCS, pupillary response, focal deficits.
- Blood pressure per sending physician parameters.
- Airway protection vigilance; vomiting and aspiration risk is high.
- Seizure monitoring throughout transport.
- Temperature management if active.

ANTICIPATED DETERIORATION

- Rapid GCS decline or loss of consciousness.
- Unequal or unreactive pupils (herniation sign).
- Seizure activity.
- Vomiting with aspiration.
- Hemodynamic instability.

DIVERSION TRIGGERS

> *IMMEDIATE DIVERSION REQUIRED: Rapid neurologic decline, signs of herniation, uncontrolled seizure, airway compromise, or refractory hemodynamic instability.*

DOCUMENTATION PRIORITIES

- Baseline neurologic findings at departure.
- Blood pressure trend and management.
- Infusion verification.
- Any change in exam during transport with time documented.

II-11. SEIZURE / STATUS EPILEPTICUS

CLINICAL OVERVIEW

Seizure activity may be primary neurologic or secondary to metabolic, infectious, toxic, or structural pathology. Status epilepticus is defined as continuous seizure activity ≥5 minutes or recurrent seizures without return to baseline.

Transfer required for ongoing refractory seizure management, EEG monitoring, neurology consultation, or ICU-level care.

Benzodiazepines administered; antiepileptic loading dose may be given; airway secured if required.

COMMON ACTIVE THERAPIES AT TRANSFER

Sedation infusion if intubated (midazolam or ketamine for intubated adult only, Paramedic managed), oxygen therapy, IV access maintenance.

STANDING ORDERS

EMT	AEMT	PM
1. Apply cardiac monitor; document rhythm strip. **2.** Apply oxygen; target SpO2 ≥94%.	**1.** All EMT steps. **2.** Establish peripheral IV if not present.	**1.** All EMT and AEMT steps. **2.** For active seizure: midazolam 2–5 mg IV slow push; may repeat once at 5 minutes.

EMT	AEMT	PM
3. Maintain IV access and infusion continuity. **4.** Position patient laterally if not intubated to reduce aspiration risk. **5.** Notify Paramedic immediately if seizure recurs or airway is compromised. **6.** Do not restrain actively seizing extremities; protect patient from injury.	**3.** Check blood glucose; treat hypoglycemia if glucose <70 mg/dL with dextrose 10%. **4.** For active seizure: notify Paramedic immediately; prepare midazolam for Paramedic administration.	**3.** For pediatric seizure: midazolam 0.1 mg/kg IV (max 5 mg). **4.** For refractory seizure: contact DMO for additional benzodiazepine or antiepileptic orders. **5.** Maintain sedation infusion per sending orders for intubated patients. **6.** For airway compromise: intubate and initiate ventilator management.

TRANSPORT MONITORING PRIORITIES

- Airway protection and respiratory effort continuously.
- SpO2 trend.
- Recurrence of seizure activity throughout transport.
- Mental status and return to baseline post-ictal.
- Blood glucose level.

ANTICIPATED DETERIORATION

- Recurrent or prolonged seizure.
- Hypoventilation or apnea.
- Aspiration.
- Postictal agitation threatening airway.

DIVERSION TRIGGERS

> *IMMEDIATE DIVERSION REQUIRED: Uncontrolled seizure unresponsive to benzodiazepines, airway compromise, or persistent hypoxia.*

DOCUMENTATION PRIORITIES

- Seizure duration and description.
- Medications administered with dose, route, time, and response.
- Airway status throughout transport.
- Neurologic baseline post-event.

II-12. BRAIN TUMOR / MASS EFFECT TRANSFER

CLINICAL OVERVIEW

Intracranial mass lesion causing mass effect may increase intracranial pressure and impair cerebral perfusion. Transfer required for neurosurgical intervention or advanced imaging unavailable at the sending facility.

Transfer required for surgical intervention, radiation oncology, or advanced neurodiagnostic capability.

Steroids may be initiated (dexamethasone). Imaging performed. Seizure prophylaxis may be administered. Airway monitored.

COMMON ACTIVE THERAPIES AT TRANSFER

Oxygen therapy, IV fluids, sedation if intubated.

STANDING ORDERS

EMT	AEMT	PM
1. Apply cardiac monitor; document rhythm strip. **2.** Apply oxygen if SpO2 <94%. **3.** Maintain IV access and infusion continuity. **4.** Elevate head of stretcher 30 degrees. **5.** Monitor blood pressure every 5 minutes. **6.** Notify Paramedic of any GCS change, vomiting, or seizure.	**1.** All EMT steps. **2.** Establish peripheral IV if not present. **3.** Check blood glucose. **4.** For seizure: notify Paramedic immediately; prepare midazolam.	**1.** All EMT and AEMT steps. **2.** For active seizure: midazolam 2–5 mg IV; may repeat once. **3.** Maintain blood pressure within sending physician parameters. **4.** For airway compromise or GCS ≤8: consider intubation. **5.** Contact DMO for herniation signs or refractory instability.

TRANSPORT MONITORING PRIORITIES

- Neurologic reassessment every 5–10 minutes: GCS, pupils, focal deficits.
- Blood pressure stability.
- Seizure monitoring.
- Vomiting and aspiration risk.

ANTICIPATED DETERIORATION

- Progressive neurologic decline.
- Seizure activity.
- Vomiting with aspiration.
- Hemodynamic instability.

DIVERSION TRIGGERS

> *IMMEDIATE DIVERSION REQUIRED: Rapid neurologic deterioration, airway compromise, or refractory hypotension.*

DOCUMENTATION PRIORITIES

- Baseline neurologic exam at departure.
- Imaging summary if provided by sending facility.

- Any change in exam during transport with time documented.

C. PULMONARY CONDITIONS

II-13. ACUTE RESPIRATORY FAILURE

CLINICAL OVERVIEW

Acute respiratory failure is defined as inadequate oxygenation, ventilation, or both, requiring advanced respiratory support. Failure of gas exchange may result from pulmonary, cardiac, neurologic, or infectious causes.

Transfer required for ICU-level ventilatory support, specialty consultation, or respiratory management unavailable at the sending facility.

Supplemental oxygen initiated. Non-invasive or mechanical ventilation established. Sedation initiated if intubated.

COMMON ACTIVE THERAPIES AT TRANSFER

Oxygen therapy, CPAP/BiPAP via Flow-Safe II, mechanical ventilation (LTV 1200), sedation infusion if intubated (Paramedic managed).

STANDING ORDERS

EMT	AEMT	PM
1. Apply cardiac monitor; document rhythm strip. **2.** Apply oxygen; target SpO2 ≥94%. **3.** Assist with CPAP mask seal and positioning if in use. **4.** Monitor respiratory rate and work of breathing. **5.** Monitor blood pressure every 5 minutes. **6.** Notify Paramedic immediately of SpO2 decline, respiratory fatigue, or agitation.	**1.** All EMT steps. **2.** Establish peripheral IV if not present. **3.** Initiate CPAP at 5–10 cmH2O if not already applied for alert, cooperative patients with hypoxia. **4.** Administer albuterol 2.5 mg nebulized if bronchospasm component is present.	**1.** All EMT and AEMT steps. **2.** Confirm ventilator settings (LTV 1200): tidal volume 6–8 mL/kg ideal body weight, PEEP 5 cmH2O, FiO2 titrated to SpO2 94–98%. **3.** Maintain sedation infusion per sending orders for intubated patients. **4.** For ventilator failure: transition to BVM; troubleshoot per Ventilator Failure protocol. **5.** For impending respiratory failure on CPAP: prepare for intubation. **6.** Contact DMO for persistent hypoxia or ventilator management questions.

TRANSPORT MONITORING PRIORITIES

- SpO2 continuously; target 94–98%.
- Respiratory rate and work of breathing.

- Ventilator synchrony and alarm status if intubated.
- ETCO2 if available.
- Blood pressure every 5 minutes.

ANTICIPATED DETERIORATION

- Worsening hypoxia unresponsive to supplemental oxygen.
- Ventilatory fatigue.
- Hypotension from auto-PEEP or tension pneumothorax.
- Dysrhythmia.

DIVERSION TRIGGERS

> *IMMEDIATE DIVERSION REQUIRED: Refractory hypoxia, inability to ventilate, or hemodynamic instability.*

DOCUMENTATION PRIORITIES

- Ventilator settings at departure and any changes.
- Oxygen requirement trend.
- Sedation infusion rate.
- Respiratory rate and SpO2 at intervals.

II-14. VENTILATOR FAILURE / MALFUNCTION

CLINICAL OVERVIEW

Mechanical ventilator malfunction or failure during transport requires rapid identification and correction. Loss of mechanical ventilation may rapidly result in hypoxia and hypercapnia in a sedated or apneic patient.

Patient is being transferred for ongoing specialty care; ventilator failure is a transport emergency, not a reason for transfer.

Patient stabilized on LTV 1200. Backup airway equipment confirmed prior to departure per pre-departure checklist.

COMMON ACTIVE THERAPIES AT TRANSFER

Mechanical ventilation, sedation infusion if intubated, oxygen therapy.

STANDING ORDERS

EMT	AEMT	PM
1. Immediately notify Paramedic of any ventilator alarm.	**1.** All EMT steps.	**1.** All EMT and AEMT steps.

EMT	AEMT	PM
2. Monitor SpO2 and respiratory effort continuously. **3.** Prepare BVM with PEEP valve for immediate use. **4.** Monitor blood pressure every 3–5 minutes.	**2.** If ventilator fails and Paramedic requires assistance: initiate BVM ventilation at 10–12 breaths/min. **3.** Ensure BVM is connected to oxygen source.	**2.** Disconnect patient from ventilator immediately if malfunction is confirmed; ventilate with BVM. **3.** Troubleshoot: check circuit connections, ETT position, oxygen supply, and power. **4.** If high-pressure alarm: suction ETT; assess for pneumothorax. **5.** If low-pressure alarm: check for circuit disconnect or cuff leak. **6.** If ventilation cannot be restored: divert to nearest appropriate emergency department. **7.** Contact DMO immediately.

> *When in doubt, take the patient off the ventilator and BVM manually. A correctly functioning BVM is always safer than a malfunctioning ventilator.*

TRANSPORT MONITORING PRIORITIES

- SpO2 continuously.
- Ventilator alarms and waveforms.
- Chest rise assessment bilaterally.
- ETCO2 if available.

ANTICIPATED DETERIORATION

- Sudden desaturation.
- High-pressure alarm from obstruction or pneumothorax.
- Low-pressure alarm from circuit disconnect.
- Cardiovascular compromise from hypoxia.

DIVERSION TRIGGERS

> *IMMEDIATE DIVERSION REQUIRED: Inability to maintain adequate oxygenation or ventilation despite BVM rescue ventilation.*

DOCUMENTATION PRIORITIES

- Ventilator settings at departure.
- Nature of malfunction and time identified.
- Corrective actions taken and outcome.
- SpO2 and vital sign trend during event.

II-15. PULMONARY EMBOLISM

CLINICAL OVERVIEW

Pulmonary embolism involves obstruction of pulmonary arterial flow leading to increased pulmonary vascular resistance and potential right ventricular failure. Massive PE carries a high risk for cardiovascular collapse.

Transfer required for thrombolysis, catheter-directed therapy, or ICU-level monitoring unavailable at the sending facility.

Heparin infusion initiated, oxygen therapy administered, vasopressors started if hemodynamically unstable.

COMMON ACTIVE THERAPIES AT TRANSFER

Heparin infusion (Paramedic managed), oxygen therapy, vasopressor infusion if ordered.

STANDING ORDERS

EMT	AEMT	PM
1. Apply cardiac monitor; document rhythm strip. **2.** Apply oxygen; titrate to SpO2 ≥94%. **3.** Maintain IV access and heparin infusion continuity; do not adjust heparin rate. **4.** Monitor blood pressure every 5 minutes. **5.** Notify Paramedic of SpO2 decline, hypotension, or mental status change.	**1.** All EMT steps. **2.** Establish peripheral IV if not present. **3.** Obtain 12-lead ECG; report findings to Paramedic. **4.** Heparin is a hospital-supplied infusion; AEMT does not adjust heparin rates.	**1.** All EMT and AEMT steps. **2.** Maintain heparin infusion per sending orders; verify concentration and rate. **3.** For hypotension: initiate norepinephrine infusion; titrate to MAP ≥65 mmHg. **4.** For cardiac arrest from massive PE: initiate ACLS; consider thrombolytics only with DMO order. **5.** Avoid aggressive fluid resuscitation; volume overload worsens RV failure. **6.** Contact DMO for any hemodynamic deterioration.

TRANSPORT MONITORING PRIORITIES

- SpO2 continuously; target ≥94%.
- Heart rate, blood pressure, and mental status.
- Signs of obstructive shock: tachycardia, hypotension, JVD, clear lung sounds.
- Heparin infusion verification.

ANTICIPATED DETERIORATION

- Sudden hypoxia.
- Hypotension and signs of obstructive shock.
- Syncope.

- Cardiac arrest.

DIVERSION TRIGGERS

> *IMMEDIATE DIVERSION REQUIRED: SBP <90 mmHg unresponsive to vasopressors, severe desaturation unresponsive to oxygen, or cardiac arrest.*

DOCUMENTATION PRIORITIES

- Heparin infusion verification at departure.
- Oxygen requirement trend.
- Hemodynamic stability throughout transport.
- Any interventions and response.

II-16. TRACHEOSTOMY COMPLICATION

CLINICAL OVERVIEW

Tracheostomy complications during IFT include tube obstruction, displacement, bleeding, or infection. Any compromise of tracheostomy patency may result in rapid hypoxia.

Transfer required for ENT, surgical, or pulmonology evaluation unavailable at the sending facility.

Tube patency assessed, suction performed, oxygen therapy applied, spare tracheostomy equipment provided if available.

COMMON ACTIVE THERAPIES AT TRANSFER

Oxygen therapy, mechanical ventilation if connected, sedation if intubated.

STANDING ORDERS

EMT	AEMT	PM
1. Apply cardiac monitor. **2.** Apply oxygen via tracheostomy mask or connect to ventilator circuit. **3.** Have suction immediately available throughout transport. **4.** Monitor SpO2 and work of breathing. **5.** Notify Paramedic immediately of SpO2 decline or changes in airway patency.	**1.** All EMT steps. **2.** Establish peripheral IV if not present. **3.** Suction tracheostomy if secretions are audible or SpO2 is declining. **4.** If tube appears displaced: notify Paramedic immediately; do not attempt tube change.	**1.** All EMT and AEMT steps. **2.** For obstruction unresponsive to suctioning: attempt to pass suction catheter; if unsuccessful, deflate cuff and remove tube. **3.** If stoma is mature (>7 days): insert spare tube of correct size. **4.** If stoma is immature (<7 days) and tube is removed: cover stoma, ventilate via BVM over mouth and nose.

EMT	AEMT	PM
		5. For complete airway obstruction with no tube access: attempt oral intubation through mouth; if unable, use stoma. **6.** Contact DMO immediately for any airway emergency.

> *Know the tracheostomy tube type and whether the stoma is mature before transport. A stoma less than 7 days old may close rapidly if the tube is removed. Carry the correct spare tube size.*

TRANSPORT MONITORING PRIORITIES

- Airway patency and suction readiness continuously.
- SpO2 trend.
- Ventilator synchrony if applicable.
- Secretion character and volume.

ANTICIPATED DETERIORATION

- Sudden hypoxia.
- Inability to ventilate.
- Tube displacement or decannulation.

DIVERSION TRIGGERS

> *IMMEDIATE DIVERSION REQUIRED: Complete airway obstruction or refractory hypoxia unresponsive to intervention.*

DOCUMENTATION PRIORITIES

- Tracheostomy tube type, size, and age of tube.
- Baseline oxygenation at departure.
- Any suction events, tube changes, or airway interventions.

D. ENDOCRINE / METABOLIC CONDITIONS

II-17. DIABETIC KETOACIDOSIS (DKA)

CLINICAL OVERVIEW

DKA is a life-threatening metabolic emergency characterized by hyperglycemia, metabolic acidosis, and ketone production. Fluid shifts and electrolyte disturbances may precipitate dysrhythmia or shock during transport.

Transfer required for intensive insulin and electrolyte management or ICU-level monitoring unavailable at the sending facility.

IV fluid resuscitation initiated, insulin infusion started, electrolyte monitoring in progress.

COMMON ACTIVE THERAPIES AT TRANSFER

Insulin infusion (Paramedic managed), IV fluids, potassium replacement if ordered.

STANDING ORDERS

EMT	AEMT	PM
1. Apply cardiac monitor; document rhythm strip. **2.** Maintain IV access and insulin infusion continuity; do not adjust insulin rate. **3.** Monitor blood pressure every 5 minutes. **4.** Obtain blood glucose at departure. **5.** Notify Paramedic of glucose <70 mg/dL, altered mental status, or rhythm change.	**1.** All EMT steps. **2.** Establish peripheral IV if not present. **3.** Recheck blood glucose every 30 minutes. **4.** For glucose <70 mg/dL: administer dextrose 10% 100–250 mL IV and notify Paramedic. **5.** Insulin infusion is a hospital-supplied drip; AEMT does not adjust insulin rates.	**1.** All EMT and AEMT steps. **2.** Verify insulin infusion concentration and rate against sending orders. **3.** Continue IV fluid resuscitation per sending orders; typically normal saline. **4.** For glucose <70 mg/dL: hold insulin, administer dextrose 10%, contact DMO. **5.** Monitor ECG for hyperkalemia signs: peaked T waves, widening QRS. **6.** Contact DMO for dysrhythmia, refractory hypotension, or significant glucose deviation.

TRANSPORT MONITORING PRIORITIES

- Blood glucose every 30 minutes.
- Cardiac monitoring for electrolyte-induced dysrhythmias.
- Blood pressure and mental status.
- Insulin infusion rate and access site.

ANTICIPATED DETERIORATION

- Hypoglycemia from insulin therapy.
- Worsening acidosis.
- Dysrhythmia from hypokalemia.
- Hypotension.

DIVERSION TRIGGERS

> *IMMEDIATE DIVERSION REQUIRED: Severe hypoglycemia unresponsive to dextrose, refractory hypotension, or life-threatening dysrhythmia.*

DOCUMENTATION PRIORITIES

- Glucose levels at departure and at intervals.
- Insulin infusion rate and any adjustments.
- Fluid administration volume.
- Neurologic status trend.

II-18. HYPEROSMOLAR HYPERGLYCEMIC STATE (HHS)

CLINICAL OVERVIEW

HHS involves severe hyperglycemia with profound dehydration and altered mental status without significant ketoacidosis. Extreme hyperosmolarity causes neurologic dysfunction and cardiovascular instability.

Transfer required for ICU-level monitoring and fluid management unavailable at the sending facility.

Aggressive IV fluid resuscitation initiated. Insulin infusion may be started.

COMMON ACTIVE THERAPIES AT TRANSFER

IV fluids, insulin infusion if ordered (Paramedic managed), electrolyte replacement.

STANDING ORDERS

EMT	AEMT	PM
1. Apply cardiac monitor. 2. Maintain IV access and infusion continuity. 3. Monitor blood pressure every 5 minutes. 4. Obtain blood glucose at departure. 5. Notify Paramedic of glucose <70 mg/dL, altered mental status, or seizure.	1. All EMT steps. 2. Establish peripheral IV if not present. 3. Recheck blood glucose every 30 minutes. 4. For glucose <70 mg/dL: administer dextrose 10% 100–250 mL IV and notify Paramedic.	1. All EMT and AEMT steps. 2. Continue IV fluid resuscitation per sending orders. 3. For seizure: midazolam 2–5 mg IV; contact DMO. 4. Monitor ECG for dysrhythmia. 5. Contact DMO for refractory hypotension or significant neurologic decline.

TRANSPORT MONITORING PRIORITIES

- Blood glucose every 30 minutes.
- Cardiac rhythm monitoring.
- Mental status reassessment.
- Hemodynamic stability.

ANTICIPATED DETERIORATION

- Seizure.
- Hypoglycemia from treatment.

- Hypotension from dehydration.

DIVERSION TRIGGERS

> *IMMEDIATE DIVERSION REQUIRED: Seizure unresponsive to benzodiazepine, refractory hypotension, or significant mental status decline.*

DOCUMENTATION PRIORITIES

- Glucose levels at intervals.
- Fluid volume administered.
- Neurologic trend.
- Infusion verification.

II-19. HYPERKALEMIA

CLINICAL OVERVIEW

Hyperkalemia is an electrolyte disturbance that may cause life-threatening cardiac dysrhythmias by altering myocardial cell membrane potential and conduction. IFT patients have typically received membrane stabilization and potassium-shifting therapy prior to transfer.

Transfer required for dialysis capability or advanced electrolyte management unavailable at the sending facility.

Calcium administered for membrane stabilization. Insulin and dextrose administered for intracellular potassium shift. Cardiac monitoring initiated.

COMMON ACTIVE THERAPIES AT TRANSFER

Continuous cardiac monitoring, IV access maintenance, repeat glucose monitoring if insulin was given.

STANDING ORDERS

EMT	AEMT	PM
1. Apply cardiac monitor; document rhythm strip. **2.** Maintain IV access and infusion continuity. **3.** Monitor blood pressure every 5 minutes. **4.** Obtain blood glucose at departure. **5.** Notify Paramedic immediately of peaked T waves, QRS widening, or any rhythm change.	**1.** All EMT steps. **2.** Establish peripheral IV if not present. **3.** Recheck blood glucose; treat hypoglycemia if <70 mg/dL with dextrose 10%. **4.** Obtain 12-lead ECG; report findings to Paramedic.	**1.** All EMT and AEMT steps. **2.** For peaked T waves or QRS widening: calcium gluconate 1–2 g IV over 10 min or calcium chloride 500–1000 mg IV over 10 min. **3.** For dysrhythmia: treat per appropriate cardiac protocol. **4.** For hypoglycemia from insulin therapy: dextrose 10% 100–250 mL IV.

EMT	AEMT	PM
		5. Contact DMO for any significant ECG change or dysrhythmia.

> *The ECG is your most important monitoring tool in hyperkalemia. A wide bizarre rhythm with known hyperkalemia should be treated as hyperkalemic cardiac toxicity until proven otherwise.*

TRANSPORT MONITORING PRIORITIES

- Continuous ECG for peaked T waves, PR prolongation, widened QRS, or sine wave pattern.
- Blood pressure stability.
- Blood glucose level.
- Mental status.

ANTICIPATED DETERIORATION

- Progression to ventricular dysrhythmia.
- Hypotension.
- Cardiac arrest.

DIVERSION TRIGGERS

> *IMMEDIATE DIVERSION REQUIRED: Sustained dysrhythmia, loss of pulse, or refractory hypotension.*

DOCUMENTATION PRIORITIES

- ECG findings at departure and any changes.
- Medications administered prior to transfer.
- Blood glucose levels.
- Hemodynamic trend.

E. GI / HEMORRHAGE CONDITIONS

II-20. UPPER GASTROINTESTINAL BLEED

CLINICAL OVERVIEW

Upper GI bleeding involves hemorrhage proximal to the ligament of Treitz and may be caused by peptic ulcer disease, varices, erosive gastritis, or malignancy. Significant blood loss may lead to hypovolemic shock.

Transfer required for endoscopy, interventional radiology, or ICU care unavailable at the sending facility.

IV fluid resuscitation initiated. Blood products administered if indicated. Proton pump inhibitor therapy started.

COMMON ACTIVE THERAPIES AT TRANSFER

Blood product infusion if ongoing, crystalloid infusion, antiemetics, oxygen as needed.

STANDING ORDERS

EMT	AEMT	PM
1. Apply cardiac monitor. 2. Apply oxygen if SpO2 <94%. 3. Maintain IV access and infusion continuity; blood products are Paramedic-managed. 4. Have suction immediately available; aspiration risk is high. 5. Monitor blood pressure every 5 minutes. 6. Notify Paramedic of hematemesis, hypotension, or mental status change.	1. All EMT steps. 2. Establish peripheral IV (large bore if possible) if not present. 3. Administer normal saline 250–500 mL IV bolus if SBP <90 mmHg and no blood products are running. 4. Administer ondansetron 4 mg IV for active nausea to reduce aspiration risk. 5. Blood product infusions are Paramedic-managed; AEMT does not adjust blood product rates.	1. All EMT and AEMT steps. 2. Monitor blood product infusions per sending orders; dual-verify at departure. 3. Continue crystalloid resuscitation per sending orders. 4. For hemodynamic instability unresponsive to fluids: initiate norepinephrine per shock protocol. 5. For airway compromise from active hematemesis: intubate. 6. Contact DMO for refractory instability or transfusion reaction.

TRANSPORT MONITORING PRIORITIES

- Heart rate and blood pressure every 5 minutes.
- Mental status as perfusion marker.
- Ongoing hematemesis or melena.
- Signs of aspiration.
- Blood product infusion verification.

ANTICIPATED DETERIORATION

- Progressive hypotension and tachycardia.
- Altered mental status.
- Active hematemesis with aspiration risk.
- Transfusion reaction.

DIVERSION TRIGGERS

> *IMMEDIATE DIVERSION REQUIRED: Refractory hypotension, massive active bleeding, or loss of consciousness.*

DOCUMENTATION PRIORITIES

- Blood products administered with volume and type.
- Crystalloid volume infused.
- Vital sign trend.

- Any change in bleeding status during transport.

F. INFECTIOUS / SHOCK CONDITIONS

II-21. SEPSIS / SEPTIC SHOCK

CLINICAL OVERVIEW

Sepsis is a dysregulated host response to infection resulting in life-threatening organ dysfunction. Septic shock represents circulatory and metabolic failure with higher mortality. Vasodilation, capillary leak, and myocardial depression lead to hypotension and tissue hypoperfusion.

Transfer required for ICU-level monitoring, vasopressor support, or source control unavailable at the sending facility.

IV fluid resuscitation initiated. Broad-spectrum antibiotics administered. Vasopressor infusion started if hypotension persists after fluids.

COMMON ACTIVE THERAPIES AT TRANSFER

Crystalloid infusion, norepinephrine infusion (Paramedic managed), oxygen therapy, antibiotic infusion if in progress.

STANDING ORDERS

EMT	AEMT	PM
1. Apply cardiac monitor. **2.** Apply oxygen; target SpO2 ≥94%. **3.** Maintain IV access and vasopressor infusion continuity; do not interrupt norepinephrine. **4.** Monitor blood pressure every 3–5 minutes. **5.** Notify Paramedic of MAP <65 mmHg, escalating tachycardia, or mental status change.	**1.** All EMT steps. **2.** Establish peripheral IV (large bore if possible) if not present. **3.** Administer normal saline 500 mL IV bolus if SBP <90 mmHg and no vasopressor is running. **4.** Norepinephrine infusion is Paramedic-managed; AEMT does not titrate vasopressors.	**1.** All EMT and AEMT steps. **2.** Titrate norepinephrine to maintain MAP ≥65 mmHg per sending orders. **3.** Continue antibiotic infusion per sending orders; verify concentration and line patency. **4.** For escalating vasopressor requirement: contact DMO; consider adding vasopressin if ordered. **5.** For respiratory failure: initiate CPAP or prepare for intubation. **6.** Contact DMO for persistent hypotension or significant clinical deterioration.

TRANSPORT MONITORING PRIORITIES

- MAP ≥65 mmHg target; blood pressure every 3–5 minutes.

- Mental status trend as end-organ perfusion marker.
- Vasopressor infusion rate and access site.
- Respiratory rate and SpO2.

ANTICIPATED DETERIORATION

- Escalating vasopressor requirement.
- Refractory hypotension.
- Altered mental status.
- Respiratory failure.

DIVERSION TRIGGERS

> *IMMEDIATE DIVERSION REQUIRED: Persistent hypotension despite vasopressor titration, acute respiratory failure, or significant mental status decline.*

DOCUMENTATION PRIORITIES

- Fluid volume administered.
- Vasopressor concentration and rate.
- Suspected infection source.
- Hemodynamic trend at intervals.

II-22. NECROTIZING INFECTION / SURGICAL CAPABILITY GAP

CLINICAL OVERVIEW

Necrotizing soft tissue infection is a rapidly progressive, life-threatening infection requiring emergent surgical intervention. Rapid tissue destruction and systemic toxicity may lead to septic shock and multi-organ failure.

Transfer required for emergent surgical debridement and advanced critical care unavailable at the sending facility.

Broad-spectrum antibiotics initiated. IV fluid resuscitation performed. Vasopressors started if septic shock is present.

COMMON ACTIVE THERAPIES AT TRANSFER

Antibiotic infusion (facility-initiated), crystalloid infusion, norepinephrine infusion if ordered (Paramedic managed).

STANDING ORDERS

EMT	AEMT	PM
1. Apply cardiac monitor. 2. Apply oxygen; target SpO2 ≥94%.	1. All EMT steps. 2. Establish peripheral IV if not present.	1. All EMT and AEMT steps. 2. Titrate norepinephrine to MAP ≥65 mmHg per sending orders.

EMT	AEMT	PM
3. Maintain IV access and all infusion continuity. **4.** Monitor blood pressure every 3–5 minutes. **5.** Notify Paramedic of hemodynamic change, mental status decline, or signs of progression.	**3.** Administer normal saline 500 mL IV bolus if SBP <90 mmHg and no vasopressor is running. **4.** Vasopressor infusion is Paramedic-managed.	**3.** Continue antibiotic infusion per sending orders. **4.** For respiratory compromise: initiate CPAP or prepare for intubation. **5.** Contact DMO for refractory shock or rapid deterioration.

TRANSPORT MONITORING PRIORITIES

- MAP ≥65 mmHg target; blood pressure every 3–5 minutes.
- Mental status and pain severity.
- Signs of clinical progression.
- Perfusion assessment.

ANTICIPATED DETERIORATION

- Rapid hypotension.
- Escalating shock.
- Altered mental status.
- Respiratory compromise.

DIVERSION TRIGGERS

> *IMMEDIATE DIVERSION REQUIRED: Refractory hypotension, acute respiratory failure, or cardiac arrest.*

DOCUMENTATION PRIORITIES

- Antibiotics administered with times.
- Fluid volume infused.
- Vasopressor rate.
- Clinical progression during transport.

G. BEHAVIORAL / PSYCHIATRIC CONDITIONS

II-23. PSYCHIATRIC / BEHAVIORAL HEALTH TRANSFER (ADULT AND PEDIATRIC)

CLINICAL OVERVIEW

Psychiatric and behavioral health transfers involve patients requiring evaluation or admission for self-harm risk, acute psychosis, severe mood disorder, or inability to care for themselves. These transports may involve

agitation, elopement attempts, or sudden escalation. Acute psychiatric crises may result from mental health disorders, substance use, missed medications, or underlying medical pathology.

Transfer required when the sending facility lacks behavioral health services or a secure psychiatric unit.

Medical screening completed. Laboratory testing and clearance performed. Sedation may be administered prior to departure. Restraints applied proactively if elopement or escalation risk is identified.

COMMON ACTIVE THERAPIES AT TRANSFER

Behavioral monitoring, physical restraints (XD cuffs, four-point) if indicated, midazolam for chemical sedation per standing order (Paramedic only). Ketamine is not authorized for psychiatric sedation.

STANDING ORDERS

EMT	AEMT	PM
1. Apply cardiac monitor if patient permits. **2.** Apply oxygen if clinically indicated. **3.** Maintain continuous visual observation throughout transport. **4.** Ensure restraint integrity and perform neurovascular checks on restrained extremities every 15 minutes. **5.** Notify Paramedic immediately of escalating behavior, elopement attempt, or airway concern.	**1.** All EMT steps. **2.** Establish peripheral IV if indicated and patient permits. **3.** Monitor SpO2 and respiratory rate if sedation has been administered. **4.** AEMT does not administer chemical sedation for behavioral indications.	**1.** All EMT and AEMT steps. **2.** Apply XD four-point restraints if involuntary transport or credible escalation risk; document justification. **3.** Chemical sedation: midazolam 2–5 mg IV slow push for severe agitation threatening safety. May repeat once at 5 minutes. Medical control consultation recommended but not required under standing order. **4.** Ketamine is NOT authorized for psychiatric sedation. **5.** Monitor airway and respiratory rate continuously after sedation. **6.** Contact DMO for airway compromise, respiratory depression, or uncontrolled violent behavior.

> *Voluntary patients are not restrained unless self-harm, combativeness, or other clear warning signs emerge. All restraint decisions must be documented with clinical justification.*

TRANSPORT MONITORING PRIORITIES

- Continuous behavioral observation.
- Airway protection if sedated.
- SpO2 and respiratory rate after sedation.
- Restraint integrity and neurovascular checks every 15 minutes if restrained.
- Mental status reassessment at intervals.

ANTICIPATED DETERIORATION

- Sudden agitation or violent behavior.
- Respiratory depression from sedation.
- Emesis with aspiration risk.
- Elopement attempt.
- Acute medical decompensation.

DIVERSION TRIGGERS

> *IMMEDIATE DIVERSION REQUIRED: Airway compromise, severe respiratory depression, uncontrolled violent behavior threatening crew safety, or acute medical instability.*

DOCUMENTATION PRIORITIES

- Behavioral baseline at departure.
- Justification for restraint application if used.
- Sedation dose, time, route, and response.
- Continuous reassessment and safety measures.

H. TRAUMATIC CONDITIONS

II-24. GENERAL TRAUMA TRANSPORT

CLINICAL OVERVIEW

Trauma patients being transferred between facilities have typically undergone initial stabilization. Primary transport objectives are maintaining adequate oxygenation and perfusion while preventing secondary injury. TBI management is addressed in the Neurologic Deterioration protocol.

Transfer required for trauma center resources, surgical capability, neurosurgical services, or ICU-level care unavailable at the sending facility.

Patients may have received surgical intervention, intubation, chest tube placement, blood products, and vasopressor therapy prior to transfer.

COMMON ACTIVE THERAPIES AT TRANSFER

Oxygen therapy, IV fluids, blood product infusions if ongoing (Paramedic managed), vasopressor infusion if ordered (Paramedic managed), sedation if intubated (Paramedic managed).

STANDING ORDERS

EMT	AEMT	PM
1. Apply cardiac monitor. **2.** Maintain SpO2 ≥94% with supplemental oxygen. **3.** Maintain IV access and all infusion continuity. **4.** Monitor blood pressure every 5 minutes. **5.** Ensure all tubes and devices are secured before and during transport. **6.** Notify Paramedic of hemodynamic change, SpO2 decline, or device concern.	**1.** All EMT steps. **2.** Establish peripheral IV (large bore if possible) if not present. **3.** Administer normal saline 250–500 mL IV bolus if SBP <90 mmHg and no blood products are running. **4.** Blood product and vasopressor infusions are Paramedic-managed.	**1.** All EMT and AEMT steps. **2.** Confirm blood product infusions: dual-verify medication, rate, and access. **3.** Titrate vasopressor to MAP ≥65 mmHg per sending orders. **4.** For intubated patients: confirm ventilator settings; avoid hypoxia and hyperventilation. **5.** For chest tube: confirm tube patency and drainage. **6.** Contact DMO for hemorrhagic shock, airway emergency, or critical equipment failure.

TRANSPORT MONITORING PRIORITIES

- SpO2 ≥94% continuously.
- MAP ≥65 mmHg; blood pressure every 5 minutes.
- All tubes and device placement and function.
- Mental status as perfusion marker.
- Blood product infusion verification.

ANTICIPATED DETERIORATION

- Significant hemorrhage.
- Loss of airway.
- Hypotension unresponsive to resuscitation.
- Cardiac arrest.
- Critical equipment failure.

DIVERSION TRIGGERS

> *IMMEDIATE DIVERSION REQUIRED: Loss of airway, significant uncontrolled hemorrhage, refractory hypotension, cardiac arrest, or critical equipment failure.*

DOCUMENTATION PRIORITIES

- Airway status and ventilator settings if applicable.
- Blood products and fluids administered.
- Hemodynamic trend.
- Device placement and function checks.

I. SPECIALTY TRANSFERS

II-25. DONOR PATIENT MANAGEMENT TRANSFER

CLINICAL OVERVIEW

Brain-death donor management transfers involve the interfacility movement of patients declared brain dead who are maintained on life-sustaining therapies for potential organ donation. The primary objective is optimal organ preservation during transfer while upholding the highest standards of clinical and ethical practice.

Transfer to designated transplant center or operating facility to facilitate organ procurement.

Brain death confirmed by accepted clinical criteria and ancillary testing. Mechanical ventilation initiated. Vasopressors titrated. Electrolyte disturbances corrected. Diabetes insipidus managed. Temperature control in progress.

COMMON ACTIVE THERAPIES AT TRANSFER

Mechanical ventilation, vasopressor infusions (Paramedic managed), hormone replacement if ordered, targeted temperature management, IV fluids.

STANDING ORDERS

EMT	AEMT	PM
1. Apply cardiac monitor. **2.** Maintain all infusion continuity; do not interrupt vasopressors. **3.** Maintain ventilator operation; monitor circuit integrity. **4.** Monitor blood pressure every 5 minutes. **5.** Notify Paramedic of hemodynamic change, ventilator alarm, or device concern. **6.** Treat this patient with the same clinical rigor and dignity as any other patient.	**1.** All EMT steps. **2.** Establish peripheral IV if not present. **3.** Monitor blood glucose; treat hypoglycemia if glucose <70 mg/dL with dextrose 10%. **4.** Vasopressor infusions are Paramedic-managed.	**1.** All EMT and AEMT steps. **2.** Confirm all vasopressor infusions: verify concentration, rate, and access. **3.** Confirm ventilator settings per sending orders; maintain oxygenation and normocapnia. **4.** Titrate vasopressors to maintain MAP ≥65 mmHg and HR <100 per sending orders. **5.** Monitor urine output catheter patency; report concerns to DMO. **6.** Contact DMO and transplant coordinator for any significant instability or equipment failure.

> *Transport personnel must maintain respectful and dignified care at all times. Communicate clearly and compassionately with referring and receiving teams throughout the transfer.*

TRANSPORT MONITORING PRIORITIES

- Continuous ECG and hemodynamic monitoring.
- Vasopressor infusion rates and access site every 15 minutes.

- Ventilator function and settings.
- Temperature management device function.
- Blood glucose.
- Urine output catheter patency.

ANTICIPATED DETERIORATION

- Abrupt hypotension.
- Cardiac arrhythmia.
- Hypoxemia.
- Ventilator failure.
- Line dislodgement.

DIVERSION TRIGGERS

> *IMMEDIATE DIVERSION REQUIRED: Refractory hypotension unresponsive to therapy, sustained cardiac arrest, severe hypoxemia not correctable with ventilator adjustment, or any condition that precludes organ viability.*

DOCUMENTATION PRIORITIES

- Pre-transport stabilization measures.
- All therapies administered during transport with dosages, rates, and times.
- Monitoring parameters at regular intervals.
- Interventions for complications.
- Communication with DMO and transplant coordinator.

II-26. HYPOGLYCEMIA — INTERFACILITY TRANSPORT

CLINICAL OVERVIEW

Hypoglycemia during interfacility transport is a distinct clinical scenario from field hypoglycemia. It most commonly occurs in patients on insulin infusions, those who have been NPO, or those transferred from facilities where glucose management was inadequately stabilized before departure. Glucose <70 mg/dL with symptoms or <50 mg/dL regardless of symptoms requires immediate treatment.

Transfer required for: post-bariatric hypoglycemia requiring endocrine evaluation, refractory hypoglycemia from long-acting insulin or sulfonylurea overdose, or hypoglycemia as a complication of another primary condition requiring higher-level care.

COMMON ACTIVE THERAPIES AT TRANSFER

- Insulin infusion (Paramedic managed) — confirm rate and most recent glucose before departure.
- Dextrose infusion or oral glucose supplementation.
- Continuous glucose monitoring (CGM) — note: CGM readings may not reflect true serum glucose; confirm with glucometer.

STANDING ORDERS

EMT	AEMT	PM
1. Obtain blood glucose immediately; repeat every 30 minutes throughout transport. **2.** For glucose <70 mg/dL with symptoms and patient can swallow: oral glucose gel 15–25 g PO. **3.** Apply cardiac monitor. **4.** Notify Paramedic of glucose value immediately.	**1.** All EMT steps. **2.** Establish peripheral IV if not already present. **3.** For glucose <70 mg/dL with symptoms or <50 mg/dL regardless: dextrose 10% 100–250 mL IV; recheck glucose at 5 minutes. **4.** For persistent hypoglycemia: repeat dextrose 10%; hold or reduce insulin infusion rate — contact DMO. **5.** Obtain blood glucose every 30 minutes throughout transport.	**1.** All EMT and AEMT steps. **2.** For unconscious patient without IV: glucagon 1 mg IM or IN. **3.** For insulin infusion: adjust rate per sending physician parameters and glucose trend; contact DMO if no parameters provided. **4.** For refractory hypoglycemia (glucose fails to correct after two dextrose administrations): contact DMO immediately; consider dextrose infusion. **5.** Document glucose trend, insulin infusion rate changes, and dextrose administered.

> *CGM devices (Dexcom, FreeStyle Libre) may be present on IFT patients. Do not treat based on CGM alone — always confirm with a glucometer before administering dextrose or adjusting insulin. CGM readings lag serum glucose by 5–15 minutes and may be inaccurate during rapid glucose changes.*

TRANSPORT MONITORING PRIORITIES

- Blood glucose every 30 minutes minimum; every 15 minutes if actively treating hypoglycemia.
- Mental status and level of consciousness.
- Insulin infusion rate and pump function if running.
- Signs of hypoglycemia recurrence after initial correction.

DIVERSION / ESCALATION TRIGGERS

DIVERSION REQUIRED: Glucose unresponsive to two rounds of IV dextrose. Altered mental status not improving with glucose correction. Suspected adrenal insufficiency or sulfonylurea-induced hypoglycemia requiring extended monitoring.

DOCUMENTATION PRIORITIES

- Blood glucose values with times — document every reading.
- Insulin infusion rate at departure and any changes.
- Dextrose administered: volume, concentration, time, and glucose response.
- DMO contact and orders received.

II-27. ANAPHYLAXIS — INTERFACILITY TRANSPORT

CLINICAL OVERVIEW

Anaphylaxis during interfacility transport typically occurs as a reaction to a medication, blood product, or contrast agent administered at the sending facility or during transport. It may develop or re-emerge during transport as a biphasic reaction hours after initial treatment. The sending facility may have already treated the initial reaction; the transport team must be prepared for recurrence.

Transfer required for: anaphylaxis requiring ICU-level monitoring, anaphylaxis from a diagnostic or therapeutic procedure (contrast, chemotherapy, biologic agent) requiring specialist evaluation, or ongoing epinephrine infusion for refractory anaphylaxis.

COMMON ACTIVE THERAPIES AT TRANSFER

- Epinephrine infusion (Paramedic managed) — confirm concentration and rate.
- Diphenhydramine infusion or recent IM administration.
- Methylprednisolone or dexamethasone IV.
- Normal saline infusion for hemodynamic support.

STANDING ORDERS

EMT	AEMT	PM
1. Assess airway, breathing, and circulation at departure and throughout transport. **2.** Apply cardiac monitor and pulse oximeter continuously.	**1.** All EMT steps. **2.** Confirm IV access is patent and adequate for medication administration.	**1.** All EMT and AEMT steps. **2.** For refractory anaphylaxis not responding to IM epinephrine: epinephrine infusion 2–10 mcg/min IV titrated to response; contact DMO.

EMT	AEMT	PM
3. Keep epinephrine autoinjector immediately accessible throughout transport. **4.** Notify Paramedic immediately of any worsening respiratory symptoms, hives, or hemodynamic change.	**3.** For recurrence or worsening: administer epinephrine 1:1,000 0.3–0.5 mg IM immediately; notify DMO. **4.** Albuterol 2.5 mg nebulized for bronchospasm component. **5.** Normal saline 500 mL–1 L IV bolus for hypotension. **6.** Diphenhydramine 25–50 mg IV/IO as adjunct.	**3.** For refractory bronchospasm: magnesium sulfate 2 g IV over 20 minutes. **4.** Monitor and manage biphasic reaction risk throughout transport. **5.** Contact DMO for any patient on an epinephrine infusion at departure.

Biphasic anaphylaxis occurs in up to 20% of cases, typically 1–8 hours after the initial reaction. All anaphylaxis patients require observation even after apparent clinical resolution. Do not assume a quiet patient en route is stable — reassess every 5 minutes.

TRANSPORT MONITORING PRIORITIES

- Airway: stridor, hoarseness, drooling — signs of progressive angioedema.
- Respiratory: wheeze, SpO2, respiratory rate.
- Hemodynamic: blood pressure every 3–5 minutes.
- Skin: urticaria progression or regression.
- Mental status as perfusion marker.

DIVERSION / ESCALATION TRIGGERS

DIVERSION REQUIRED: Airway compromise or progressive angioedema. Hemodynamic collapse unresponsive to epinephrine and fluids. Biphasic reaction with deterioration during transport.

DOCUMENTATION PRIORITIES

- Trigger agent if identified.
- Treatment administered at sending facility.
- Clinical status at departure and trend during transport.
- Any epinephrine doses administered during transport with time and response.
- Airway assessment findings throughout.

II-28. TOXICOLOGY AND OVERDOSE — INTERFACILITY TRANSPORT

CLINICAL OVERVIEW

Overdose and toxicology patients are frequently transferred between facilities for higher-level care, psychiatric evaluation, antidote administration, or ICU monitoring. The toxidrome is often partially treated at the sending facility; transport teams must recognize evolving toxicity, monitor for re-sedation or re-intoxication, and manage active therapies initiated at the sending facility.

Transfer required for: antidote access (Fab fragments, fomepizole, physostigmine), ICU-level monitoring for cardiotoxic ingestions (TCA, CCB, digoxin), NAC protocol initiation or continuation for acetaminophen toxicity, or psychiatric evaluation after intentional overdose.

COMMON ACTIVE THERAPIES AT TRANSFER

- Naloxone infusion for opioid overdose maintenance (AEMT authorized to monitor).
- N-acetylcysteine (NAC) infusion for acetaminophen toxicity (Paramedic managed).
- Sodium bicarbonate infusion for TCA or salicylate toxicity (Paramedic managed).
- Insulin infusion for calcium channel blocker toxicity (Paramedic managed).
- Activated charcoal administered at sending facility — monitor for aspiration.

STANDING ORDERS

EMT	AEMT	PM
1. Obtain and document: substance ingested, estimated amount, time of ingestion, and treatment already administered. **2.** Assess level of consciousness, airway protective reflexes, and respiratory rate. **3.** Apply cardiac monitor; look for QRS widening (TCA), QT prolongation (antipsychotics, CCB), and bradyarrhythmia (beta blockers, CCB, digoxin). **4.** Apply pulse oximeter continuously. **5.** Position laterally if mental status is reduced; suction immediately available.	**1.** All EMT steps. **2.** Confirm IV access is patent. **3.** Monitor naloxone infusion if running; assess for re-sedation or opioid withdrawal throughout transport. **4.** For re-sedation (respiratory rate <10, SpO2 declining): administer naloxone 0.4–2 mg IV/IO/IN; titrate to respiratory effort. **5.** Obtain blood glucose; treat hypoglycemia with dextrose 10%.	**1.** All EMT and AEMT steps. **2.** Manage NAC, sodium bicarbonate, or insulin infusions per sending physician parameters. **3.** For TCA toxicity with QRS widening >120 ms or dysrhythmia: sodium bicarbonate 1–2 mEq/kg IV. **4.** For CCB or beta blocker toxicity with hemodynamic compromise: calcium gluconate 1–2 g IV; glucagon 3–5 mg IV/IM; norepinephrine for refractory hypotension. **5.** For active seizure from toxic etiology: midazolam 2–5 mg IV/IO/IM. **6.** For airway compromise (GCS ≤8 with loss of protective reflexes): intubate; be aware that succinylcholine is contraindicated in hyperkalemia (consider rocuronium — hospital supplied). **7.** Contact DMO and Poison Control (1-800-222-1222) for complex or deteriorating toxicology.

> *Re-sedation after naloxone is a predictable event — naloxone has a shorter half-life than most opioids. Monitor respiratory rate and SpO2 continuously throughout transport. A patient who is alert at departure may become apneic 20–30 minutes into transport.*

> *Activated charcoal at the sending facility increases aspiration risk significantly. Position the patient at 30–45 degrees head up and have suction immediately accessible throughout transport.*

TRANSPORT MONITORING PRIORITIES

- Respiratory rate and SpO2 continuously — re-sedation watch.
- Continuous cardiac monitoring: QRS duration, QT interval, rate, rhythm.
- Mental status trend every 5 minutes.
- Blood glucose at departure and every 30 minutes.
- All active infusion rates and pump function.

DIVERSION / ESCALATION TRIGGERS

> *DIVERSION REQUIRED: Airway compromise. Cardiac arrest or sustained life-threatening dysrhythmia. Hemodynamic collapse unresponsive to treatment. Refractory seizure activity. Re-sedation with respiratory failure.*

DOCUMENTATION PRIORITIES

- Substance, estimated dose, and time of ingestion.
- Toxidrome identified.
- Treatment administered at sending facility.
- All infusions running at departure with rates.
- Cardiac rhythm findings including QRS and QT intervals if measured.
- Any clinical changes during transport with times.
- Poison Control contact time and guidance if obtained.

SECTION III — AMBULANCE MEDICATION FORMULARY

This formulary covers medications carried on AMR Kansas City ambulances. It does not include hospital-supplied infusions or medications initiated at the sending facility — those are addressed in Section IV. Each drug card shows the **Authorized Scope** row identifying which credential level may administer that medication independently under standing orders.

STATE AUTHORITY: This formulary is authorized under the Kansas Board of Emergency Medical Services (KBEMS) Approved Medication List, effective June 4, 2021, and local medical direction from Dr. Ameet Deshmukh, Medical Director, AMR Kansas City. AEMT scope additions reflect KBEMS class authorization and Medical Director standing order designation.

III-1. ADENOSINE — PM ONLY

Authorized Scope	**IV Rapid Push**
Classification	Antiarrhythmic; AV nodal blocking agent.
Mechanism	Transiently blocks AV nodal conduction, terminating re-entrant supraventricular tachycardias.
Indications	Stable supraventricular tachycardia (SVT) with narrow complex rhythm.
Adult Dosing	6 mg rapid IV push followed immediately by 20 mL NS flush. May repeat at 12 mg x1 if no conversion.
Pediatric Dosing	0.1 mg/kg IV rapid push (max 6 mg); may repeat at 0.2 mg/kg (max 12 mg).
Contraindications	Second- or third-degree AV block without pacemaker; irregular wide-complex tachycardia; known hypersensitivity.
Adverse Effects	Flushing, chest discomfort, transient asystole, dyspnea, sense of impending doom.
Monitoring	Continuous ECG during and after administration. Immediate readiness for cardioversion if deterioration occurs.

Must be given as rapid IV push through the most proximal site available. Flush immediately and simultaneously with 20 mL NS. Half-life is approximately 10 seconds.

III-2. ALBUTEROL (SALBUTAMOL) — ALL LEVELS

Authorized Scope	MDI / Neb	MDI / Neb	MDI / Neb
Classification	Beta-2 adrenergic agonist bronchodilator.		
Mechanism	Stimulates beta-2 receptors causing bronchial smooth muscle relaxation and bronchodilation.		
Indications	Bronchospasm associated with asthma or COPD exacerbation; anaphylaxis with bronchospasm component.		
Adult Dosing	2.5 mg nebulized over 5–10 minutes; may repeat every 20 minutes as needed. MDI: 2–4 puffs.		
Pediatric Dosing	2.5 mg nebulized. MDI: 2–4 puffs with spacer.		
Contraindications	Known hypersensitivity to albuterol.		
Adverse Effects	Tachycardia, tremor, anxiety, hypokalemia with repeated dosing.		
Monitoring	Respiratory effort, oxygen saturation, heart rate.		

III-3. AMIODARONE

AEMT+

Authorized Scope	—	IV/IO	IV/IO
Classification	Class III antiarrhythmic.		
Mechanism	Prolongs action potential duration and refractory period in cardiac tissue; also has alpha and beta blocking properties.		
Indications	Ventricular tachycardia (stable or unstable); ventricular fibrillation (ACLS sequence).		
Adult Dosing	Stable VT: 150 mg IV over 10 minutes. Pulseless VT/VF: 300 mg IV/IO push; may repeat 150 mg x1.		
Pediatric Dosing	Adult cardiac arrest: 300 mg IV/IO push (fixed dose); repeat 150 mg x1 if needed. Adult stable VT: 150 mg IV over 10 min. Pediatric cardiac arrest: 5 mg/kg IV/IO push (max 300 mg); stable VT: 5 mg/kg IV over 20–60 min.		
Contraindications	Severe sinus-node dysfunction without pacing; cardiogenic shock without pacing; known hypersensitivity.		
Adverse Effects	Hypotension, bradycardia, phlebitis at IV site.		
Monitoring	Continuous ECG and blood pressure during administration.		

AEMT Authorization: Amiodarone IV/IO is authorized for AEMT under KBEMS state scope. Contact DMO if clinical situation is unclear prior to administration.

III-4. ASPIRIN — ALL LEVELS

Authorized Scope	PO	PO	PO
Classification	Antiplatelet agent; non-steroidal anti-inflammatory.		
Mechanism	Irreversibly inhibits cyclooxygenase (COX-1), reducing thromboxane A2 and platelet aggregation.		
Indications	Suspected acute coronary syndrome (ACS) without contraindication.		
Adult Dosing	324 mg PO chewed (four 81 mg tablets preferred for faster absorption).		
Pediatric Dosing	Not routinely administered in the pediatric IFT setting unless specifically ordered.		
Contraindications	Active GI bleeding; known allergy to aspirin or NSAIDs; suspected hemorrhagic stroke; already received at sending facility.		
Adverse Effects	GI irritation, bleeding.		
Monitoring	Monitor for signs of active bleeding.		

III-5. ATROPINE SULFATE — AEMT+

Authorized Scope	—	Autoinjector (OPG only)	IV/IO / Autoinjector
Classification	Anticholinergic; parasympatholytic agent.		
Mechanism	Competitively blocks acetylcholine at muscarinic receptors; increases heart rate and AV conduction; reverses cholinergic excess.		
Indications	PM: Symptomatic bradycardia. AEMT and PM: Organophosphate / nerve agent (cholinergic) toxicity via DuoDote autoinjector.		
Adult Dosing	Bradycardia (PM only): 1 mg IV every 3–5 min; max 3 mg. Organophosphate toxicity (AEMT+): DuoDote autoinjector IM to lateral thigh; repeat every 5–10 min until secretions dry.		
Pediatric Dosing	Bradycardia (PM only): 0.02 mg/kg IV (min 0.1 mg; max 1 mg per dose). Organophosphate		

	(AEMT+): weight-based autoinjector per pediatric reference.
Contraindications	Tachycardia (except organophosphate context); narrow-angle glaucoma (relative).
Adverse Effects	Tachycardia, dry mouth, urinary retention, blurred vision, delirium at high doses.
Monitoring	Continuous ECG and blood pressure. In organophosphate toxicity: monitor secretions, respiratory effort, and mental status.

AEMT Scope: DuoDote autoinjector is authorized for organophosphate / nerve agent toxicity only. IV/IO atropine for symptomatic bradycardia remains Paramedic scope. Authorization basis: KBEMS antidote class.

III-6. DIPHENHYDRAMINE (BENADRYL) — AEMT+

Authorized Scope	PO	PO / IM / IV/IO	PO / IM / IV/IO
Classification	Antihistamine; H1 receptor antagonist.		
Mechanism	Blocks histamine H1 receptors, reducing allergic response mediators.		
Indications	Allergic reaction; adjunct therapy in anaphylaxis after epinephrine; dystonic reaction.		
Adult Dosing	25–50 mg IV/IO slow push or IM. PO: 25–50 mg.		
Pediatric Dosing	1 mg/kg IV/IO or IM (maximum 50 mg). PO: 1 mg/kg (max 50 mg).		
Contraindications	Known hypersensitivity; acute asthma (may thicken secretions).		
Adverse Effects	Sedation, anticholinergic effects, hypotension with rapid IV push.		
Monitoring	Airway and mental status post-administration.		

Diphenhydramine is an adjunct in anaphylaxis only. Epinephrine is the primary treatment and must not be delayed.

III-7. DEXTROSE 10% (D10W) — AEMT+

Authorized Scope	—	IV/IO	IV/IO
Classification	Hypertonic glucose solution.		

Mechanism	Provides rapid correction of hypoglycemia by increasing serum glucose concentration.
Indications	Symptomatic hypoglycemia (glucose <70 mg/dL with symptoms, or <50 mg/dL regardless of symptoms); altered mental status with suspected hypoglycemia.
Adult Dosing	100–250 mL IV/IO; titrate to effect. Recheck glucose 5 minutes after administration.
Pediatric Dosing	2–4 mL/kg IV/IO (max 250 mL); recheck glucose 5 minutes after.
Contraindications	Confirmed hyperglycemia. Intracranial hemorrhage (withhold unless glucose confirmed <50 mg/dL).
Adverse Effects	Hyperglycemia; tissue necrosis if extravasated from peripheral IV.
Monitoring	Blood glucose before and 5 minutes after administration. Monitor for recurrence.

Confirm glucose with glucometer before administering. Document glucose values before and after treatment. If IV/IO access is unavailable and patient cannot swallow, oral glucose is the alternative for EMT level.

III-8. EPINEPHRINE 1:1,000 (IM) — ALL LEVELS

Authorized Scope	Autoinjector / IM	Autoinjector / IM	Autoinjector / IM
Classification	Alpha and beta adrenergic agonist; sympathomimetic.		
Mechanism	Stimulates alpha-1 (vasoconstriction) and beta-1/2 (increased cardiac output, bronchodilation) adrenergic receptors.		
Indications	Anaphylaxis; severe allergic reaction with systemic involvement.		
Adult Dosing	0.3–0.5 mg IM to lateral thigh. EpiPen: 0.3 mg. May repeat every 5–10 minutes if no improvement.		
Pediatric Dosing	0.01 mg/kg IM (maximum 0.3 mg per dose). EpiPen Jr: 0.15 mg for 15–30 kg.		
Contraindications	None in life-threatening anaphylaxis.		
Adverse Effects	Tachycardia, hypertension, anxiety, pallor, tremor.		
Monitoring	Continuous cardiac monitoring and blood pressure after administration.		

Lateral thigh is the preferred injection site for fastest absorption. Do not confuse with 1:10,000 IV/IO concentration.

III-9. EPINEPHRINE 1:10,000 (IV/IO) — AEMT+

Authorized Scope	—	IV/IO	IV/IO
Classification	Alpha and beta adrenergic agonist; sympathomimetic.		
Mechanism	Increases coronary and cerebral perfusion pressure during cardiac arrest; vasoconstriction and chronotropy.		
Indications	Cardiac arrest (all rhythms). Severe refractory bradycardia unresponsive to atropine (pediatric, AEMT+). Push-dose pressor for severe hypotension (PM only).		
Adult Dosing	Cardiac arrest: 1 mg IV/IO every 3–5 minutes. Push-dose pressor (PM only): 10–20 mcg IV every 1–2 minutes titrated to effect. Preparation: draw 1 mL of epinephrine 1:10,000 (0.1 mg/mL) into a 10 mL syringe and dilute to 10 mL with NS → yields 10 mcg/mL; give 1–2 mL per push-dose.		
Pediatric Dosing	Cardiac arrest: 0.01 mg/kg IV/IO (max 1 mg) every 3–5 minutes. Severe bradycardia: 0.01 mg/kg IV/IO.		
Contraindications	None in cardiac arrest.		
Adverse Effects	Hypertension, arrhythmias, increased myocardial oxygen demand.		
Monitoring	Continuous ECG and capnography during resuscitation.		

AEMT Authorization: Epinephrine 1:10,000 IV/IO is authorized for AEMT for cardiac arrest and severe pediatric bradycardia. Push-dose pressor titration remains Paramedic scope.

III-10. FENTANYL CITRATE — AEMT+

Authorized Scope	—	IV/IO / IN / IM	IV/IO / IN / IM
Classification	Opioid analgesic.		
Mechanism	Binds to mu-opioid receptors producing analgesia and mild sedation.		

Indications	Moderate to severe pain in non-behavioral patients. AEMT: IV/IO push, IN, and IM. PM: all routes.
Adult Dosing	IV/IO: 25–100 mcg slow push; repeat in 25–50 mcg increments; max total 200 mcg. IN: 1–2 mcg/kg (max 100 mcg per nostril). IM: 1–2 mcg/kg.
Pediatric Dosing	1 mcg/kg IV/IO slow push (max 50 mcg per dose). IN: 1–2 mcg/kg.
Contraindications	Respiratory depression; hemodynamic instability without airway control; known allergy. Use with caution in head injury.
Adverse Effects	Respiratory depression, hypotension, nausea, chest wall rigidity with rapid high-dose administration.
Monitoring	Continuous pulse oximetry, respiratory rate, blood pressure, and mental status after each dose.

AEMT Authorization: Fentanyl is the designated opioid for AEMT under KBEMS opioid class authorization per Medical Director designation. Administer IV or IO slowly over 1–2 minutes. IV/IO routes are authorized consistent with AEMT vascular access scope (KSA 65-6120). Naloxone must be immediately available.

III-11. MIDAZOLAM (VERSED) — AEMT+

Authorized Scope	—	**IV/IO / IM / IN (seizure only)**	**IV/IO / IM / IN / Infusion**
Classification	Benzodiazepine; sedative-hypnotic.		
Mechanism	Enhances GABA-A receptor activity producing sedation, anxiolysis, amnesia, and anticonvulsant effects.		
Indications	Active seizure / status epilepticus (AEMT and PM). Behavioral sedation (PM only). Sedation infusion for intubated patients (PM only).		
Adult Dosing	Seizure: 2–5 mg IV/IO slow push or 5 mg IM; may repeat once at 5 minutes. IN: 5 mg (2.5 mg per nostril). Behavioral sedation (PM only): 2–5 mg IV slow push; may repeat once.		
Pediatric Dosing	0.1 mg/kg IV/IO or IM (maximum 5 mg). IN: 0.2 mg/kg (max 5 mg).		
Contraindications	Severe hypotension without airway control; known hypersensitivity.		

Adverse Effects	Respiratory depression, hypotension, paradoxical agitation (rare in pediatrics).
Monitoring	Continuous respiratory rate, SpO2, and blood pressure after administration.

AEMT Authorization: Midazolam IM, IV/IO, and IN is authorized for AEMT for active seizure management only under KBEMS benzodiazepine class authorization. Behavioral sedation and infusion use remain Paramedic scope only.

III-12. KETAMINE (INTUBATED ADULTS ONLY) — PM ONLY

Authorized Scope	—	**IV/IO Bolus or Infusion**
Classification	Dissociative anesthetic; NMDA receptor antagonist.	
Mechanism	Blocks NMDA receptors producing dissociative sedation and analgesia; maintains airway reflexes and hemodynamic stability.	
Indications	Ongoing sedation for intubated adult patients only. Preferred in hypotensive intubated patients.	
Adult Dosing	Bolus: 0.5–1 mg/kg IV for intubated adult. Infusion: 1 mg/kg/hr starting; titrate up to max 8 mg/kg/hr. Preferred concentration: 1:1 (250 mg/250 mL or 500 mg/500 mL).	
Pediatric Dosing	Not authorized.	
Contraindications	Non-intubated patients; psychiatric agitation; pediatric patients; known hypersensitivity.	
Adverse Effects	Hypertension, tachycardia, laryngospasm (non-intubated), emergence phenomena (rare in intubated patients).	
Monitoring	Continuous cardiac monitoring, blood pressure, ventilator synchrony.	

Ketamine is NOT authorized for pediatric sedation, psychiatric agitation, or non-intubated patients under any circumstance. Its hemodynamic stability advantage makes it the preferred sedation agent for hypotensive intubated adults.

III-13. LIDOCAINE — AEMT+

Authorized Scope	—	**IV/IO**	**IV/IO**

Classification	Class IB antiarrhythmic; sodium channel blocker.
Mechanism	Blocks fast sodium channels reducing ventricular automaticity and ectopy.
Indications	Ventricular tachycardia (stable); ventricular ectopy causing hemodynamic compromise. Alternative to amiodarone.
Adult Dosing	1–1.5 mg/kg IV/IO bolus; may repeat 0.5–0.75 mg/kg every 5–10 minutes; max total 3 mg/kg.
Pediatric Dosing	1 mg/kg IV/IO.
Contraindications	Second- or third-degree AV block without pacemaker; known hypersensitivity; Stokes-Adams syndrome.
Adverse Effects	Neurologic toxicity (dizziness, tinnitus, seizures at toxic doses); hypotension; bradycardia.
Monitoring	Continuous ECG monitoring throughout administration.

AEMT Authorization: Lidocaine IV/IO is authorized for AEMT under KBEMS state scope. Administer slowly. Tinnitus or perioral numbness signals approaching toxic levels — stop administration and notify DMO.

III-14. MAGNESIUM SULFATE — PM ONLY

Authorized Scope	— — **IV/IO**
Classification	Electrolyte; antiarrhythmic; tocolytic.
Mechanism	Stabilizes myocardial cell membranes; blocks calcium channels; reduces neuromuscular excitability.
Indications	Torsades de pointes; severe refractory asthma; eclampsia / pre-eclampsia; documented hypomagnesemia.
Adult Dosing	Torsades / arrhythmia: 2 g IV over 5–10 minutes. Severe asthma: 2 g IV over 20 minutes. Eclampsia: 4–6 g IV loading dose over 15–20 minutes.
Pediatric Dosing	25–50 mg/kg IV (max 2 g per dose) over 10–20 minutes.
Contraindications	Heart block without pacing; hypermagnesemia; renal failure (relative).
Adverse Effects	Hypotension, flushing, respiratory depression at toxic levels, loss of deep tendon reflexes.

Monitoring	Cardiac monitoring and blood pressure throughout infusion. Respiratory rate and deep tendon reflexes for toxicity.

Loss of patellar reflex is the earliest sign of magnesium toxicity and precedes respiratory depression. Calcium gluconate reverses magnesium toxicity — note this is a hospital-supplied medication (Section IV) not carried on the truck.

III-15. NALOXONE (NARCAN) — ALL LEVELS

Authorized Scope	Autoinjector / IN / IM	Autoinjector / IN / IM / IV/IO	Autoinjector / IN / IM / IV/IO
Classification	Opioid antagonist.		
Mechanism	Competitively displaces opioids at mu, kappa, and delta receptors reversing respiratory depression, sedation, and analgesia.		
Indications	Suspected opioid overdose with respiratory depression; opioid-induced respiratory compromise in IFT patients.		
Adult Dosing	IV/IO: 0.4–2 mg titrated to respiratory effort (avoid full reversal in opioid-tolerant patients). IM or IN: 2 mg. Autoinjector: 0.4 mg.		
Pediatric Dosing	0.01–0.1 mg/kg IV/IO (titrate to respiratory effort). IN: 0.1 mg/kg (max 2 mg).		
Contraindications	None in respiratory depression.		
Adverse Effects	Acute opioid withdrawal (agitation, vomiting, tachycardia, hypertension); recurrence of respiratory depression as naloxone wears off.		
Monitoring	Airway protection continuously. Monitor for re-sedation (naloxone half-life shorter than most opioids). Continuous pulse oximetry.		

AEMT Authorization: IV/IO route added under KBEMS state scope. Titrate IV/IO naloxone to respiratory effort, not full consciousness. Abrupt full reversal in opioid-tolerant patients can precipitate severe withdrawal.

III-16. NITROGLYCERIN — AEMT+

Authorized Scope	—	SL / Transdermal	SL / Transdermal / Infusion
Classification	Vasodilator; nitrate.		

Mechanism	Releases nitric oxide causing vascular smooth muscle relaxation, reducing preload and at higher doses afterload.
Indications	Chest pain suspected cardiac in origin; acute pulmonary edema with hypertension (SBP ≥100 mmHg).
Adult Dosing	SL: 0.4 mg every 5 minutes up to 3 doses if SBP ≥100 mmHg. Infusion (PM only): titrate per sending orders.
Pediatric Dosing	Not routinely administered in pediatric IFT setting unless specifically ordered.
Contraindications	SBP <100 mmHg; recent PDE-5 inhibitor use within 24–48 hours; suspected right ventricular infarction; severe aortic stenosis.
Adverse Effects	Hypotension, headache, reflex tachycardia, dizziness.
Monitoring	Blood pressure prior to each SL dose; continuous cardiac monitoring.

Check blood pressure before every dose. Hold if SBP <100 mmHg. Ask about PDE-5 inhibitor use before first dose. RV infarction is a critical contraindication — nitrates may cause severe refractory hypotension in this setting.

III-17. NOREPINEPHRINE (LEVOPHED) — PM ONLY

Authorized Scope	—	—	**IV/IO Infusion**
Classification	Alpha-adrenergic agonist; vasopressor.		
Mechanism	Primarily alpha-1 stimulation causing vasoconstriction and increased systemic vascular resistance; mild beta-1 effect.		
Indications	Septic shock; cardiogenic shock; refractory hypotension after adequate volume resuscitation.		
Adult Dosing	Fixed-dose infusion per service standard; titrate to maintain MAP ≥65 mmHg. Typical starting range: 0.01–0.1 mcg/kg/min.		
Pediatric Dosing	0.05–1 mcg/kg/min IV/IO infusion; titrate to effect per PALS targets.		
Contraindications	Uncorrected hypovolemia (correct volume deficit before initiating).		
Adverse Effects	Hypertension, arrhythmias, peripheral ischemia, tissue necrosis from extravasation.		

Monitoring	Continuous cardiac monitoring; frequent blood pressure; monitor IV/IO site for extravasation every 15 minutes.

Paramedic scope only due to titration requirements and extravasation risk. Preferred via central venous access when available. If peripheral IV is the only access, monitor site continuously and use the most proximal site possible.

III-18. SODIUM BICARBONATE — PM ONLY

Authorized Scope	—	—	IV/IO
Classification	Alkalinizing agent.		
Mechanism	Buffers metabolic acidosis by increasing serum bicarbonate. In TCA overdose: alkalinizes sodium channels reversing cardiotoxicity.		
Indications	Severe metabolic acidosis. Hyperkalemia with ECG changes (adjunct). Tricyclic antidepressant (TCA) overdose with wide QRS or arrhythmia.		
Adult Dosing	1 mEq/kg IV/IO bolus (typically 50–100 mEq). Repeat per DMO order.		
Pediatric Dosing	1 mEq/kg IV/IO.		
Contraindications	Respiratory alkalosis; metabolic alkalosis; hypocalcemia (correct first).		
Adverse Effects	Metabolic alkalosis, hypernatremia, paradoxical CNS acidosis, hypocalcemia.		
Monitoring	Cardiac monitoring; reassessment of clinical status. Do not mix with calcium-containing solutions (precipitates).		

In TCA overdose, titrate to QRS narrowing on ECG rather than fixed dose. Sodium bicarbonate remains Paramedic scope due to indication specificity and alkalosis risk.

III-19. ONDANSETRON (ZOFRAN) — AEMT+

Authorized Scope	PO / ODT	PO / ODT / IM / IN / IV/IO	PO / ODT / IM / IN / IV/IO
Classification	Antiemetic; 5-HT3 receptor antagonist.		

Mechanism	Blocks serotonin receptors in the central and peripheral nervous system, reducing nausea and vomiting.
Indications	Nausea and vomiting; reducing aspiration risk in at-risk IFT patients.
Adult Dosing	IV/IO: 4 mg slow push over 2–5 minutes. IM or IN: 4 mg. ODT/PO: 4 mg.
Pediatric Dosing	0.1 mg/kg IV/IO (max 4 mg). ODT: weight-based per package insert.
Contraindications	Known hypersensitivity; caution with prolonged QT or concurrent QT-prolonging medications.
Adverse Effects	Headache, constipation, QT prolongation (rare at standard doses).
Monitoring	Monitor for arrhythmias in patients with known QT prolongation.

AEMT Authorization: Full route expansion (IM, IN, IV/IO) authorized under KBEMS antiemetic class per Medical Director designation. Ondansetron is the designated antiemetic agent for AEMT.

III-20. NORMAL SALINE (0.9% NACL) — AEMT+

Authorized Scope	**Monitoring only**	**IV/IO Bolus / Maintenance**	**IV/IO Bolus / Maintenance**
Classification	Isotonic crystalloid solution.		
Mechanism	Expands intravascular volume through isotonic fluid replacement.		
Indications	Hypotension; dehydration; medication carrier fluid; IV access maintenance.		
Adult Dosing	250–500 mL IV/IO bolus for hypotension; titrate to hemodynamic response. Maintenance: per clinical need.		
Pediatric Dosing	20 mL/kg IV/IO bolus for hypotension; may repeat per clinical response and Paramedic or DMO direction.		
Contraindications	Volume overload; decompensated CHF (avoid bolus without Paramedic or DMO direction); pulmonary edema.		
Adverse Effects	Fluid overload; dilutional hyperchloremic acidosis with large volumes.		

Monitoring	Blood pressure, lung sounds, and signs of volume overload after bolus.

EMTs may monitor and maintain a running normal saline infusion initiated at the sending facility but may not initiate a new IV/IO or administer a bolus independently. AEMT may initiate IV/IO and administer bolus per standing orders.

III-21. IPRATROPIUM BROMIDE (ATROVENT) — ALL LEVELS

Authorized Scope	MDI / Neb	MDI / Neb	MDI / Neb
Classification	Anticholinergic bronchodilator.		
Mechanism	Blocks muscarinic receptors in airway smooth muscle causing bronchodilation and reducing secretions.		
Indications	Bronchospasm; typically combined with albuterol for moderate to severe exacerbations.		
Adult Dosing	0.5 mg nebulized; typically combined with albuterol in the same nebulizer. MDI: 2–4 puffs.		
Pediatric Dosing	0.25–0.5 mg nebulized; combined with albuterol.		
Contraindications	Known hypersensitivity to ipratropium or atropine derivatives.		
Adverse Effects	Dry mouth, blurred vision, urinary retention, paradoxical bronchospasm (rare).		
Monitoring	Respiratory status and heart rate.		

SECTION IV — HOSPITAL-SUPPLIED MEDICATION & INFUSION MONITORING

This section covers medications and infusions initiated at the sending facility and continued during interfacility transport. It is intentionally distinct from the Ambulance Medication Formulary (Section III). When a medication is carried on the AMR unit, refer to Section III for full pharmacology. This section focuses on transport-phase verification, monitoring, complication recognition, diversion triggers, and documentation.

DISPATCH AUTHORITY AND CREW ASSIGNMENT

AMR Kansas City call types are filtered at the dispatch level based on the clinical requirements of the transport. Crew assignment is matched to the scope demands of the call before departure.

> *KBEMS POSITION: An AEMT may not monitor, manage, or clinically respond to a hospital-supplied medication that is not within their KBEMS-authorized medication scope. AEMTs will not be dispatched to transports requiring management of medications outside their authorized list. If a transport requires a medication outside AEMT scope, a Paramedic crew will be assigned.*

This means the clinical content of Section IV applies as follows:

- EMT crews: Section IV-A general guideline applies. EMTs monitor the patient and maintain normal saline continuity only. No medication infusion monitoring beyond NS.
- AEMT crews: Section IV-B applies. AEMTs may monitor hospital-supplied infusions that correspond to medications within their KBEMS-authorized scope only. See the AEMT Authorized Infusion list below.
- Paramedic crews: All of Section IV applies. Paramedics manage, monitor, and titrate hospital-supplied infusions within service protocol and sending physician orders.

> *NON-REDUNDANCY RULE: When a hospital-supplied medication is also carried in the AMR formulary (e.g., midazolam, fentanyl, amiodarone, lidocaine), refer to Section III for indications, contraindications, and dosing. This section provides transport-phase monitoring and management only.*

A. GENERAL INFUSION GUIDELINE — ALL CREWS

PRE-DEPARTURE INFUSION VERIFICATION

Before leaving the sending facility, the transporting Paramedic must complete the following verification for each active infusion. On AEMT and EMT crews, the crew member must confirm this verification has been completed before departure.

1.	Confirm medication name and concentration (mg/mL or mcg/mL).
2.	Confirm ordered dose or rate (e.g., mcg/min, mcg/kg/min, units/hr, mg/hr).
3.	Confirm current pump rate and compare to the order.

4.	Trace tubing from bag or syringe to patient (line trace) and label the line.
5.	Confirm vascular access type (PIV, IO, PICC, central line) and patency.
6.	Confirm adequate volume remaining for transport time plus safety buffer.
7.	Confirm backup plan for pump failure.
8.	Verify sending provider contact and receiving report is complete with transport parameters documented.

INFUSION PUMP AND LINE SAFETY

- Use Sapphire infusion pumps per service standard whenever compatible with the sending infusion setup.
- If the sending facility pump remains with the patient, confirm battery life is sufficient for the full transport duration.
- Maintain dedicated lines for high-risk infusions: vasopressors, insulin, heparin, and sedation should not share a line with other medications.
- Do not piggyback incompatible medications without explicit pharmacy guidance from the sending facility.
- Never interrupt vasopressor or sedation infusions during patient movement. Plan all transfers and cot loading accordingly.

PHYSIOLOGIC TARGETS — TRANSPORT DEFAULTS

Use the following targets unless the sending physician has documented specific parameters that differ. Always follow sending physician orders when explicitly provided.

MEDICATION / CATEGORY	TRANSPORT MONITORING NOTES
Adult MAP target	MAP ≥65 mmHg
Adult SBP minimum	SBP ≥90 mmHg
Pediatric BP target	Age-appropriate per PALS; weight-based dosing throughout
SpO2 target	≥94% (94–98% post-ROSC; avoid hyperoxia in stroke and COPD)
ETCO2 target (intubated)	35–40 mmHg unless specific order
Glucose target	140–180 mg/dL for most ICU patients; follow sending orders

If the sending physician provides explicit parameters that differ from these defaults (e.g., permissive hypertension in ischemic stroke, tight BP control in intracranial hemorrhage), follow those parameters and document them in the PCR.

ESCALATION AND DIVERSION — ALL CREWS

DIVERSION INDICATIONS: Loss of airway or ventilation. Refractory hypoxia. Hemodynamic collapse unresponsive to infusion support. Sustained life-threatening dysrhythmia. Uncontrolled hemorrhage. Severe adverse medication or infusion reaction. Do not delay diversion waiting for DMO if the patient is critically unstable.

DOCUMENTATION STANDARDS — ALL HOSPITAL-SUPPLIED INFUSIONS

- Medication name and concentration.
- Ordered dose or rate if provided by sending physician.
- Starting pump rate at departure and any rate changes during transport.
- Vital signs and reassessment at defined intervals (minimum every 5–15 minutes depending on acuity).
- Vascular access type and line patency checks performed.
- Any alarms, interruptions, or troubleshooting steps taken.
- Any adverse effects and actions taken.
- Receiving facility handoff confirmation.

B. AEMT — AUTHORIZED HOSPITAL-SUPPLIED INFUSION MONITORING

AEMTs are authorized to monitor hospital-supplied infusions only when the medication corresponds to a drug within their KBEMS-authorized scope. The following infusions represent the hospital-supplied medications an AEMT may encounter on dispatched calls and are authorized to clinically monitor.

> *If an AEMT arrives at a sending facility and discovers the patient has an active infusion not on this list, the AEMT must contact dispatch immediately. The call requires Paramedic reassignment. The AEMT may not depart with an unauthorized infusion running.*

MEDICATION / CATEGORY	TRANSPORT MONITORING NOTES
Normal Saline (0.9% NaCl)	Isotonic crystalloid. KBEMS authorized. AEMT may monitor, maintain, and adjust rate per standing orders. Most common infusion encountered on AEMT-level calls.
Fentanyl infusion	Opioid analgesia. KBEMS opioid class authorized for AEMT. Authorized for hospital-supplied analgesia in non-intubated, non-sedated patients only. A fentanyl infusion for an intubated or sedated patient is a Paramedic-level transport — contact dispatch if encountered. Monitor SpO2, respiratory rate, blood pressure, and mental status. Naloxone must be immediately available.
Midazolam infusion	Benzodiazepine. KBEMS benzodiazepine class authorized for AEMT. AMR KC medical direction limits AEMT midazolam to active seizure management only. A hospital-supplied midazolam sedation infusion (intubated patient or behavioral sedation) is outside AEMT standing order authority and is a Paramedic-level transport — contact dispatch if encountered.
Ondansetron (IV infusion)	Antiemetic. KBEMS antiemetic class authorized. AEMT may monitor a running ondansetron infusion and administer per Section III standing orders. Monitor for QT prolongation in high-risk patients.
Amiodarone infusion	Antiarrhythmic. KBEMS authorized. AEMT may monitor a running amiodarone infusion. Do not adjust rate without DMO direction. Monitor continuous ECG and blood pressure.

MEDICATION / CATEGORY	TRANSPORT MONITORING NOTES
Lidocaine infusion	Antiarrhythmic. KBEMS authorized. AEMT may monitor a running lidocaine infusion. Do not adjust rate without DMO direction. Monitor continuous ECG. Watch for neurologic toxicity: tinnitus, perioral numbness, confusion.
Dextrose infusion (D5W, D10W)	Glucose replacement. KBEMS dextrose IV/IO authorized. AEMT may monitor and administer D10 per standing orders for hypoglycemia. Monitor blood glucose every 30 minutes.
Isotonic crystalloid with electrolyte additives	e.g., NS with KCl. Explicitly listed on KBEMS AEMT authorization. KCl must run via pump at all times. Monitor cardiac rhythm continuously during potassium infusion.
Isotonic crystalloid with antibiotic additives	e.g., NS with vancomycin, piperacillin-tazobactam. Explicitly listed on KBEMS AEMT authorization. Monitor for infusion reactions throughout transport.
Naloxone infusion	Opioid antagonist. KBEMS naloxone IV/IO authorized. AEMT may monitor a hospital-supplied naloxone infusion for opioid reversal maintenance. Monitor for re-sedation and withdrawal symptoms.

AEMT INFUSION MONITORING RESPONSIBILITIES

- Verify the infusion against the authorized list before departure. If any running infusion is not on this list, contact dispatch immediately.
- Confirm pump rate matches sending physician order at departure.
- Monitor patient hemodynamics and clinical response at the same intervals as Paramedic crews.
- Do not titrate amiodarone, lidocaine, or any other infusion rate without explicit sending physician parameters and DMO guidance. When in doubt, maintain current rate and contact DMO.
- For any infusion concern: contact DMO. Do not adjust without authority.

> *AEMT SCOPE BOUNDARY: Monitoring an infusion means observing the patient's clinical response and the pump function. It does not mean authority to titrate, adjust, or troubleshoot the drug itself beyond stopping the infusion in an emergency and maintaining IV access with normal saline. When in doubt, stop the infusion, maintain IV access, and contact DMO.*

C. PARAMEDIC — HOSPITAL-SUPPLIED INFUSION MONITORING

Paramedics manage all hospital-supplied infusions within service protocol and sending physician orders. The following subsections cover the infusion categories encountered in AMR Kansas City IFT operations.

> *Paramedics may titrate infusions only when a sending physician has provided an explicit order with parameters (e.g., titrate norepinephrine to MAP ≥65 mmHg). Titration without explicit orders requires DMO consultation. Paramedics may flush central lines if trained and competency-validated. Medications may not be administered via arterial lines.*

IV-C1. VASOPRESSORS & INOTROPES

MEDICATION / CATEGORY	TRANSPORT MONITORING NOTES
Norepinephrine	First-line vasopressor. Alpha-1 dominant. Titrate to MAP ≥65 mmHg. Monitor access site for extravasation every 15 minutes.
Epinephrine infusion	Anaphylactic and cardiogenic shock refractory to norepinephrine. Alpha and beta effects. Monitor for tachyarrhythmia.
Dopamine	Dose-dependent effects. Less commonly used. Monitor for tachyarrhythmia.
Phenylephrine	Pure alpha-1 agonist. No beta effect. May cause reflex bradycardia.
Vasopressin	Non-catecholamine adjunct. Fixed rate — do not titrate without explicit order.
Dobutamine	Inotrope with mild vasodilatory effect. Monitor for hypotension.
Milrinone	Phosphodiesterase inhibitor inotrope. Significant vasodilatory effect. Often requires concurrent vasopressor.
Nicardipine / Clevidipine	Calcium channel blocker antihypertensives. Used for BP control in neurologic emergencies.

DIVERSION REQUIRED: Persistent hypotension at maximum infusion rate, sustained life-threatening dysrhythmia, or loss of vascular access in a vasopressor-dependent patient.

IV-C2. SEDATION, ANALGESIA & NEUROMUSCULAR BLOCKADE

MEDICATION / CATEGORY	TRANSPORT MONITORING NOTES
Propofol	Short-acting sedative. Significant hypotensive potential. Milky white — verify line integrity. Monitor blood pressure every 5 minutes.
Dexmedetomidine	Alpha-2 agonist sedative. Minimal respiratory depression. Monitor for bradycardia and hypotension.
Midazolam infusion	Benzodiazepine sedation. AMR formulary agent — see Section III for pharmacology.
Fentanyl infusion	Opioid analgesia. AMR formulary agent — see Section III for pharmacology.
Ketamine infusion	Dissociative sedation for intubated adults only. AMR formulary agent — see Section III.
Hydromorphone infusion	Opioid analgesia. Monitor for respiratory depression.
Vecuronium	Neuromuscular blocker. Patient is fully paralyzed and cannot protect airway or signal distress. Absolute airway and ventilator vigilance required.
Rocuronium	Neuromuscular blocker. Same considerations as vecuronium. Sugammadex reversal available at receiving facility.
Cisatracurium	Neuromuscular blocker. Hoffman elimination. ICU-level paralysis. Same transport vigilance as other paralytics.

PARALYZED PATIENT: A patient on a neuromuscular blocker infusion cannot breathe independently, signal distress, or protect their airway if the ventilator fails. ETCO2 monitoring is essential. BVM must be immediately accessible. Loss of ventilation in a paralyzed patient is an immediate diversion trigger.

IV-C3. CARDIAC RATE & RHYTHM CONTROL / ANTICOAGULATION

MEDICATION / CATEGORY	TRANSPORT MONITORING NOTES
Amiodarone infusion	Antiarrhythmic. AMR formulary agent — see Section III. Monitor for hypotension.
Lidocaine infusion	Antiarrhythmic. AMR formulary agent — see Section III. Monitor for neurologic toxicity.
Diltiazem infusion	Rate control for A-fib with RVR. Monitor for hypotension and excessive bradycardia.
Esmolol infusion	Ultra-short-acting beta blocker. Rate control and BP management. Monitor for bradycardia and hypotension.
Heparin infusion	Anticoagulation for ACS, PE, DVT, STEMI transfers. Do not adjust without explicit order. Monitor access site for bleeding.
Bivalirudin	Direct thrombin inhibitor. Used in HIT. Monitor for bleeding.
Argatroban	Direct thrombin inhibitor. Hepatically metabolized. Monitor for bleeding.
GP IIb/IIIa inhibitors	Eptifibatide, tirofiban. Post-PCI or high-risk ACS. Monitor for bleeding and thrombocytopenia.

DIVERSION REQUIRED: Hemodynamically significant dysrhythmia unresponsive to ongoing infusion, refractory hypotension from rate-control agent, or active hemorrhage with hemodynamic instability.

IV-C4. ENDOCRINE, ELECTROLYTES & CRITICAL CARE ADJUNCTS

MEDICATION / CATEGORY	TRANSPORT MONITORING NOTES
Insulin infusion	Regular insulin for DKA, HHS, hyperglycemia. Monitor glucose every 30 minutes. Treat hypoglycemia per D10 standing order.
Dextrose infusion	Glucose replacement or maintenance. Monitor blood glucose at intervals.
Potassium chloride (KCl)	Electrolyte replacement. Must run via pump at controlled rate. Never push undiluted KCl. Monitor cardiac rhythm continuously.
Magnesium infusion	AMR formulary agent (Paramedic scope) — see Section III.
Sodium bicarbonate infusion	AMR formulary agent (Paramedic scope) — see Section III.
Hypertonic saline (3%)	ICU-ordered for hyponatremia or cerebral edema. Rate must not be changed without DMO order. Monitor neurologic status closely.

KCl SAFETY: Potassium chloride infusion must run via pump at all times. Free-flow or bolus potassium can cause fatal cardiac arrest. Confirm pump programming before departure and after any line manipulation.

IV-C5. ANTIBIOTICS, ANTIFUNGALS & ANTIVIRALS

MEDICATION / CATEGORY	TRANSPORT MONITORING NOTES
Piperacillin-tazobactam	Broad-spectrum. Common in sepsis and pneumonia. Monitor for infusion reactions.
Vancomycin	Must infuse slowly (≥60 min) to avoid Red Man Syndrome. Monitor for flushing, erythema, and pruritus.
Cefepime	Fourth-generation cephalosporin. Monitor for neurotoxicity (confusion, seizures) in renal impairment.
Meropenem	Carbapenem for resistant organisms. Monitor for infusion reactions.
Antifungals	Fluconazole, micafungin. Monitor for infusion reactions and QT prolongation (fluconazole).
Acyclovir	Antiviral. Adequate hydration essential — risk of crystalline nephropathy. Monitor urine output report from sending facility.

INFUSION REACTION RESPONSE

1. Stop the infusion immediately.
2. Maintain IV access with normal saline.
3. Assess airway, breathing, and circulation.
4. Initiate Anaphylaxis protocol if indicated.
5. Notify DMO and receiving facility.
6. Determine need for diversion based on patient stability.

IV-C6. BLOOD PRODUCTS & HEMOSTATIC THERAPIES

Blood product administration is Paramedic-managed. Verify patient identification, unit number, and blood type compatibility prior to departure for all blood products.

MEDICATION / CATEGORY	TRANSPORT MONITORING NOTES
Packed Red Blood Cells (pRBC)	Facility-directed rate (commonly 1 unit over 1.5–4 hours). Verify compatibility before departure. Monitor for hemolytic reaction, TACO, and TRALI.
Fresh Frozen Plasma (FFP)	Verify prior to departure. Monitor for allergic reaction, anaphylaxis, TRALI, and volume overload.
Platelets	Verify prior to departure. Monitor for allergic reaction and anaphylaxis.
Tranexamic acid (TXA) infusion	Antifibrinolytic. Facility-initiated. Monitor vital signs and for signs of thromboembolism.

MEDICATION / CATEGORY	TRANSPORT MONITORING NOTES
Factor concentrates	Facility-managed hemostatic agents. Monitoring-focused during transport.

TRANSFUSION REACTION RESPONSE

1. Stop the transfusion immediately. Maintain IV access with normal saline.
2. Assess airway, breathing, and circulation.
3. Initiate Anaphylaxis protocol if anaphylaxis is suspected.
4. Notify DMO and receiving facility immediately.
5. Determine need for diversion based on patient stability.

> *DIVERSION REQUIRED: Suspected hemolytic reaction (hypotension, back pain, hemoglobinuria), severe respiratory distress or hypoxia, refractory hypotension, or airway compromise during active transfusion.*

DOCUMENTATION — BLOOD PRODUCTS

- Product type: pRBC, FFP, platelets, or hemostatic agent.
- Unit number and compatibility verification confirmation.
- Ordered infusion rate and actual rate at departure.
- Vital sign trend during transport.
- Any reaction and interventions performed.
- Communication with DMO and receiving facility.

SECTION V — PROCEDURES MANUAL

Each procedure card identifies the credential level authorized to perform that procedure independently under standing orders. The scope badge on each card follows the same color convention used throughout this document: green (All Levels), blue (AEMT+), or navy (PM Only).

V-1. BAG-VALVE-MASK (BVM) VENTILATION — ALL LEVELS

INDICATIONS

- Apnea or inadequate respiratory effort.
- Hypoventilation requiring assisted ventilation.
- Ventilator failure — manual rescue ventilation.
- Pre-oxygenation prior to airway intervention.

EQUIPMENT

BVM device with oxygen reservoir bag
Appropriate mask size (adult / pediatric)
PEEP valve (attach when indicated)
Oxygen source with flow set to 15 L/min
OPA or NPA as indicated

PROCEDURE STEPS

1. Position airway: head tilt-chin lift (non-trauma) or jaw thrust (trauma or suspected cervical injury).
2. Insert OPA or NPA as indicated to maintain airway patency.
3. Apply mask over nose and mouth; ensure tight seal using C-E grip.
4. Connect BVM to oxygen at 15 L/min with reservoir bag attached.
5. Ventilate at appropriate rate: adult 10–12 breaths/min; pediatric per PALS guidance.
6. Observe chest rise with each breath; adjust mask seal or airway position if absent.
7. Monitor SpO2 and ETCO2 if available throughout ventilation.

CRITICAL NOTES

> *Avoid excessive ventilation rate or volume. Over-ventilation causes gastric distention, aspiration risk, and reduces venous return. Squeeze the bag only enough to see the chest rise.*

> *Two-rescuer BVM technique is preferred when staffing allows — one provider maintains mask seal, one squeezes the bag. This significantly improves tidal volume delivery.*

DOCUMENTATION

- Indication for BVM use.

- Duration of manual ventilation.
- SpO2 and patient response.
- Transition to mechanical ventilation if performed.

V-2. OXYGEN ADMINISTRATION — ALL LEVELS

INDICATIONS

- Hypoxia (SpO2 <94% in most patients).
- Respiratory distress.
- Shock or hemodynamic compromise.
- Suspected carbon monoxide poisoning (100% NRB regardless of SpO2).
- Cardiac arrest (100% oxygen during CPR via BVM).

EQUIPMENT

Nasal cannula (1–6 L/min)
Simple face mask (6–10 L/min)
Non-rebreather mask (10–15 L/min)
BVM with reservoir (15 L/min)
Oxygen cylinder with regulator

PROCEDURE STEPS

1. Select delivery device based on required FiO2 and patient tolerance.
2. Apply device securely; ensure patient comfort and compliance.
3. Set flow rate to achieve target SpO2.
4. Monitor SpO2 continuously; titrate flow rate to maintain target.
5. Reassess device and flow rate at regular intervals throughout transport.

CRITICAL NOTES

> *Oxygen is a drug — titrate to effect. Target SpO2 ≥94% for most patients. Post-ROSC: target 94–98% to avoid hyperoxia. Ischemic stroke: avoid hyperoxia. COPD with known hypoxic drive: titrate cautiously to lowest effective flow.*

DOCUMENTATION

- Delivery device used.
- Flow rate at departure and any changes.
- SpO2 trend throughout transport.
- Patient tolerance and any complications.
- SpO2 and ETCO2 before and after.

- Character and volume of secretions removed.
- Number of suction passes performed.
- Catheter size used.
- Indication for suctioning.

DOCUMENTATION

Deep suctioning of the ETT or tracheostomy is authorized at the AEMT level under Kansas AEMT educational standards and AMR Kansas City Medical Director standing order. Upper airway suctioning (oral and nasal) remains All Levels — see V-3A.

SCOPE NOTE

> *Vagal stimulation from deep suctioning can cause significant bradycardia, particularly in pediatric patients. Monitor heart rate continuously. If bradycardia occurs: stop suctioning immediately, ventilate with 100% oxygen, and reassess. Persistent bradycardia: atropine per protocol (Paramedic scope).*

> *Do not use saline lavage instillation prior to suctioning. Current evidence does not support routine saline lavage and it may worsen hypoxia. If secretions are extremely thick and impacted, contact DMO.*

9. Reassess SpO2, ETCO2, and work of breathing after suctioning.
8. For tracheostomy: after suctioning, confirm tube position and cuff status are unchanged.
7. Allow full re-oxygenation between passes; do not suction more than twice consecutively without re-oxygenating.
6. Limit each suction pass to 10–15 seconds maximum.
5. Apply suction while withdrawing catheter using a rotating motion. Do not apply suction during insertion.
4. Insert catheter without applying suction; advance to measured depth.
3. Measure catheter depth: for ETT, measure to approximate carina depth (ETT length plus 1–2 cm). For tracheostomy, advance to just below the tube tip.
2. Don sterile gloves; maintain sterile technique throughout.
1. Pre-oxygenate the patient: increase FiO2 to 100% for minimum 30 seconds before suctioning. For ventilated patients, use ventilator hyperoxygenation function if available.

PROCEDURE STEPS

Portable suction device (confirmed functional)
Sterile flexible suction catheter — sized at half the inner diameter of the ETT or tracheostomy tube
Sterile gloves
BVM with oxygen immediately available
Pulse oximeter and waveform capnography
Pre-oxygenation source (BVM or ventilator at 100% FiO2)

EQUIPMENT

- ETCO2 waveform change suggesting airway obstruction in intubated patient.

- Visible secretions at the ETT or tracheostomy opening.
- Tracheostomy patient with audible secretions, declining SpO2, or increasing work of breathing.
- Intubated patient with audible secretions in the ETT or declining SpO2 suggesting secretion accumulation.

INDICATIONS

- Patient tolerance and any complications.
- SpO2 and ETCO2 before and after.
- Character and volume of secretions removed.
- Number of suction passes performed.
- Catheter size used.
- Indication for suctioning.

DOCUMENTATION

Deep suctioning of the ETT or tracheostomy is authorized at the AEMT level under Kansas AEMT educational standards and AMR Kansas City Medical Director standing order. Upper airway suctioning (oral and nasal) remains All Levels — see V-3A.

SCOPE NOTE

> *Vagal stimulation from deep suctioning can cause significant bradycardia, particularly in pediatric patients. Monitor heart rate continuously. If bradycardia occurs: stop suctioning immediately, ventilate with 100% oxygen, and reassess. Persistent bradycardia: atropine per protocol (Paramedic scope).*

> *Do not use saline lavage instillation prior to suctioning. Current evidence does not support routine saline lavage and it may worsen hypoxia. If secretions are extremely thick and impacted, contact DMO.*

9. Reassess SpO2, ETCO2, and work of breathing after suctioning.
8. For tracheostomy: after suctioning, confirm tube position and cuff status are unchanged.
7. Allow full re-oxygenation between passes; do not suction more than twice consecutively without re-oxygenating.
6. Limit each suction pass to 10–15 seconds maximum.
5. Apply suction while withdrawing catheter using a rotating motion. Do not apply suction during insertion.
4. Insert catheter without applying suction; advance to measured depth.
3. Measure catheter depth: for ETT, measure to approximate carina depth (ETT length plus 1–2 cm). For tracheostomy, advance to just below the tube tip.
2. Don sterile gloves; maintain sterile technique throughout.
1. Pre-oxygenate the patient: increase FiO2 to 100% for minimum 30 seconds before suctioning. For ventilated patients, use ventilator hyperoxygenation function if available.

PROCEDURE STEPS

Portable suction device (confirmed functional)

Sterile flexible suction catheter — sized at half the inner diameter of the ETT or tracheostomy tube
Sterile gloves
BVM with oxygen immediately available
Pulse oximeter and waveform capnography
Pre-oxygenation source (BVM or ventilator at 100% FiO2)

EQUIPMENT

- ETCO2 waveform change suggesting airway obstruction in intubated patient.
- Visible secretions at the ETT or tracheostomy opening.
- Tracheostomy patient with audible secretions, declining SpO2, or increasing work of breathing.
- Intubated patient with audible secretions in the ETT or declining SpO2 suggesting secretion accumulation.

INDICATIONS

V-3A. UPPER AIRWAY SUCTIONING — ALL LEVELS

INDICATIONS

- Visible secretions, blood, or vomitus in the oral or nasal airway.
- Audible gurgling or airway obstruction from secretions.
- Declining SpO2 with suspected upper airway secretion accumulation.
- Prior to BVM ventilation when airway is not clear.

EQUIPMENT

Portable suction device (confirmed functional)
Rigid (Yankauer) catheter — oropharyngeal suctioning
Soft flexible catheter — nasopharyngeal suctioning
Gloves and eye protection

PROCEDURE STEPS

1. Position patient: lateral if unconscious to allow passive drainage; upright if tolerating.
2. Turn on suction; confirm adequate suction pressure.
3. For oral suctioning: insert Yankauer along the inside of the cheek to the back of the pharynx; apply suction while withdrawing in a sweeping motion.
4. For nasal suctioning: insert soft catheter gently along the floor of the nasal passage; apply suction while withdrawing with a rotating motion.
5. Limit each suction attempt to 10–15 seconds maximum.
6. Allow patient to recover oxygenation between attempts; pre-oxygenate before suctioning if SpO2 permits.
7. Reassess airway patency and SpO2 after each suction attempt.

Monitor for vagal stimulation during suctioning — bradycardia can occur, particularly in pediatric patients. If bradycardia develops: stop suctioning immediately, ventilate with 100% oxygen, and notify Paramedic.

DOCUMENTATION

- Indication for suctioning.
- Catheter type used (rigid vs. soft).
- Character and volume of secretions removed.
- SpO2 before and after suctioning.

V-3A. UPPER AIRWAY SUCTIONING — ALL LEVELS

INDICATIONS

- Visible secretions, blood, or vomitus in the oral or nasal airway.
- Audible gurgling or airway obstruction from secretions.
- Declining SpO2 with suspected upper airway secretion accumulation.
- Prior to BVM ventilation when airway is not clear.

EQUIPMENT

Portable suction device (confirmed functional)
Rigid (Yankauer) catheter — oropharyngeal suctioning
Soft flexible catheter — nasopharyngeal suctioning
Gloves and eye protection

PROCEDURE STEPS

1. Position patient: lateral if unconscious to allow passive drainage; upright if tolerating.
2. Turn on suction; confirm adequate suction pressure.
3. For oral suctioning: insert Yankauer along the inside of the cheek to the back of the pharynx; apply suction while withdrawing in a sweeping motion.
4. For nasal suctioning: insert soft catheter gently along the floor of the nasal passage; apply suction while withdrawing with a rotating motion.
5. Limit each suction attempt to 10–15 seconds maximum.
6. Allow patient to recover oxygenation between attempts; pre-oxygenate before suctioning if SpO2 permits.
7. Reassess airway patency and SpO2 after each suction attempt.

Monitor for vagal stimulation during suctioning — bradycardia can occur, particularly in pediatric patients. If bradycardia develops: stop suctioning immediately, ventilate with 100% oxygen, and notify Paramedic.

DOCUMENTATION

- Indication for suctioning.

- Catheter type used (rigid vs. soft).
- Character and volume of secretions removed.
- SpO2 before and after suctioning.

V-3B. DEEP SUCTIONING — ETT AND TRACHEOSTOMY — AEMT+

INDICATIONS

- Intubated patient with audible secretions in the ETT or declining SpO2 suggesting secretion accumulation.
- Tracheostomy patient with audible secretions, declining SpO2, or increasing work of breathing.
- Visible secretions at the ETT or tracheostomy opening.
- ETCO2 waveform change suggesting airway obstruction in intubated patient.

EQUIPMENT

Portable suction device (confirmed functional)
Sterile flexible suction catheter — sized at half the inner diameter of the ETT or tracheostomy tube
Sterile gloves
BVM with oxygen immediately available
Pulse oximeter and waveform capnography
Pre-oxygenation source (BVM or ventilator at 100% FiO2)

PROCEDURE STEPS

1. Pre-oxygenate the patient: increase FiO2 to 100% for minimum 30 seconds before suctioning. For ventilated patients, use ventilator hyperoxygenation function if available.
2. Don sterile gloves; maintain sterile technique throughout.
3. Measure catheter depth: for ETT, measure to approximate carina depth (ETT length plus 1–2 cm). For tracheostomy, advance to just below the tube tip.
4. Insert catheter without applying suction; advance to measured depth.
5. Apply suction while withdrawing catheter using a rotating motion. Do not apply suction during insertion.
6. Limit each suction pass to 10–15 seconds maximum.
7. Allow full re-oxygenation between passes; do not suction more than twice consecutively without re-oxygenating.
8. For tracheostomy: after suctioning, confirm tube position and cuff status are unchanged.
9. Reassess SpO2, ETCO2, and work of breathing after suctioning.

> *Do not use saline lavage instillation prior to suctioning. Current evidence does not support routine saline lavage and it may worsen hypoxia. If secretions are extremely thick and impacted, contact DMO.*

> *Vagal stimulation from deep suctioning can cause significant bradycardia, particularly in pediatric patients. Monitor heart rate continuously. If bradycardia occurs: stop suctioning immediately, ventilate with 100% oxygen, and reassess. Persistent bradycardia: atropine per protocol (Paramedic scope).*

SCOPE NOTE

Deep suctioning of the ETT or tracheostomy is authorized at the AEMT level under Kansas AEMT educational standards and AMR Kansas City Medical Director standing order. Upper airway suctioning (oral and nasal) remains All Levels — see V-3A.

DOCUMENTATION

- Indication for suctioning.
- Catheter size used.
- Number of suction passes performed.
- Character and volume of secretions removed.
- SpO2 and ETCO2 before and after.
- Patient tolerance and any complications.

V-4. ENDOTRACHEAL INTUBATION — PM ONLY

INDICATIONS

- Airway compromise with inability to maintain patent airway.
- Respiratory failure unresponsive to non-invasive support.
- Inability to protect airway (GCS ≤8, loss of protective reflexes).
- Anticipated clinical deterioration requiring definitive airway.

EQUIPMENT

Laryngoscope with appropriate blade (Miller or Macintosh)
Endotracheal tube (ETT) appropriate size with stylet
Syringe for cuff inflation (10 mL)
ETCO2 detector (colorimetric or waveform capnography)
BVM and oxygen source
Suction device and Yankauer catheter
Tape or commercial ETT holder for tube securement

PROCEDURE STEPS

1. Pre-oxygenate with BVM and 100% oxygen for minimum 3 minutes if time allows.
2. Position patient in sniffing position (unless cervical spine precautions required).
3. Visualize vocal cords via direct laryngoscopy.
4. Advance ETT through cords under direct visualization; note depth at teeth.
5. Inflate cuff with 5–10 mL air; remove stylet.
6. Confirm placement with waveform capnography (primary) and bilateral auscultation.
7. Secure ETT with tape or commercial holder; document cm marking at teeth.
8. Connect to BVM or ventilator; initiate ventilation.

CRITICAL NOTES

> *No RSI is permitted under AMR Kansas City protocols. Maximum two laryngoscopy attempts before escalating to supraglottic airway (SGA/iGel). If two attempts fail, do not persist — ventilate with BVM and SGA and contact DMO.*

> *Waveform capnography is the gold standard for ETT confirmation. Colorimetric ETCO2 alone is not sufficient for a low-perfusion state (cardiac arrest). Always combine with auscultation and clinical assessment.*

DOCUMENTATION

- ETT size and depth (cm at teeth).
- Confirmation method (waveform capnography, auscultation).
- Number of attempts.
- Any complications during the procedure.

V-5. CPAP (FLOW-SAFE II) — ALL LEVELS

INDICATIONS

- Acute pulmonary edema with respiratory distress.
- COPD exacerbation with moderate to severe hypoxia.
- Hypoxia unresponsive to high-flow oxygen via NRB.
- Patient must be alert, cooperative, and able to protect airway.

EQUIPMENT

Flow-Safe II CPAP device
Appropriately sized CPAP mask
Head strap assembly
Oxygen source (minimum 15 L/min required)
Pressure manometer (built into Flow-Safe II)

PROCEDURE STEPS

1. Explain the procedure to the patient; patient cooperation is essential.
2. Select appropriate mask size; ensure no facial hair that may break seal.
3. Apply mask over nose and mouth; secure head strap snugly.
4. Connect Flow-Safe II to oxygen at 15 L/min; verify pressure gauge reading.
5. Initiate CPAP at 5 cmH2O; titrate to 10 cmH2O if needed based on response.
6. Monitor mask seal, respiratory rate, work of breathing, and SpO2 continuously.
7. Reassess patient tolerance every 5 minutes throughout transport.

CRITICAL NOTES

CPAP is contraindicated in: hypotension (SBP <90 mmHg), decreased mental status, inability to protect airway, active emesis, and suspected pneumothorax. Reassess these contraindications before initiating.

If the patient deteriorates on CPAP (worsening SpO2, decreasing mental status, increasing distress), remove CPAP and prepare for intubation. Do not persist with a failing CPAP attempt.

DOCUMENTATION

- CPAP pressure setting used.
- Patient tolerance and response.
- SpO2 before and during CPAP.
- Respiratory rate trend.

V-6. LTV 1200 VENTILATOR MANAGEMENT — PM ONLY

INDICATIONS

- Intubated patient requiring mechanical ventilation during transport.
- Transition from hospital ventilator to LTV 1200 for transport.
- Ventilator failure — replace failed sending facility ventilator.

EQUIPMENT

LTV 1200 transport ventilator (battery confirmed >50% charge)
Ventilator circuit with flow transducer sense lines and exhalation valve drive line
BVM with PEEP valve (immediately accessible — never more than arm's reach away)
Supplemental oxygen source (E-cylinder minimum; verify duration for transport)
Pulse oximeter and waveform capnography (mandatory for all ventilated transports)
Inline suction catheter (recommended for transport >30 minutes)

IDEAL BODY WEIGHT & TIDAL VOLUME CALCULATION

Tidal volume must be based on **Ideal Body Weight (IBW)**, not actual body weight. Using actual weight in obese patients causes volutrauma.

Parameter	Value/Formula
Males	IBW (kg) = 50 + 2.3 × (height in inches − 60)
Females	IBW (kg) = 45.5 + 2.3 × (height in inches − 60)
Target TV	6–8 mL/kg IBW (lung-protective; use 6 mL/kg for ARDS or TBI)
Quick estimate	Average adult male 70 cm (5'11") = ~70 kg IBW → target 420–560 mL
Quick estimate	Average adult female 65 cm (5'7") = ~60 kg IBW → target 360–480 mL

VENTILATION MODES — SELECTION GUIDE

Mode	How It Works	When to Use
Assist/Control (A/C)	Delivers a full mandatory breath at set rate; patient may trigger additional full breaths above set rate. Every breath is a full machine breath.	Default for most transport patients. Use when patient has unreliable or absent drive. Easiest to manage en route.
SIMV	Delivers set number of mandatory breaths; patient may take unsupported spontaneous breaths between. Optional Pressure Support for spontaneous breaths.	Use when patient has consistent spontaneous drive and sending facility was weaning. Requires more monitoring — watch for spontaneous breath stacking.
CPAP/PSV	No mandatory rate. Patient breathes spontaneously with pressure support. Apnea backup activates if no breath within Apnea Interval.	Use only for patients with strong, reliable spontaneous drive. High risk if drive fails en route. Rarely appropriate for transport without RN/RT.
NPPV	Non-invasive BiPAP via mask (IPAP/EPAP). Not for intubated patients.	Not used for intubated transport. CPAP via Flow-Safe II is preferred for non-intubated patients (see V-5).

INITIAL SETTINGS — BY CLINICAL CONDITION

Condition	Initial Settings	Clinical Notes
Normal lungs (post-arrest, OD, trauma)	TV: 6–8 mL/kg IBW Rate: 12–16 FiO2: titrate to SpO2 94–98% PEEP: 5 cmH2O Insp Time: 1.0 sec High Pres Limit: 40 cmH2O	Most common transport scenario. Confirm ETCO2 35–40 mmHg. Watch for fighting the vent — may need sedation adjustment.
ARDS / Pulmonary edema / Pneumonia	TV: 6 mL/kg IBW (strict) Rate: 16–20 FiO2: titrate SpO2 ≥92% PEEP: 8–12 cmH2O (per sending orders) Insp Time: 1.0–1.2 sec High Pres Limit: 35 cmH2O	Low-tidal-volume strategy is mandatory. Plateau pressure target <30 cmH2O. Do not increase TV to chase ETCO2 — permissive hypercapnia is acceptable. PEEP changes require close hemodynamic monitoring.
TBI / Elevated ICP	TV: 6–7 mL/kg IBW Rate: 16–18 (target ETCO2 35–40) FiO2: 100% if unstable; titrate to 94–98% PEEP: 5 cmH2O (minimize — higher PEEP may raise ICP) Insp Time: 1.0 sec	ETCO2 target is critical — avoid both hypercapnia (vasodilation, ICP rise) and hypocapnia (vasoconstriction, ischemia). For herniation signs only: brief controlled hyperventilation ETCO2 30–35, contact DMO. Never drop ETCO2 below 30.
Obstructive (COPD / Asthma)	TV: 6–8 mL/kg IBW Rate: 10–12 (allow full exhalation) FiO2: titrate SpO2 88–92% PEEP: 0–3 cmH2O Insp Time: 0.8–1.0 sec I:E ratio target 1:3 or greater	Auto-PEEP (breath stacking) is the primary risk. Slow rate and long expiratory time prevent it. If HIGH PRES alarm is recurrent without airway obstruction, suspect auto-PEEP — disconnect briefly and listen for prolonged exhalation. Contact DMO before increasing PEEP.
Hemodynamic instability / Shock	TV: 6–8 mL/kg IBW Rate: 12–14 FiO2: 100% initially PEEP: 5 cmH2O (may reduce if profound hypotension) Insp Time: 1.0 sec	Positive pressure ventilation reduces venous return and cardiac output. Expect BP drop on initiation. Have vasopressor running or ready before connecting. Monitor MAP continuously after any PEEP change.

TRANSITION FROM HOSPITAL VENTILATOR — STEP-BY-STEP

> *Obtain a verbal handoff from the sending RT or RN covering: current mode, TV, rate, FiO2, PEEP, inspiratory time, last ABG if available, and any recent vent changes. Document these at departure.*

1. Confirm ETT position and security — check cm marking at lip, bilateral breath sounds, waveform capnography.
2. Pre-oxygenate: increase sending vent FiO2 to 100% for 2–3 minutes before transition.
3. Connect LTV 1200 breathing circuit: main tube to 22mm outlet port; connect both flow transducer sense lines (non-interchangeable Luer fittings); connect exhalation valve drive line.
4. Power on LTV 1200 — press On/Standby. If SAME PATIENT prompt appears: select NEW PATIENT for a new setup; select SAME PATIENT to resume previous settings.
5. Set mode (A/C is default for most patients). Press mode button to cycle: Assist/Control → SIMV/CPAP → NPPV.
6. Set volume vs. pressure ventilation type by pressing Select button twice within mode.
7. Set Tidal Volume (volume mode) or Pressure Control (pressure mode).
8. Set Breath Rate.
9. Set Inspiratory Time.
10. Set FiO2 (O2% button — LTV 1200 only). Adjust to match sending vent or target.
11. Set Sensitivity: default 3 L/min for adults. Higher sensitivity (lower number) if patient is triggering poorly; lower sensitivity (higher number) if auto-triggering.
12. Set PEEP using dedicated PEEP control knob.
13. Set alarms: High Pressure Limit (40 cmH2O adult default); Low Pressure (10 cmH2O); Low Minute Volume (3 L adult default).
14. Disconnect from hospital vent; immediately connect ETT to LTV 1200 circuit.
15. Confirm: bilateral chest rise, SpO2 improving or stable, ETCO2 waveform present and appropriate, absence of HIGH PRES or LOW PRES alarms.
16. Document all settings at departure with time.

MONITORED DATA — DISPLAY READINGS

Press Monitor Select button to cycle through displays. Press twice to auto-scroll.

Display	What It Means
PIP	Peak Inspiratory Pressure — pressure at end of inspiration. Target <35 cmH2O; rising PIP = obstruction, secretions, decreased compliance.
MAP	Mean Airway Pressure — running 60-second average. Elevated MAP = increased risk of barotrauma and hemodynamic compromise.
PEEP	End-expiratory pressure measured at patient wye. Should match set PEEP; higher than set = auto-PEEP (air trapping).
f	Total breath rate including patient-triggered breaths. Higher than set rate = patient is triggering; lower = apnea risk.
Vte	Exhaled tidal volume. Should approximate set TV; significant difference = circuit leak or auto-cycling.
VE	Exhaled minute volume over last 60 seconds. Target 6–8 L/min for most adults.
I:E	Measured inspiratory:expiratory ratio. Target ≥1:2 for most patients; ≥1:3 for obstructive disease.

ALARM REFERENCE — CAUSES AND IMMEDIATE ACTIONS

For any alarm you cannot immediately identify and correct: disconnect patient from LTV 1200, ventilate with BVM, and troubleshoot. Never delay oxygenation to troubleshoot.

ALARM	CAUSE	IMMEDIATE ACTION
APNEA XX bpm	No breath detected within set Apnea Interval. Ventilator enters Apnea Backup mode at displayed rate.	Assess patient — apnea may indicate deterioration, sedation excess, or disconnection. Verify circuit integrity. Adjust settings if spontaneous drive has changed.
HIGH PRES	Circuit pressure exceeded High Pressure Limit. Inspiration terminated. Common causes: secretions, ETT kink, biting, coughing, right mainstem intubation, pneumothorax, decreased compliance.	Silence alarm. Suction ETT if secretions suspected. Check circuit for kinks. Assess breath sounds bilaterally. Verify ETT position. If persistent and unexplained: needle decompress if tension PTX suspected. Contact DMO.
LOW PRES	Peak inspiratory pressure below Low Pressure setting during a mandatory breath. Circuit leak, disconnection, or ETT cuff deflation.	Check circuit connections at ETT, wye, and ventilator port. Verify ETT cuff is inflated. Check cuff pressure (target 20–30 cmH2O). If cannot identify leak: BVM and contact DMO.
LOW MIN VOL	Exhaled minute volume below set threshold. Circuit leak, patient not triggering in CPAP/SIMV, hypoventilation.	Check circuit integrity. Assess patient respiratory drive. Verify settings are appropriate. Consider mode change to A/C. Contact DMO if persistent.
DISC/SENSE	Patient circuit or proximal pressure sense line disconnected, or low-side flow transducer sense line disconnected, or proximal line kinked/occluded.	Check all circuit connections — both flow transducer sense lines (Luer fittings) and main breathing tube. Check pressure sense line for kinks. Reconnect and confirm alarm clears.
HIGH PEEP	PEEP exceeds High PEEP alarm setting. Exhalation valve, PEEP valve, or circuit occluded.	Check exhalation valve and PEEP valve for obstruction. Check circuit for kinks in expiratory limb. In COPD/asthma: suspect auto-PEEP — briefly disconnect circuit and allow full exhalation.
HIGH f	Total breath rate exceeds High f alarm threshold. Patient is taking many spontaneous breaths (pain, anxiety, metabolic acidosis, hypoxia, circuit leak causing auto-triggering).	Assess patient comfort and pain. Check for circuit leak causing auto-triggering (reduce sensitivity if auto-triggering). Address underlying cause. Contact DMO if respiratory distress.
BAT LOW BAT EMPTY	Internal battery is low (10 min remaining) or critically low (5 min remaining). BAT EMPTY cannot be silenced.	Connect to vehicle DC power immediately. BAT LOW: amber LED. BAT EMPTY: red LED. Keep vehicle power connected throughout transport. Confirm battery >50% before every transport.
POWER LOST	External power voltage dropped below usable level; ventilator switched to internal battery.	Check vehicle power connection. Reconnect DC power. Monitor battery level indicator. If cannot restore external power: calculate remaining battery time and transport accordingly.
INOP	Ventilator has detected an unsafe condition during operation. Device is non-functional.	Immediately disconnect patient and ventilate with BVM. Remove LTV 1200 from service. Contact DMO. Transport to nearest appropriate facility with manual ventilation en route.

POWER INDICATORS — QUICK REFERENCE

Battery LED: GREEN	Internal battery acceptable — approximately 45 minutes remaining at nominal settings.
Battery LED: AMBER	Battery low — approximately 10 minutes remaining. Connect to external DC power immediately.
Battery LED: RED	Battery critically low — approximately 5 minutes remaining. URGENT: connect external power now.
Battery LED: OFF	Running on AC or external battery (normal during transport with vehicle power connected).
Charge LED: GREEN	Internal battery fully charged.
Charge LED: AMBER	Battery charging (not yet full).
Charge LED: RED	Charge fault or battery fault — remove from service, contact CareFusion service.
Ext Power LED: GREEN	External power level acceptable.
Ext Power LED: AMBER	External power level low — evaluate connection and power source.

TROUBLESHOOTING — COMMON TRANSPORT PROBLEMS

Problem	Response
Patient fighting the ventilator / dyssynchrony	Assess adequacy of sedation — most common cause. Check ETCO2 for hypercapnia (patient may need higher rate). Check for pain or uncomfortable positioning. If on SIMV, consider switching to A/C. Contact DMO if unresolvable or patient deteriorating.
SpO2 declining on vent	Increase FiO2 first. Check for circuit disconnection. Suction ETT — secretions are most common cause. Verify bilateral breath sounds — right mainstem intubation or tension PTX. Check PEEP — may need to increase. Contact DMO if not responsive.
ETCO2 rising (hypercapnia)	Increase rate and/or tidal volume (within safe limits). Check for circuit leak reducing effective ventilation. Suction if secretions. Do NOT hyperventilate — target 35–40 mmHg. Exception: controlled hyperventilation for herniation signs per DMO order.
ETCO2 falling (hypocapnia)	Decrease rate. In A/C: if patient is triggering excess breaths, increase sedation or adjust sensitivity. Hypocapnia causes cerebral vasoconstriction — particularly dangerous in TBI patients.
Recurrent HIGH PRES alarms	Suction ETT. Check for biting — insert bite block. Check circuit for kinks. Auscultate: if asymmetric, check ETT depth. Bilateral silent: consider tension PTX. Sedation may be needed. Do not simply increase High Pres Limit without identifying cause.
Auto-PEEP / breath stacking (COPD/asthma)	Measured PEEP > set PEEP on monitor display. Reduce rate. Prolong expiratory time (lower I:E ratio). Disconnect briefly — if prolonged exhalation occurs on disconnect, auto-PEEP is confirmed. May need sedation to reduce patient rate. Contact DMO.
Ventilator will not power on / INOP	Do not attempt to restart. Switch immediately to BVM ventilation. Check vehicle power connection for voltage drop. Remove LTV 1200 from service. Notify receiving facility. Document time of failure.

Unable to confirm ETT placement after transition	Immediately reconnect BVM. Assess chest rise bilaterally. Confirm ETCO2 waveform. Auscultate epigastrium. If esophageal intubation suspected: extubate and reintubate. Do not connect to LTV 1200 without confirmed ETT placement.

CRITICAL NOTES

BVM must be immediately accessible at all times. If any alarm cannot be identified and corrected within 30 seconds: disconnect and manually ventilate. Never persist with a malfunctioning ventilator.

Positive pressure ventilation reduces venous return. Monitor MAP continuously after PEEP increases. If hypotension develops after PEEP increase: reduce PEEP and contact DMO. Have norepinephrine ready for septic and post-arrest patients.

Control Lock: front panel controls can be locked to prevent accidental changes during transport. To lock: press and hold Control Lock button. To unlock (Easy mode): press Select then Control Lock. Verify Control Lock LED status before any setting change.

DOCUMENTATION

- Ventilation mode and breath type (volume vs pressure) at departure.
- All settings at departure: TV, rate, FiO2, PEEP, inspiratory time, sensitivity, alarm limits.
- SpO2 and ETCO2 at departure and at regular intervals (minimum every 5 minutes).
- Any settings changes during transport with clinical rationale and time.
- All alarm events: alarm type, time, cause identified, corrective action, and patient response.
- Battery and power status at departure and on arrival.
- Circuit transitions and ETT position confirmations.

V-7. PERIPHERAL IV ACCESS — AEMT+

INDICATIONS

- Medication administration.
- Fluid resuscitation.
- Vascular access maintenance for ongoing infusion.

EQUIPMENT

Appropriate IV catheter size (14–22 gauge based on indication)
Antiseptic prep (chlorhexidine or alcohol)
Tourniquet
Normal saline flush (10 mL syringe)
Transparent dressing and securement device
IV tubing and fluid bag if infusion is planned

PROCEDURE STEPS

1. Apply tourniquet proximal to intended site; identify appropriate vein.
2. Perform antiseptic skin prep; allow to dry.
3. Stabilize vein with non-dominant hand; insert catheter at 10–20 degree angle with bevel up.
4. Advance catheter into vein on flash of blood return; remove needle.
5. Release tourniquet; confirm blood return with gentle aspiration.
6. Flush with 10 mL normal saline; assess for resistance or swelling indicating infiltration.
7. Secure catheter with transparent dressing; label site with date and catheter size.

CRITICAL NOTES

> *Avoid sites distal to infiltrated, infected, or injured tissue. Avoid the antecubital fossa for vasopressor infusions when possible — extravasation risk is highest at joint-adjacent sites.*

DOCUMENTATION

- Site location and catheter size.
- Number of attempts.
- Confirmation of blood return and flush patency.

V-8. INTRAOSSEOUS (EZ-IO) ACCESS — AEMT+

INDICATIONS

- Emergent vascular access when peripheral IV cannot be obtained rapidly.
- Hemodynamically unstable patient or cardiac arrest.
- Medication administration when IV access fails or is unavailable.

EQUIPMENT

EZ-IO driver
Appropriate EZ-IO needle set (15 mm standard adult, 25 mm obese/tibial, 45 mm humeral)
Antiseptic prep
Normal saline flush (10–20 mL)
Extension set and IV tubing
EZ-Stabilizer dressing

PROCEDURE STEPS

1. Identify insertion site: proximal tibia (preferred), proximal humerus, or distal tibia (medial malleolus).
2. Position extremity appropriately; palpate landmarks.
3. Perform antiseptic skin prep.
4. Select appropriate needle length based on patient size and site.
5. Insert EZ-IO needle perpendicular to the bone with firm steady pressure until a decrease in resistance is felt.

6. Remove driver; confirm placement by unscrewing stylet — needle should stand upright without support.
7. Attach extension set; flush with 10–20 mL normal saline (may be painful in conscious patient — slow flush).
8. Secure with EZ-Stabilizer dressing; connect IV tubing.

CRITICAL NOTES

> *IO placement is contraindicated in: fractured bone at the insertion site, previous IO attempt at the same site within 24 hours, and infection or burn overlying the site.*

> *Conscious patients may experience significant pain with IO medication administration and flushing. Lidocaine 40–50 mg IO slowly prior to flush is authorized to reduce pain in conscious patients (Paramedic scope for lidocaine IO).*

DOCUMENTATION

- Insertion site used.
- Needle size selected.
- Confirmation method.
- Number of attempts.

V-9. CENTRAL LINE MONITORING & FLUSHING — PM ONLY

INDICATIONS

- Maintain patency of an existing central venous catheter during transport.
- Central venous access for medication administration in patients without peripheral IV.

EQUIPMENT

Normal saline flush syringes (10 mL)
Alcohol prep pads
Sterile gloves
Luer-lock caps

PROCEDURE STEPS

1. Confirm line type: PICC, tunneled catheter (Hickman, Groshong, Broviac), or CVC.
2. Don sterile gloves; perform aseptic technique throughout.
3. Scrub hub with alcohol prep pad for minimum 15 seconds; allow to dry.
4. Aspirate gently for blood return (5 mL) if appropriate for line type.
5. Flush using pulsatile technique (push-pause) with 10 mL normal saline.
6. Clamp line if applicable per line type.
7. Replace luer-lock cap with sterile cap if cap was removed.

CRITICAL NOTES

Central line flushing is authorized only for Paramedics who are trained and competency-validated. Do not flush if blood return is absent without confirming line position first.

Medications may NOT be administered via arterial lines under any circumstance. Confirm line identity before any administration.

Withdraw 5 mL blood from any port prior to use to clear heparin lock before medication administration.

DOCUMENTATION

- Line type and lumen used.
- Blood return confirmation.
- Volume flushed.
- Any complications or concerns.

V-10. NEEDLE DECOMPRESSION — PM ONLY

INDICATIONS

- Suspected tension pneumothorax with hemodynamic instability.
- Clinical signs: absent unilateral breath sounds, tracheal deviation (late), hypotension, distended neck veins, worsening hypoxia.
- Traumatic chest injury with respiratory and hemodynamic compromise.

EQUIPMENT

14-gauge or 16-gauge angiocatheter (3.25 inches preferred for adult)
Antiseptic prep
Gloves

PROCEDURE STEPS

1. Identify insertion site: 2nd intercostal space midclavicular line (2ICS MCL) or 4th–5th intercostal space anterior axillary line (4-5ICS AAL).
2. Perform rapid antiseptic prep.
3. Insert needle over the superior border of the rib (to avoid neurovascular bundle).
4. Advance until a rush of air is felt or heard confirming decompression.
5. Remove needle; leave catheter in place.
6. Monitor for improvement in hemodynamics, SpO2, and respiratory status.
7. If no improvement after 60 seconds, consider contralateral decompression or reassess diagnosis.

CRITICAL NOTES

Do not delay needle decompression in a suspected tension pneumothorax with instability. The diagnosis is clinical — do not wait for imaging confirmation. The risk of decompressing a simple pneumothorax is far lower than the risk of missing a tension.

DOCUMENTATION

- Clinical indication and signs present.
- Site used.
- Patient response.
- Any complications.

V-11. XD FOUR-POINT RESTRAINT APPLICATION — ALL LEVELS

INDICATIONS

- Credible risk of elopement during psychiatric or behavioral transport.
- Escalating agitation posing risk to patient or crew safety.
- Risk of self-harm during transport.
- Involuntary psychiatric transport where elopement risk is present.

EQUIPMENT

XD soft cuffs (four)
Stretcher with appropriate anchor points

PROCEDURE STEPS

1. Explain process to patient if clinically appropriate and safe to do so.
2. Apply XD soft cuffs to all four extremities; ensure snug but not constrictive fit.
3. Secure cuffs to stretcher frame anchor points — never to side rails.
4. Position patient supine or semi-Fowler; never prone.
5. Confirm circulation, sensation, and motor function in all four extremities immediately after application.
6. Reassess neurovascular status every 15 minutes throughout transport.

CRITICAL NOTES

Physician order is not required for restraint application under AMR Kansas City protocol. Application is based on provider clinical judgment with documented justification.

Never transport a restrained patient prone. Prone restraint is associated with positional asphyxia and is strictly prohibited.

Proactive application at the sending facility before agitation escalates is preferred over reactive application during transport.

DOCUMENTATION

- Clinical indication and justification for restraint.
- Time restraints applied.
- Neurovascular reassessment findings every 15 minutes.
- Patient response and behavior throughout transport.

V-12. BEHAVIORAL SEDATION PROCEDURE — PM ONLY

INDICATIONS

- Severe agitation posing imminent safety risk to patient or crew during transport.
- Agitation unresponsive to verbal de-escalation and physical restraint.
- Airway or clinical compromise from uncontrolled agitation.

EQUIPMENT

Cardiac monitor and pulse oximeter (must be applied before sedation)
Airway management equipment (BVM, suction) immediately accessible
Midazolam per formulary (Section III)

PROCEDURE STEPS

1. Apply cardiac monitor and pulse oximeter before administering any sedation.
2. Ensure airway equipment (BVM, suction) is immediately accessible.
3. Administer midazolam per formulary dosing: 2–5 mg IV slow push; titrate to effect.
4. Monitor airway, respiratory rate, SpO2, and mental status continuously after administration.
5. May repeat once at 5 minutes if inadequate effect and patient remains hemodynamically stable.
6. Reassess need for physical restraints; sedation and restraint decisions are independent.

CRITICAL NOTES

Ketamine is NOT authorized for psychiatric agitation under AMR Kansas City protocols. Midazolam is the only authorized chemical sedation agent for behavioral indications.

Medical control consultation is recommended but not required under standing order. Document DMO contact attempt and outcome if pursued.

Monitor closely for respiratory depression after administration. Positioning in the recovery position when possible reduces aspiration risk.

DOCUMENTATION

- Clinical indication and justification.
- Medication dose, route, and time administered.
- Response to sedation.

- Airway and respiratory monitoring throughout.
- Restraint status and neurovascular checks if applicable.

V-13. SAPPHIRE INFUSION PUMP SETUP — AEMT+

INDICATIONS

- Any continuous medication infusion requiring controlled rate delivery during transport.
- Transition from sending facility pump to AMR Sapphire pump when appropriate.

EQUIPMENT

Sapphire infusion pump
Compatible IV tubing and administration set
Medication bag or syringe as applicable
Charged battery (confirm before departure)

PROCEDURE STEPS

1. Verify medication name, concentration, and ordered rate against sending physician order.
2. Perform dual verification with partner: medication, concentration, patient weight if applicable, programmed rate.
3. Load medication into pump; program infusion rate per verified order.
4. Prime tubing; connect to patient IV access.
5. Trace tubing from medication source to patient access; label line.
6. Confirm pump is running at correct rate; secure pump to stretcher.
7. Confirm battery level is adequate for transport duration.

CRITICAL NOTES

> *Dual verification is required before departure for all high-risk infusions: vasopressors, sedation, insulin, heparin, and anticoagulants. Document both verifying provider names in the PCR.*

> *AEMT may set up and operate the Sapphire pump for infusions within their authorized medication scope. Pump setup for medications outside AEMT scope is Paramedic responsibility.*

DOCUMENTATION

- Medication, concentration, and programmed rate.
- Dual verification completed — document both provider names.
- Battery status confirmed.
- Any programming changes during transport.

V-14. CARDIAC MONITORING & 12-LEAD ECG — ALL LEVELS

INDICATIONS

- Cardiac symptoms: chest pain, palpitations, syncope, dyspnea.
- Known or suspected dysrhythmia.
- Hemodynamic instability of any cause.
- Suspected ACS or STEMI (12-lead required).
- Electrolyte disturbance (hyperkalemia, hypomagnesemia).
- All high-risk IFT transports.

EQUIPMENT

Cardiac monitor with 12-lead capability
Electrodes (10 for 12-lead; 4 for rhythm monitoring)
Razor if chest hair will interfere with electrode adhesion

PROCEDURE STEPS

1. Apply limb leads in standard configuration (RA, LA, RL, LL).
2. Apply precordial leads V1–V6 in correct anatomical positions.
3. Minimize artifact: ensure electrodes adhere well, patient is as still as possible.
4. Acquire rhythm strip; document interpretation.
5. Acquire 12-lead ECG if indicated; interpret and document findings.
6. Transmit to receiving facility if STEMI is identified (AEMT and PM).

CRITICAL NOTES

> *AEMT scope for 12-lead interpretation is limited to STEMI identification only per AMR Kansas City medical direction. Full 12-lead interpretation beyond STEMI recognition is Paramedic scope. If STEMI is identified by AEMT, notify Paramedic or DMO and receiving facility immediately.*

DOCUMENTATION

- Rhythm interpretation.
- 12-lead findings if acquired.
- Time of acquisition.
- Any changes in rhythm during transport.

V-15. SYNCHRONIZED CARDIOVERSION — PM ONLY

INDICATIONS

- Unstable tachyarrhythmia with pulse: hemodynamic compromise, altered mental status, ischemic chest pain, or acute pulmonary edema.
- SVT, A-fib with RVR, A-flutter, or stable VT failing pharmacologic therapy.

EQUIPMENT

Cardiac monitor/defibrillator with synchronized cardioversion capability
Pads or paddles applied to patient
Sedation medication (midazolam per formulary if patient is conscious)
BVM and airway equipment immediately accessible

PROCEDURE STEPS

1. Confirm rhythm on cardiac monitor.
2. Select synchronized (SYNC) mode on defibrillator; confirm sync markers appear on R waves.
3. If patient is conscious and time permits, administer sedation per formulary.
4. Select appropriate energy setting: SVT 50–100 J; A-fib 200 J biphasic (AHA 2025); VT with pulse 100 J.
5. Ensure all personnel are clear of patient.
6. Deliver shock; hold charge button until shock fires (sync delay is expected).
7. Reassess rhythm and hemodynamic status immediately after shock.
8. Repeat if indicated; escalate energy if no conversion.

CRITICAL NOTES

> *The synchronized mode causes a brief delay before shock delivery — this is expected and intentional. Do not release the button. If the defibrillator does not fire within 5 seconds in sync mode, reassess pad placement and rhythm.*

DOCUMENTATION

- Rhythm before and after cardioversion.
- Energy setting and number of shocks delivered.
- Sedation administered if applicable.
- Patient response.

V-16. TRANSCUTANEOUS PACING — PM ONLY

INDICATIONS

- Symptomatic bradycardia unresponsive to atropine.
- High-degree AV block with hemodynamic compromise.
- Bridge to transvenous pacing or definitive management.

EQUIPMENT

Cardiac monitor/defibrillator with pacing capability
Pacing pads (anterior-posterior placement preferred)
Sedation medication (midazolam per formulary for conscious patients)

PROCEDURE STEPS

1. Apply pacing pads in anterior-posterior position (anterior: left chest; posterior: left scapula).

2. Connect pads to defibrillator; select pacing mode.
3. Set pacing rate: typically 60–80 bpm as starting point.
4. Increase pacing output (mA) from 0 until electrical capture is achieved (pacing spike followed by wide QRS).
5. Confirm mechanical capture: palpable pulse corresponding to paced rate.
6. Once capture is achieved, increase output by 10% above capture threshold (safety margin).
7. Administer sedation if patient is conscious; pacing is painful.
8. Monitor continuously for capture maintenance and hemodynamic response.

CRITICAL NOTES

> *Electrical capture (spike followed by wide QRS on monitor) must be confirmed by palpating a peripheral pulse — do not rely on the monitor alone. Palpate the femoral or brachial pulse, not the carotid (artifact from pacing can simulate carotid pulsation).*

DOCUMENTATION

- Pacing rate and output (mA) at capture.
- Confirmation of both electrical and mechanical capture.
- Patient response and hemodynamic change.
- Sedation administered if applicable.

V-17. SPECIALTY DEVICE MONITORING

The following procedures address monitoring of specialty devices encountered during interfacility transport. AMR crews do not initiate, adjust, or troubleshoot these devices — that authority belongs to the accompanying credentialed clinician or remains within Paramedic scope as specified. All levels are responsible for recognizing alarm states and escalating appropriately.

V-17A. LEFT VENTRICULAR ASSIST DEVICE (LVAD) MONITORING — ALL LEVELS

INDICATIONS

- Transfer to an LVAD-capable center.
- Device evaluation or complication management.
- Non-cardiac interfacility transfer with LVAD in place.

EQUIPMENT

LVAD controller (patient-owned device)
Spare batteries (confirm present before departure)
Backup controller (confirm present before departure)
Doppler device if available for BP assessment

PROCEDURE STEPS

1. Confirm LVAD device model and controller type before departure.
2. Verify battery is charged and spare batteries are present.
3. Confirm driveline is secure, intact, and not under tension.
4. Confirm backup controller is present and functional.
5. Document baseline LVAD parameters: flow, speed, and power if accessible.
6. Monitor controller alarms continuously during transport.
7. Secure LVAD controller to prevent dropping or driveline tension during movement.
8. Contact LVAD center and DMO immediately if device alarms with patient instability.

CRITICAL NOTES

> *Many LVAD patients have minimal or absent palpable pulses — standard BP measurement may be unreliable. Use Doppler if available. Assess mental status and skin perfusion as perfusion markers.*

> *Do not disconnect the driveline under any circumstance unless specifically instructed by the LVAD center. Driveline disconnection is a life-threatening emergency.*

DOCUMENTATION

- LVAD model and controller type.
- Baseline device parameters.
- Battery status at departure.
- Any alarm events and actions taken.

V-17B. CHEST TUBE MONITORING — AEMT+

INDICATIONS

- Patient with existing chest tube for pneumothorax, hemothorax, or pleural effusion.

EQUIPMENT

Existing chest tube and drainage system
Occlusive dressing material (for emergent tube dislodgement)

PROCEDURE STEPS

1. Confirm tube is secured and dressing is intact before departure.
2. Ensure drainage system is upright and positioned below chest level at all times.
3. Assess for air leak: bubbling in water seal chamber indicates ongoing air leak.
4. Monitor respiratory status, SpO2, and drainage character throughout transport.
5. Secure drainage system to prevent tipping during vehicle movement.
6. Reassess tube position and drainage system after loading and unloading.

CRITICAL NOTES

Never clamp a chest tube during transport unless specifically ordered. Clamping may precipitate tension pneumothorax.

If tube becomes dislodged: apply occlusive dressing immediately; monitor for tension physiology (worsening hypoxia, hypotension, absent breath sounds). Notify Paramedic and DMO immediately.

DOCUMENTATION

- Chest tube location and drainage system type.
- Drainage amount and character at departure.
- Any air leak noted.
- Any tube events or complications during transport.

V-17C. ARTERIAL LINE MONITORING — PM ONLY

INDICATIONS

- Continuous invasive blood pressure monitoring in hemodynamically unstable or ventilated patients.

EQUIPMENT

Existing arterial line with transducer
Pressure bag (verify inflated to 300 mmHg)
Flush solution

PROCEDURE STEPS

1. Confirm transducer is secured and leveled at the phlebostatic axis (fourth intercostal space, midaxillary line).
2. Verify waveform is present on monitor; document baseline invasive blood pressure.
3. Ensure line integrity and dressing is secure.
4. Monitor waveform quality continuously throughout transport.
5. Re-level transducer after any change in patient position.
6. Correlate invasive readings with non-invasive BP periodically.

CRITICAL NOTES

Medications must NOT be administered via arterial lines under any circumstance. If line identity is uncertain, do not access until confirmed.

A dampened waveform may indicate: air in the line, kinking, clot, or incorrect leveling. Troubleshoot before attributing to patient hemodynamic change.

DOCUMENTATION

- Baseline invasive BP at departure.
- Waveform quality throughout transport.
- Any troubleshooting performed.
- Receiving facility handoff confirmation.

V-18. OPA AND NPA INSERTION

ALL LEVELS

INDICATIONS

- Unconscious or obtunded patient requiring airway patency maintenance (OPA).
- Patient with intact gag reflex requiring airway positioning assistance (NPA).
- Pre-oxygenation adjunct prior to advanced airway intervention.
- BVM ventilation where mask seal is inadequate without airway adjunct.

EQUIPMENT

OPA (oropharyngeal airway) — sized by measuring corner of mouth to earlobe
NPA (nasopharyngeal airway) — sized by measuring nostril to earlobe; appropriate diameter
Water-soluble lubricant for NPA
Suction device immediately available

PROCEDURE STEPS

1. OPA: Measure from center of mouth to angle of jaw or corner of mouth to earlobe.
2. OPA: Open mouth; insert OPA upside-down (curved toward tongue) and rotate 180 degrees as it passes the soft palate, OR insert with tongue depressor keeping curve toward floor of mouth.
3. OPA: Confirm correct placement — flange rests at lips; airway opens.
4. OPA: If patient gags, remove immediately — gag reflex is present; use NPA instead.
5. NPA: Lubricate the NPA with water-soluble lubricant.
6. NPA: Insert bevel toward nasal septum; advance gently along floor of nasal passage with a slight rotating motion.
7. NPA: Advance until flange rests against nostril; do not force.
8. Both: Reassess airway patency and ventilation after insertion.

CRITICAL NOTES

OPA is contraindicated in any patient with an intact gag reflex. Insertion will cause vomiting and laryngospasm. If the patient gags during insertion, remove immediately.

NPA is relatively contraindicated in suspected basilar skull fracture (raccoon eyes, Battle's sign, hemotympanum, CSF rhinorrhea). If these signs are present, use OPA or direct laryngoscopy.

DOCUMENTATION

- Airway adjunct type and size inserted.
- Patient tolerance.
- Airway patency and ventilation assessment after insertion.

V-19. IGEL SUPRAGLOTTIC AIRWAY (SGA)

AEMT+

INDICATIONS

- Apneic patient requiring airway management when BVM alone is inadequate.
- Failed or unavailable endotracheal intubation — rescue airway after two failed laryngoscopy attempts.
- Cardiac arrest requiring airway control at AEMT or PM level.
- Airway management when direct laryngoscopy is not immediately feasible.

EQUIPMENT

iGel supraglottic airway — sized by patient weight: Size 3 (30–60 kg), Size 4 (50–90 kg), Size 5 (>90 kg)
BVM with oxygen source
Suction device
Waveform capnography or colorimetric ETCO2 detector
Lubricant (water-soluble)

PROCEDURE STEPS

1. Select correct iGel size based on patient weight using Broselow tape or estimated weight.
2. Pre-oxygenate with BVM for minimum 30 seconds if time permits.
3. Apply water-soluble lubricant to posterior surface of iGel cuff.
4. Position patient: sniffing position preferred; in-line if c-spine precautions required.
5. Open mouth; press chin down gently with non-dominant thumb.
6. Insert iGel along the hard palate with cuff outlet facing chin; advance in a single smooth motion until resistance is felt.
7. Connect BVM; ventilate and confirm chest rise bilaterally.
8. Confirm placement with waveform capnography (primary) or colorimetric ETCO2.
9. Secure iGel with tape or device holder.
10. Reassess placement after every patient movement.

CRITICAL NOTES

> *The iGel does not protect fully against aspiration. If the patient has active emesis, suction immediately and consider whether intubation is achievable.*

> *In cardiac arrest: after iGel insertion, switch to continuous compressions with asynchronous ventilation at 1 breath every 6 seconds (10 breaths/min). Do not pause compressions for ventilation.*

DOCUMENTATION

- iGel size inserted.
- Confirmation method (waveform capnography, auscultation).
- Chest rise confirmed bilaterally.
- Reason for SGA placement (primary airway vs. rescue).
- Any complications during insertion.

V-20. GLUCOMETRY (BLOOD GLUCOSE MEASUREMENT) — ALL LEVELS

INDICATIONS

- Altered mental status of any cause.
- Suspected diabetic emergency.
- Seizure — all presentations.
- Syncope or near-syncope.
- Any patient who is to receive dextrose.
- Stroke-like presentation — rule out hypoglycemia as mimic.
- Monitoring during insulin infusion transport.

EQUIPMENT

Glucometer (calibrated and within expiration)
Lancet device
Test strips (within expiration)
Alcohol prep pad
Gloves

PROCEDURE STEPS

1. Apply gloves; select fingerstick site — lateral aspect of fingertip preferred.
2. Cleanse site with alcohol prep pad; allow to dry completely.
3. Lancet the site; wipe away the first drop of blood (may be contaminated).
4. Apply second drop to test strip already inserted in glucometer.
5. Read result when displayed; document value and time.
6. Apply light pressure to lancet site until bleeding stops.
7. Compare result to clinical presentation; initiate treatment per protocol if indicated.

CRITICAL NOTES

> *Always document the glucose value AND the time it was obtained. Trending over time is clinically important, especially in insulin infusion transports.*

> *Falsely low results can occur with cold fingertips, peripheral vasoconstriction, or insufficient blood sample. If result does not match clinical presentation, repeat or treat empirically.*

DOCUMENTATION

- Blood glucose value and time obtained.
- Clinical indication.
- Treatment initiated based on result.
- Repeat values if glucose was rechecked after treatment.

V-21. AUTOMATED EXTERNAL DEFIBRILLATOR (AED) OPERATION

ALL LEVELS

INDICATIONS

- Pulseless patient — apply AED as soon as available regardless of witnessed status.
- Unresponsive patient with absent or agonal respirations.

EQUIPMENT

AED unit (confirmed charged and functional)
Adult pads (or pediatric pads/attenuator for patients <8 years or <25 kg)
Razor (if chest hair will prevent pad adhesion)
Dry cloth or towel (if chest is wet)
Gloves

PROCEDURE STEPS

1. Begin CPR immediately; do not delay CPR to retrieve or set up AED.
2. Power on AED; follow audio and visual prompts throughout.
3. Apply pads while CPR continues: one pad below right clavicle, mid-sternum; one pad on left lateral chest, mid-axillary line below left breast.
4. For pediatric patient <8 years or <25 kg: use pediatric pads or pediatric attenuator; place anterior pad on center of chest, posterior pad on center of back if pediatric AP placement used.
5. Ensure patient is dry; remove medication patches from pad placement areas.
6. Pause CPR only when AED begins rhythm analysis; resume immediately if no shock advised.
7. If shock advised: ensure all personnel are clear of patient; deliver shock.
8. Resume CPR immediately after shock without pausing to check pulse.
9. Follow AED prompts for subsequent cycles; switch compressors every 2 minutes.

CRITICAL NOTES

CPR quality takes priority over AED setup. If only one rescuer is present, do not abandon compressions to retrieve the AED — send bystanders for it.

Implanted pacemakers or defibrillators: place pads at least 1 inch away from the device. A ridge under the skin indicates an implanted device.

DOCUMENTATION

- Time AED was applied.
- Number of shocks delivered.
- Rhythm analysis findings (shockable vs. no shock advised).
- Response to defibrillation.

V-22. TOURNIQUET APPLICATION (CAT / SOFTT-W) — ALL LEVELS

INDICATIONS

- Life-threatening extremity hemorrhage not controlled by direct pressure.
- Amputation or near-amputation of an extremity with active hemorrhage.
- Extremity hemorrhage in a tactically or operationally unsafe scene where direct pressure cannot be maintained.
- Massive hemorrhage from extremity wound in a patient in hemorrhagic shock.

EQUIPMENT

Combat Application Tourniquet (CAT) or SOFTT-Wide
Permanent marker for time documentation

PROCEDURE STEPS

1. Apply tourniquet 2–3 inches proximal to the wound on bare skin when possible.
2. Route the band around the extremity; thread through the buckle.
3. Pull the band tight; secure the buckle.
4. Twist the windlass rod until bleeding stops; confirm cessation of distal hemorrhage.
5. Lock windlass rod into the keeper; secure with clip or strap.
6. Note the time of application on the tourniquet or directly on the patient's skin in permanent marker.
7. Do not cover or remove the tourniquet. Document time in PCR.
8. Reassess hemorrhage control at regular intervals; if bleeding persists, apply a second tourniquet proximal to the first.

CRITICAL NOTES

Do not remove a tourniquet once applied in the field. Removal can cause sudden hemodynamic collapse from release of accumulated toxins and loss of vascular tamponade. Tourniquet removal is a hospital decision only.

Time of application is critical clinical information. Document it prominently. A tourniquet applied more than 6 hours ago carries a significantly higher risk of limb loss.

DOCUMENTATION

- Tourniquet type and limb applied to.
- Time of application — document prominently.
- Hemorrhage control achieved (yes/no).
- Whether a second tourniquet was required.

V-23. WOUND PACKING AND PRESSURE DRESSING — ALL LEVELS

INDICATIONS

- Junctional hemorrhage (groin, axilla, neck) not amenable to tourniquet.
- Deep penetrating wounds with active bleeding not controlled by surface pressure alone.
- Extremity wounds where tourniquet cannot be applied (too proximal).

EQUIPMENT

Hemostatic gauze (Combat Gauze, Celox, ChitoGauze) — preferred for severe hemorrhage
Standard sterile gauze rolls if hemostatic gauze unavailable
Pressure bandage (Israeli bandage / Emergency Bandage)
Gloves and eye protection

PROCEDURE STEPS

1. Apply direct pressure while preparing materials.
2. Pack hemostatic gauze directly into the wound cavity; do not simply cover the surface.
3. Pack tightly using index finger or thumb to push gauze into the deepest part of the wound.
4. Continue packing until the wound is filled; multiple gauze rolls may be required for deep wounds.
5. Apply firm continuous direct pressure over the packed wound for minimum 3 minutes (hemostatic gauze) or 5 minutes (plain gauze).
6. Apply pressure dressing over the packed wound to maintain compression.
7. Reassess for hemorrhage control; if bleeding continues through dressing, apply additional pressure.
8. Do not remove packed gauze in the field once hemorrhage is controlled.

CRITICAL NOTES

> *Wound packing is effective only with adequate pressure held for sufficient time. Insufficient time on pressure is the most common reason packing fails. Do not release pressure early to check the wound.*

DOCUMENTATION

- Wound location and mechanism.
- Type of gauze used (hemostatic vs. standard).
- Duration of direct pressure held.
- Hemorrhage control achieved.

V-24. PELVIC BINDER APPLICATION (T-POD / SHEET WRAP) — ALL LEVELS

INDICATIONS

- Suspected pelvic fracture: mechanism (high-energy blunt trauma, crush, fall from height), pelvic instability on examination, or perineal ecchymosis, blood at urethral meatus, or scrotal/labial hematoma.
- Hemodynamic instability with suspected pelvic fracture origin.

EQUIPMENT

T-POD pelvic binder (preferred) or

Sheet (folded lengthwise to 8–10 inch width) as alternative
Tape to secure sheet if used

PROCEDURE STEPS

1. Place patient supine; do not repeatedly rock or compress the pelvis to assess stability — assess once only.
2. T-POD: Position binder under patient at level of greater trochanters (not the iliac crests).
3. T-POD: Apply binder snugly; secure hook-and-loop closure; tighten pull straps until firm resistance felt.
4. Sheet method: Fold sheet to 8–10 inch width; position at greater trochanters.
5. Sheet method: Cross sheet ends anteriorly; apply firm consistent tension; tie or tape securely.
6. Confirm binder is at the level of the greater trochanters — placement at the iliac crests is incorrect and ineffective.
7. Do not remove binder during transport.
8. Avoid log-rolling a patient with a suspected pelvic fracture; use scoop stretcher instead.

CRITICAL NOTES

Pelvic binder placement must be at the level of the greater trochanters, not the iliac crests. Placement too high provides no tamponade of pelvic hemorrhage and can worsen displacement.

Do not apply a tourniquet to the thigh as a substitute for a pelvic binder. It will not control pelvic hemorrhage.

DOCUMENTATION

- Clinical indication and findings suggesting pelvic fracture.
- Binder type applied.
- Placement confirmed at greater trochanter level.
- Hemodynamic status before and after application.

V-25. TRACTION SPLINT (SAGER / HARE) — ALL LEVELS

INDICATIONS

- Isolated mid-shaft femur fracture with pain, deformity, and shortening.
- Significant thigh muscle spasm causing pain from femur fracture.

EQUIPMENT

Sager or Hare traction splint
Traction straps
Padding material

PROCEDURE STEPS

1. Assess and document neurovascular status distal to fracture before application: pulse, capillary refill, sensation, motor function.
2. Measure splint against uninjured leg; adjust to appropriate length.
3. Apply ankle hitch/strap securely around the ankle and foot.
4. Position splint medially (Sager) or laterally (Hare) alongside the injured leg.
5. Apply traction by extending splint until patient reports relief of muscle spasm or approximately 10% of body weight (Sager: typically 15–25 lbs).
6. Secure thigh and leg straps to maintain traction.
7. Reassess neurovascular status distal to fracture after application.
8. Secure patient to stretcher; monitor traction throughout transport.

CRITICAL NOTES

Traction splint is contraindicated in: open femur fractures with gross contamination, hip or knee injury on the same limb, ankle or foot injury on the same limb, and pelvic fractures.

The goal of traction is relief of muscle spasm and pain control — not reduction of the fracture. Do not apply excessive traction. If neurovascular status worsens after application, release traction immediately.

DOCUMENTATION

- Neurovascular status before and after application.
- Splint type and traction amount applied.
- Patient pain response to traction.
- Any change in neurovascular status during transport.

V-26. EXTREMITY SPLINTING — ALL LEVELS

INDICATIONS

- Suspected or confirmed extremity fracture (upper or lower).
- Joint injury with significant pain, swelling, or deformity.
- Dislocations in position of comfort after reduction (PM scope for reduction).

EQUIPMENT

Rigid splint (padded board, SAM splint, moldable aluminum) appropriate to extremity
Padding material (foam, towels)
Bandaging / self-adherent wrap
Sling and swath for upper extremity

PROCEDURE STEPS

1. Assess and document neurovascular status before splinting: pulse, capillary refill, sensation, motor function.

2. Splint the fracture in the position it is found; do not attempt to straighten unless vascular compromise requires one reduction attempt.
3. Pad bony prominences to prevent pressure injury.
4. Apply splint to immobilize the joint above and below the fracture site.
5. Secure splint with bandaging — firm but not constrictive; check capillary refill after application.
6. Elevate the extremity when possible to reduce swelling.
7. Reassess neurovascular status after splinting.
8. Apply sling and swath for upper extremity fractures.

CRITICAL NOTES

> *Reassess neurovascular status after splinting and at regular intervals during transport. Swelling inside a splint can cause compartment syndrome. If neurovascular status worsens after splinting, loosen the bandaging immediately.*

DOCUMENTATION

- Fracture or injury location.
- Splint type applied.
- Neurovascular status before and after splinting.
- Elevation applied.

V-27. SPINAL MOTION RESTRICTION (SMR) — ALL LEVELS

INDICATIONS

- High-energy mechanism with neurologic complaint: weakness, numbness, paresthesia, or paralysis.
- Midline spinal tenderness on palpation in an alert patient.
- Altered mental status with high-risk mechanism (MVA, fall from height, diving, axial loading).
- Distracting injury preventing reliable spinal assessment in a high-risk mechanism.

EQUIPMENT

Cervical collar (appropriately sized)
Scoop stretcher (preferred for patient movement)
Long spine board (when scoop unavailable)
Head blocks and tape or head immobilizer
Straps

PROCEDURE STEPS

1. Establish and maintain manual in-line stabilization immediately; do not release until patient is fully secured.
2. Apply correctly sized cervical collar: measure from chin-chest junction to shoulder; select collar of corresponding size.
3. Move patient using scoop stretcher (preferred) or log-roll with minimum three providers, one maintaining in-line stabilization of the head.
4. Position patient on stretcher; apply head blocks or head immobilizer.

5. Secure torso straps first, then head straps — never head before torso.
6. Confirm patient is secured and cannot move laterally.
7. Reassess neurologic status after packaging.

CRITICAL NOTES

Selective spinal immobilization is appropriate — not every trauma patient requires SMR. Apply clinical criteria: mechanism, neurologic symptoms, midline tenderness, distracting injury, altered mental status. Low-energy mechanisms in alert patients without symptoms or tenderness do not require SMR.

Prolonged immobilization on a hard long board causes pressure injury. Pad bony prominences and transfer to a scoop or pad the board when transport is extended.

DOCUMENTATION

- Clinical indication for SMR.
- Cervical collar size applied.
- Neurologic assessment before and after packaging.
- Any changes in neurologic status during transport.

V-28. EMERGENCY FIELD DELIVERY — ALL LEVELS

INDICATIONS

- Crowning is visible and delivery is imminent.
- Patient reports uncontrollable urge to push with each contraction.
- Contractions are less than 2 minutes apart with no time to reach a facility safely.

EQUIPMENT

OB delivery kit
Sterile gloves
Sterile drapes
Bulb syringe
Umbilical clamps (x2)
Sterile scissors or scalpel for cord cutting
Warm blankets for newborn
Towels for drying newborn

PROCEDURE STEPS

1. Position mother supine or semi-recumbent with left lateral tilt; keep warm.
2. Apply sterile drapes; don sterile gloves.
3. As head delivers: support presenting part with gentle pressure — do not pull.

4. If amniotic sac is intact: rupture membrane with finger or clamp.
5. Check for nuchal cord (cord around neck): if loose, slip over head; if tight, double clamp and cut before delivery of shoulders.
6. Guide head to deliver; support the head gently — do not pull.
7. Suction mouth then nose with bulb syringe if meconium is present.
8. Guide anterior shoulder downward then posterior shoulder upward; body follows.
9. Note time of delivery.
10. Dry and stimulate newborn immediately; position on warm surface.
11. Clamp cord 6–8 inches from newborn; place second clamp 2–3 inches further; cut between clamps.
12. Assess newborn: assess respirations, heart rate, and color at 1 and 5 minutes (APGAR).
13. Deliver placenta if it delivers spontaneously; do not pull on cord.
14. Monitor for postpartum hemorrhage: uterine fundal massage if uterus is boggy.

CRITICAL NOTES

Do not delay delivery to transport. If crowning is visible, the baby is coming. A delivery in a moving ambulance is more dangerous than a controlled field delivery.

Meconium-stained amniotic fluid (green or brown fluid): suction mouth then nose on delivery of the head; if newborn is vigorous (crying, good tone, HR >100), routine care is appropriate. If newborn is not vigorous, intubation and tracheal suctioning may be indicated — Paramedic scope.

DOCUMENTATION

- Time of delivery.
- Sex of newborn.
- APGAR scores at 1 and 5 minutes.
- Presence of meconium and actions taken.
- Placenta delivered or retained.
- Estimated blood loss.
- Maternal vital signs before and after delivery.

V-29. NEWBORN RESUSCITATION — ALL LEVELS

INDICATIONS

- Newborn who fails to cry, breathe adequately, or has poor muscle tone at delivery.
- Newborn with heart rate less than 100 bpm at 30 seconds of life.
- Newborn with persistent central cyanosis despite supplemental oxygen.
- Newborn born to a mother with known complications: placental abruption, prolapsed cord, meconium.

EQUIPMENT

Warm blankets and towels
Radiant heat source if available (warm ambulance)

Appropriately sized BVM (neonatal mask)
Supplemental oxygen
Bulb syringe
Suction device with soft suction catheter
Pulse oximeter (neonatal probe)
Cardiac monitor with neonatal leads if available

PROCEDURE STEPS

1. Dry the newborn vigorously with warm towels; remove wet linen immediately.
2. Position: place on back in sniffing position with neck slightly extended.
3. Suction: suction mouth then nose with bulb syringe if secretions are present.
4. Stimulate: rub back, flick soles of feet.
5. Assess at 30 seconds: breathing effort, heart rate, color.
6. If not breathing or HR <100 bpm: begin positive pressure ventilation (PPV) with BVM at 40–60 breaths/min; use only enough pressure to see chest rise.
7. If HR <60 bpm after 30 seconds of effective PPV: begin chest compressions at 3:1 ratio (compressions:ventilations) at rate of 90 compressions and 30 ventilations per minute.
8. Compressions: two-thumb encircling technique preferred; compress lower one-third of sternum, depth one-third AP chest diameter.
9. AEMT/PM: establish IV or IO access; administer epinephrine 0.01 mg/kg IV/IO if HR <60 after 30 seconds of CPR.
10. Reassess heart rate every 30 seconds.

CRITICAL NOTES

Target oxygen saturation by minute of life (SpO2 targets): 1 min: 60–65%, 2 min: 65–70%, 3 min: 70–75%, 4 min: 75–80%, 5 min: 80–85%, 10 min: 85–95%. Do not target 100% in the immediate newborn period — excessive oxygen in newborns causes oxidative injury.

The newborn 3:1 compression-to-ventilation ratio is distinct from adult (30:2) and pediatric two-rescuer (15:2) ratios. The newborn heart is highly dependent on oxygenation — coordinated ventilation is essential.

DOCUMENTATION

- APGAR scores at 1 and 5 minutes.
- Resuscitation interventions: PPV, compressions, medications.
- Response to each intervention.
- Heart rate trend throughout resuscitation.
- Time of first effective breath or ROSC.

V-30. LIFEPAK 15 — DEVICE OPERATION

ALL LEVELS

The LIFEPAK 15 is the primary cardiac monitor/defibrillator used by AMR Kansas City. This card covers device-specific operation for all credential levels. For clinical indications, energy settings, and decision-making, refer to V-14 (Cardiac Monitoring & 12-Lead ECG), V-15 (Synchronized Cardioversion), and V-16 (Transcutaneous Pacing).

EQUIPMENT

LIFEPAK 15 monitor/defibrillator
Therapy cable with QUIK-COMBO pads (preferred) or hard paddles
4-lead monitoring cable
12-lead electrode set (10 electrodes)
SpO2 sensor (finger clip or forehead)
ETCO2 sampling line or mainstream adapter
NIBP cuff (adult / pediatric)
Charged battery (confirm >50% before transport)

DEVICE STARTUP

1. Press and hold the green ON button until the device powers on and completes self-test.
2. Confirm battery level on screen; if below 20%, connect to AC power or swap battery before departure.
3. Confirm date and time are correct.
4. Connect therapy cable and apply QUIK-COMBO pads to patient (anterior-lateral or anterior-posterior placement).
5. Connect 4-lead monitoring cable for continuous rhythm monitoring.

MODE-SPECIFIC OPERATION

FUNCTION / MODE	DEVICE STEPS
Rhythm Monitoring	Apply 4-lead cable or QUIK-COMBO pads. Select Lead II (default) using the Lead Select button. Adjust gain if waveform is too small or clipped. Print rhythm strip: press PRINT. Continuous alarm monitoring is active by default.
12-Lead ECG Acquisition	Apply all 10 electrodes in standard configuration. Press the 12-LEAD button. Wait for acquisition indicator to complete (typically 10 seconds). Review tracing on screen for artifact. Press PRINT for printed 12-lead. For STEMI transmission: press TRANSMIT, select receiving facility, confirm transmission sent.
Manual Defibrillation	Ensure QUIK-COMBO pads are applied. Press ENERGY SELECT to dial to desired energy (200 J biphasic default for VF/pVT). Confirm device is in MANUAL mode (not AED mode). Press CHARGE; wait for charge tone. Confirm all clear. Press SHOCK button (orange). Resume CPR immediately.

FUNCTION / MODE	DEVICE STEPS
AED Mode	Press the AED button to enter AED mode. Device will prompt pad placement if not already applied. Press ANALYZE when prompted; stand clear during analysis. If shock advised: stand clear; press SHOCK. Follow device prompts for CPR cycles. AED mode is appropriate for EMT-level operation.
Synchronized Cardioversion	Confirm patient is connected via QUIK-COMBO pads. Press SYNC button; confirm SYNC markers appear on R waves on the screen. Select energy (SVT: 50–100 J; A-fib: 200 J per AHA 2025; VT with pulse: 100 J). Press CHARGE; confirm SYNC is still active. Press and hold SHOCK button until shock delivers — delay is expected in SYNC mode.
Transcutaneous Pacing	Apply QUIK-COMBO pads in anterior-posterior position. Press PACER button to enter pacing mode. Set RATE (typically 60–80 bpm starting point). Set OUTPUT (mA) to 0. Slowly increase OUTPUT until electrical capture is visible (pacing spike followed by wide QRS). Confirm mechanical capture by palpating femoral or brachial pulse. Set final output 10% above capture threshold.
SpO2 Monitoring	Connect SpO2 sensor to patient finger or forehead. Connect to LIFEPAK 15 SpO2 port. SpO2 and pulse rate display automatically. Waveform plethysmograph confirms signal quality. Poor perfusion or motion artifact will trigger low signal alarm.
ETCO2 Monitoring	For intubated patients: connect mainstream or sidestream ETCO2 adapter to ETT. For non-intubated: use nasal cannula sidestream sampling line. Allow 30–60 seconds for waveform to stabilize. Confirm waveform shape (square wave = good placement). Document ETCO2 value and waveform at departure and at regular intervals.
NIBP Monitoring	Apply appropriately sized cuff to upper arm. Connect to LIFEPAK 15 NIBP port. Press NIBP START for manual measurement. For continuous monitoring: set AUTO interval (1, 2, 5, or 10 minutes). Confirm cuff is not on the same arm as IV or SpO2 sensor.
CPR Feedback	The LIFEPAK 15 provides real-time CPR feedback via accelerometer. Apply pads before beginning CPR. Compression rate, depth, and release are displayed on screen. Audio and visual prompts guide compression quality. Target: rate 100–120/min, depth 2–2.4 inches, full recoil.

BATTERY AND POWER MANAGEMENT

- Confirm battery charge >50% before every transport. A fully charged battery provides approximately 3 hours of monitoring or 100+ defibrillation shocks.
- Connect to vehicle power (12V DC cable) during transport whenever possible to conserve battery.
- If battery drops below 20% during transport: connect to DC power immediately; notify receiving facility if power failure is imminent.
- Do not remove battery while device is powered on unless replacing a depleted battery with a charged spare.
- After each call: return device to charging cradle; confirm charging indicator is active.

DATA MANAGEMENT AND TRANSMISSION

- STEMI transmission: acquire 12-lead, press TRANSMIT, select receiving cath lab, confirm receipt. Always call the receiving facility directly after transmission to confirm they received it.
- The LIFEPAK 15 stores all recorded events, waveforms, and vital signs. Data is downloaded post-call via the CODE-STAT system per AMR quality assurance process.
- Print a full event summary at the end of each resuscitation: MENU → Review → Print Event Summary.

TROUBLESHOOTING

FUNCTION / MODE	DEVICE STEPS
No waveform displayed	Check lead connections and pad adhesion. Confirm correct lead is selected. Check for motion artifact — minimize patient movement during acquisition.
Artifact on rhythm strip	Check electrode adhesion; clip chest hair if needed. Check cable connections. Have partner minimize movement during strip acquisition.
SYNC not firing on shock	Confirm SYNC markers are visible on R waves. If no R waves are visible, the device will not fire. Check lead placement. If rhythm deteriorates to VF, deactivate SYNC and defibrillate.
Pacing not capturing	Increase output (mA) in 5 mA increments. Confirm pad placement is anterior-posterior. Confirm pacing rate is above patient's intrinsic rate. If no capture at maximum output, contact DMO.
Low battery alarm	Connect to vehicle DC power immediately. If no power available, conserve battery by turning off non-essential monitoring (NIBP auto, display brightness).
ETCO2 no waveform	Confirm adapter is connected correctly to ETT or sampling line. Check for moisture in the sampling line — disconnect and clear if needed. Allow 60 seconds to stabilize after reconnection.
SpO2 no signal	Reposition sensor; try alternate finger or forehead sensor. Check perfusion — vasoconstriction reduces signal. Confirm patient has a pulse.

> *DEVICE AUTHORITY: Clinical decisions regarding energy selection, pacing parameters, and cardioversion indications are governed by V-14, V-15, and V-16. This card covers device operation only. When clinical and device guidance differ, follow the clinical protocol and contact DMO.*

DOCUMENTATION

- Device applied time and lead/pad configuration used.
- 12-lead acquisition time and findings; transmission confirmation if sent.
- Defibrillation: energy delivered and number of shocks.
- Cardioversion: energy, SYNC confirmed, number of shocks, rhythm before and after.
- Pacing: rate set, output at capture, mechanical capture confirmed.
- ETCO2 values at departure, during transport, and at arrival.
- Battery level at departure.

SECTION VII — SPECIALTY & ACCOMPANIED CRITICAL CARE TRANSPORTS

This section defines clinical, operational, and scope-of-practice guidelines for specialty transports involving hospital-accompanied clinical teams and advanced circulatory or neonatal support devices. AMR personnel provide the transport platform, patient monitoring within their credentialed scope, and support to the accompanying team. Specialty device authority and clinical decision-making remains with the accompanying credentialed clinician in all cases.

> *SCOPE PRINCIPLE: On any accompanied specialty transport, the accompanying clinician holds clinical authority for the specialty device and its management. AMR crew members do not initiate, adjust, or troubleshoot specialty devices independently. AMR responsibilities are clearly defined for each transport type below and do not expand based on accompanying team requests that exceed AMR scope.*

VII-1. NICU SPECIALTY SUPPORT TRANSPORT (OPRMC MODEL)

CLINICAL OVERVIEW

Transport of neonatal patients staffed by a hospital NICU team (RN, RT, or MD) with AMR EMT driver and assist support. This model is specific to the OPRMC operational partnership. AMR does not provide the clinical neonatal team — that team travels with the patient from the sending facility.

SCOPE & AUTHORITY

> *Clinical authority for all neonatal care rests entirely with the accompanying NICU team. AMR personnel function as driver and secondary support only. AMR does not independently manage neonatal ventilators, medication drips, invasive lines, or airway management. If the NICU team requests an AMR provider to perform an action outside AMR scope, the AMR provider must decline and inform the team of the scope limitation.*

RESPONSIBILITIES

AMR CREW RESPONSIBILITIES	SPECIALTY TEAM RESPONSIBILITIES
• Safe vehicle operation and route planning.	• Full neonatal clinical management.
• Equipment loading, securing, and unloading.	• Ventilator management and adjustment.
• Assist NICU team as directed within AMR scope.	• Medication administration and titration.
• Monitor vehicle power supply and environmental stability (temperature).	• Airway management.
• Assist in emergency repositioning or resuscitation as directed by NICU team.	• Central and invasive line management.
• Scene and traffic safety.	• All clinical decision-making for the neonate.

MONITORING PRIORITIES — AMR

- Vehicle power status and inverter function if applicable.
- Environmental temperature in patient compartment.
- Equipment stability during vehicle movement.
- Route planning for smoothest possible transport.

ANTICIPATED COMPLICATIONS

- Accidental extubation or line dislodgement during patient movement.
- Equipment power failure.
- Neonatal decompensation requiring NICU team intervention.
- Vehicle mechanical issue during transport.

DIVERSION TRIGGERS

IMMEDIATE DIVERSION REQUIRED: Airway compromise. Equipment failure without backup. Hemodynamic collapse. NICU team requests diversion. Vehicle mechanical compromise affecting patient safety.

DOCUMENTATION

- Names and credentials of all accompanying NICU team members.
- Equipment transported with patient.
- Transfer-of-care documentation at sending and receiving facility.
- Any adverse events or complications during transport.
- Diversion decisions and communication if applicable.

VII-2. INTRA-AORTIC BALLOON PUMP (IABP) TRANSPORT

CLINICAL OVERVIEW

Transport of patients requiring mechanical circulatory support via intra-aortic balloon pump (IABP). The IABP augments diastolic pressure and reduces cardiac afterload, providing hemodynamic support in cardiogenic shock or high-risk cardiac patients.

SCOPE & AUTHORITY

IABP transport requires a perfusionist or specialty-trained RN or MD to accompany the patient. AMR personnel do not initiate, adjust, or troubleshoot IABP settings or timing. Device authority rests entirely with the accompanying clinician.

RESPONSIBILITIES

AMR CREW RESPONSIBILITIES	SPECIALTY TEAM RESPONSIBILITIES
• Hemodynamic and cardiac rhythm monitoring.	• IABP timing and augmentation management.
• IV access integrity throughout transport.	• Pump troubleshooting and alarm response.
• Vehicle and scene safety.	• Arterial waveform interpretation and management.
• Assist specialty team as directed within AMR scope.	• All device adjustment decisions.
• Monitor for signs of limb ischemia at IABP insertion site.	• Clinical management of cardiogenic shock.
• Document pump function alarms reported by specialty team.	

TRANSPORT MONITORING — AMR

- MAP ≥65 mmHg adults unless sending physician has specified otherwise.
- Continuous cardiac rhythm monitoring; document any changes.
- Signs of limb ischemia at IABP insertion site: pallor, coolness, absent pulse.
- Pump function alarms as reported by specialty team.
- Mental status as end-organ perfusion marker.

ANTICIPATED COMPLICATIONS

- Pump failure or loss of augmentation.
- Hemodynamic collapse.
- Arterial access site bleeding.
- Limb ischemia from IABP catheter.
- Sustained dysrhythmia affecting pump timing.

DIVERSION TRIGGERS

> *IMMEDIATE DIVERSION REQUIRED: Loss of peripheral perfusion. Uncontrolled access site bleeding. Sustained hemodynamically significant dysrhythmia. Specialty clinician requests diversion.*

DOCUMENTATION

- Device presence and type documented.
- Specialty clinician name and credential documented.
- Hemodynamic trends at regular intervals.
- Any alarms or device interruptions noted by specialty team.
- Transfer-of-care acknowledgment at receiving facility.

VII-3. IMPELLA DEVICE SUPPORT TRANSPORT

CLINICAL OVERVIEW

Transport of patients supported by a percutaneous ventricular assist device (Impella). The Impella unloads the left ventricle by drawing blood from the LV and expelling it into the ascending aorta, providing active hemodynamic support in cardiogenic shock.

SCOPE & AUTHORITY

Impella transport requires a perfusionist or specialty-trained RN or MD to accompany the patient. AMR personnel do not initiate, adjust, or troubleshoot Impella settings, flow levels, or cannula position. Device authority rests entirely with the accompanying clinician.

RESPONSIBILITIES

AMR CREW RESPONSIBILITIES	SPECIALTY TEAM RESPONSIBILITIES
• Hemodynamic and cardiac rhythm monitoring.	• Impella flow adjustments and performance level management.
• IV access integrity throughout transport.	• Pump troubleshooting and alarm response.
• Assist specialty team as directed within AMR scope.	• Cannula position monitoring.
• Monitor access site for bleeding.	• Access site management.
• Vehicle and scene safety.	• All clinical decision-making for device management.
• Document device alarms as reported by specialty team.	

TRANSPORT MONITORING — AMR

- MAP and peripheral perfusion monitoring throughout transport.
- Continuous cardiac rhythm monitoring.
- Access site bleeding surveillance: groin or axillary insertion site depending on device type.
- Signs of hemolysis: dark or red urine reported by sending facility.
- Device alarm awareness as communicated by accompanying clinician.

ANTICIPATED COMPLICATIONS

- Hemodynamic collapse from device malfunction.
- Cannula displacement.
- Acute access site hemorrhage.
- Sustained dysrhythmia.
- Device suction event from hypovolemia.

DIVERSION TRIGGERS

IMMEDIATE DIVERSION REQUIRED: Loss of circulatory support with hemodynamic collapse. Uncontrolled access site bleeding. Sustained hemodynamic instability unresponsive to therapy. Specialty clinician requests diversion.

DOCUMENTATION

- Device type and model documented.
- Specialty clinician name and credential documented.
- Hemodynamic trends at regular intervals.
- Any alarms or device concerns noted by specialty team.
- Transfer-of-care acknowledgment at receiving facility.

VII-4. ECMO TRANSPORT

CLINICAL OVERVIEW

Transport of patients supported by extracorporeal membrane oxygenation (ECMO). ECMO provides cardiac and/or respiratory support by circulating blood outside the body through an oxygenator. VA-ECMO supports both cardiac and pulmonary function; VV-ECMO supports pulmonary function only. These are the highest-acuity IFT transports encountered in the Kansas City area.

SCOPE & AUTHORITY

> *ECMO transport requires an ECMO team to be present throughout transport — typically a perfusionist and ECMO-credentialed RN or MD. AMR personnel do not manage or adjust the ECMO circuit, oxygenator, or cannulas under any circumstance. AMR responsibilities are limited to the transport platform, patient monitoring within AMR scope, and support to the ECMO team.*

RESPONSIBILITIES

AMR CREW RESPONSIBILITIES	SPECIALTY TEAM RESPONSIBILITIES
• Safe vehicle operation and route planning.	• ECMO circuit management and pump flow adjustments.
• Patient hemodynamic monitoring within AMR scope.	• Oxygenator management and sweep gas adjustment.
• IV access integrity and continuity.	• Cannula management and position monitoring.
• Ventilator monitoring if not managed by ECMO team.	• Anticoagulation oversight and management.
• Bleeding surveillance at cannula sites.	• All ECMO-specific clinical decisions.
• Vehicle and scene safety.	• Coordination with receiving ECMO center.
• Circuit alarm awareness as communicated by ECMO team.	

TRANSPORT MONITORING — AMR

- Hemodynamic stability: blood pressure, MAP, and mental status.
- Oxygenation trend: SpO2 and any visible circuit color changes noted by ECMO team.
- Cannula site bleeding surveillance at femoral, jugular, or other access sites.
- Circuit alarm awareness — do not respond to circuit alarms independently; notify ECMO team immediately.

- Ventilator monitoring if AMR is managing ventilation independently of ECMO team.
- Cannula security during all patient movements.

ANTICIPATED COMPLICATIONS

- Pump failure or circuit clot requiring circuit change.
- Oxygenator failure indicated by desaturation or circuit color change.
- Cannula dislodgement — immediately life-threatening.
- Massive hemorrhage from cannula sites or systemic anticoagulation.
- Sudden hemodynamic collapse.
- Air embolism in circuit.

DIVERSION TRIGGERS

> *IMMEDIATE DIVERSION REQUIRED: Circuit failure without backup capability. Massive hemorrhage with hemodynamic collapse. Loss of perfusion. Cannula dislodgement. ECMO team requests diversion.*

PRE-TRANSPORT CHECKLIST — ECMO

1. Confirm ECMO team members are present and identified before departure.
2. Confirm backup battery power for ECMO circuit for full transport duration.
3. Confirm cannula sites are dressed, secured, and accessible for monitoring.
4. Confirm ventilator settings if AMR is managing ventilation.
5. Confirm receiving ECMO center is notified and prepared.
6. Confirm route and estimated transport time communicated to ECMO team.

DOCUMENTATION

- All ECMO team members documented by name and credential.
- Circuit presence and device type documented.
- Hemodynamic and oxygenation trends at regular intervals.
- Any alarms or critical events communicated by ECMO team.
- Transfer-of-care acknowledgment at receiving ECMO center.

APPENDICES

APPENDIX A — DIVERSION ALGORITHM

PURPOSE

Diversion is the redirection of an interfacility transport to an alternative receiving facility closer than the intended destination due to a change in patient acuity that requires immediate stabilization beyond the capability of the original destination or that cannot safely wait for the full transport time.

> *Diversion is a patient safety intervention, not a failure. When the clinical threshold is met, divert early. Do not delay diversion waiting for DMO if the patient is critically unstable. Notify DMO and dispatch as soon as it is safe to do so.*

STEP 1 — IDENTIFY A DIVERSION TRIGGER

Diversion is indicated when any of the following are present and cannot be corrected with available resources during transport:

- Airway compromise or loss of airway that cannot be secured.
- Refractory hypoxia (SpO2 <90% despite maximum oxygen and ventilatory support).
- Hemodynamic collapse (persistent hypotension despite vasopressor support at maximum rate).
- Cardiac arrest.
- Sustained life-threatening dysrhythmia unresponsive to treatment.
- Ventilator failure with inability to maintain oxygenation via BVM.
- LVAD or mechanical circulatory device failure with patient instability.
- Uncontrolled hemorrhage.
- Severe adverse medication or transfusion reaction with hemodynamic compromise.
- Specialty team requests diversion (accompanied transports).

STEP 2 — STABILIZE IMMEDIATELY

While diversion destination is being determined, initiate all available stabilizing interventions within your scope. Do not withhold treatment while contacting dispatch.

STEP 3 — NOTIFY DISPATCH

1. Notify dispatch of diversion intent, patient condition, and current location.
2. Request nearest appropriate receiving facility based on patient need.
3. Confirm receiving facility can accept the patient and has the required capabilities.

STEP 4 — CONTACT MEDICAL CONTROL

Contact DMO when it is safe and clinically feasible. Do not delay diversion or stabilization waiting for DMO contact if the patient is critically unstable. Document DMO contact attempt and outcome in the PCR.

STEP 5 — REDIRECT TO NEAREST APPROPRIATE FACILITY

Redirect to the nearest facility capable of managing the clinical emergency. Important guidance for lower-level-of-care transports:

> *If the intended destination is a lower level of care (e.g., rehabilitation facility, LTAC, nursing home, psychiatric facility), diversion must be made to the nearest appropriate HIGHER-level stabilizing facility, not another lower-level-of-care setting. A patient in cardiogenic shock cannot be diverted to a nursing home.*

STEP 6 — DOCUMENT

- Clinical indication and trigger for diversion.
- Time diversion decision was made.
- Dispatch and DMO notification times and outcomes.
- Diversion destination and rationale.
- Patient clinical status at time of diversion and upon arrival.

DIVERSION DECISION SUMMARY

Divert Immediately — No DMO Required First	Contact DMO Before or Simultaneously
• Cardiac arrest • Complete airway loss • Hemodynamic collapse • Ventilator failure with ongoing hypoxia • Uncontrolled hemorrhage	• Escalating instability not yet at collapse • Refractory dysrhythmia with preserved pulse • Adverse reaction with maintained hemodynamics • Device malfunction without immediate instability • Any clinical uncertainty about diversion decision

APPENDIX B — KC METRO HOSPITAL CAPABILITY CHART

> *VERIFICATION REQUIRED: This chart is based on the AMR Kansas City Medical Guidelines 2026 and available designation data at time of publication. Hospital capabilities, trauma designations, and stroke center certifications change. This chart MUST be verified against current MARCER data and confirmed with your medical director before distribution or clinical use. Do not use outdated information for diversion decisions.*

The following chart lists hospitals within the AMR Kansas City service area with their known clinical capabilities. Use this chart to identify the nearest appropriate receiving facility during diversion decisions. For time-sensitive conditions, always confirm current diversion status with the receiving facility via dispatch.

✓ = Capability confirmed	— = Not available	**C/P** = Comprehensive / Primary (Stroke)	**A/P** = Adult / Pediatric (Burn)

HOSPITAL	TRAUMA	STEMI	STROKE	BURN	HYPERBARIC	L&D	FORENSIC
Advent Health College Blvd	—	✓	P	—	—	—	—
Advent Health Lenexa (Prairie Star)	—	✓	—	—	—	✓	—
Advent Health Shawnee Mission	—	✓	P	—	—	✓	—
Advent Health South Overland Park	—	—	—	—	—	—	—
Belton Regional Medical Center	—	—	—	—	—	—	—
Cass Regional Medical Center	—	—	—	—	—	—	—
Centerpoint Medical Center	Level II	✓	P	—	—	✓	—
Children's Mercy Hospital	Level I	—	—	P	—	—	—
Children's Mercy Hospital Kansas	—	—	—	P	—	—	—
Excelsior Springs Hospital	—	—	—	—	—	—	—
Kansas City VA Medical Center	—	—	—	—	—	—	—
Lawrence Memorial	—	✓	P	—	—	✓	—
Leavenworth VA	—	—	—	—	—	—	—
Lee's Summit Medical Center	Level III	✓	P	—	—	✓	—
Liberty Hospital	—	✓	P	—	—	✓	—
Menorah Medical Center	—	✓	P	—	—	—	—
North Kansas City Health	—	✓	—	—	—	✓	—
Overland Park Regional Medical Center	Level II	✓	C	A	—	✓	—
Overland Park Regional at Shawnee	—	—	—	—	—	—	—
Overland Park Regional at Olathe	—	—	—	—	—	—	—
Providence Medical Center	—	—	—	—	—	✓	—
Research Medical Center	Level II	✓	C	A	—	✓	✓
St. John's Hospital	—	—	—	—	—	—	—
St. Joseph Hospital	—	—	—	—	—	—	—
St. Luke's Hospital — Plaza	Level I	✓	C	A	—	✓	✓
St. Luke's Hospital — East	—	✓	P	—	—	✓	—
St. Luke's Hospital — Northland	—	✓	P	—	—	✓	—
St. Luke's Hospital — South	—	✓	P	—	—	—	—
St. Luke's Community — Leawood	—	—	—	—	—	—	—

HOSPITAL	TRAUMA	STEMI	STROKE	BURN	HYPERBARIC	L&D	FORENSIC
St. Luke's Community — Roeland Park	—	—	—	—	—	—	—
St. Mary's Medical Center	—	—	—	—	—	—	—
University Health Lakewood	—	—	—	—	—	—	—
University Health Truman	Level I	✓	C	—	—	✓	✓
University of Kansas Hospital	Level I	✓	C	AP	✓	✓	✓
University of Kansas Olathe	—	✓	—	—	—	—	—
University of Kansas Paola	—	—	—	—	—	—	—

* This list is not intended to be an all-inclusive list of acceptable transport destinations. Facility capabilities may change. Always confirm with dispatch and the receiving facility for time-sensitive or specialty transports.

SECTION VIII — 911 MUTUAL AID PROTOCOLS

AMR Kansas City provides 911 mutual aid support to the Kansas City Metro area when requested by the primary response system. These protocols govern clinical care during mutual aid responses. Providers on mutual aid calls function within their credentialed scope and under AMR Kansas City medical direction. Coordinate with the incident commander and primary agency on scene.

> *MUTUAL AID CONTEXT: On 911 mutual aid responses, AMR crews operate under AMR Kansas City medical direction — not the primary agency's protocols. If a conflict exists between AMR standing orders and the primary agency's direction, follow AMR protocols and document the conflict. Contact DMO if clarification is needed.*

A. GENERAL MEDICAL

VIII-A1. ABDOMINAL PAIN

OVERVIEW

Assess for life-threatening causes: aortic aneurysm (>50 years, back or flank pain, pulsatile mass), ectopic pregnancy (women of childbearing age), bowel obstruction, and mesenteric ischemia. Most abdominal pain is not immediately life-threatening but requires hospital evaluation.

STANDING ORDERS

EMT	AEMT	PM
1. Obtain history: onset, location, radiation, severity, associated symptoms. **2.** Apply cardiac monitor; obtain vitals. **3.** Allow position of comfort; flexion of knees and hips often reduces pain. **4.** Apply oxygen if SpO2 <94% or signs of shock. **5.** Transport; notify receiving facility of suspected etiology.	**1.** All EMT steps. **2.** Establish peripheral IV. **3.** Administer normal saline 250–500 mL IV bolus for hypotension. **4.** Administer ondansetron 4 mg IV/IM/IN for nausea.	**1.** All EMT and AEMT steps. **2.** Administer fentanyl 25–100 mcg IV titrated for moderate to severe pain. **3.** For suspected aortic aneurysm with shock: permissive hypotension (SBP 80–90 mmHg); large-bore IV; rapid transport. **4.** Obtain 12-lead ECG in patients >50 with upper abdominal pain to rule out cardiac etiology. **5.** Contact DMO for unstable presentations.

> *Abdominal pain in women of childbearing age is an ectopic pregnancy until proven otherwise. Obtain a pregnancy history on every female patient of childbearing age with abdominal pain.*

TRANSPORT

Transport all abdominal pain to nearest appropriate ED. Aortic aneurysm, ectopic pregnancy, and mesenteric ischemia are surgical emergencies — notify receiving facility early.

VIII-A2. ALTERED MENTAL STATUS

OVERVIEW

Altered mental status (AMS) has a broad differential: hypoglycemia, hypoxia, stroke, seizure, head trauma, toxicologic, metabolic, and psychiatric causes. Treat reversible causes immediately before assuming a neurologic etiology.

STANDING ORDERS

EMT	AEMT	PM
1. Assess and manage airway; position laterally if unconscious. **2.** Apply oxygen; target SpO2 ≥94%. **3.** Obtain blood glucose immediately. **4.** Apply cardiac monitor. **5.** Assess GCS, pupils, and focal neurologic deficits. **6.** Check temperature; obtain history from bystanders.	**1.** All EMT steps. **2.** Establish peripheral IV or IO. **3.** For glucose <70 mg/dL: administer dextrose 10% 100–250 mL IV; recheck glucose. **4.** For suspected opioid overdose: naloxone 2 mg IN or 0.4–2 mg IV titrated to respiratory effort. **5.** Administer normal saline 250 mL IV bolus for hypotension.	**1.** All EMT and AEMT steps. **2.** For active seizure: midazolam 2–5 mg IV/IO/IM/IN. **3.** For airway compromise (GCS ≤8): intubate. **4.** For suspected thiamine deficiency (alcoholism, malnutrition): thiamine 100 mg IV if available before dextrose. **5.** Contact DMO for persistent or unexplained AMS.

Always check glucose first. Hypoglycemia is the most common reversible cause of AMS and the most dangerous to miss.

TRANSPORT

Transport all AMS patients. Rapid neurologic deterioration, airway compromise, or refractory hypotension warrant highest priority transport.

VIII-A3. ANAPHYLAXIS AND ALLERGIC REACTION

OVERVIEW

Anaphylaxis involves two or more organ systems (skin, respiratory, cardiovascular, GI) or hypotension alone after allergen exposure. Epinephrine is the only primary treatment. Antihistamines and steroids are adjuncts only.

STANDING ORDERS

EMT	AEMT	PM
1. Administer epinephrine 1:1,000 0.3–0.5 mg IM to lateral thigh immediately. 2. Remove or identify triggering agent if possible. 3. Position supine with legs elevated unless respiratory distress requires upright. 4. Apply oxygen; target SpO2 ≥94%. 5. Administer diphenhydramine 25–50 mg PO if patient can swallow. 6. Repeat epinephrine every 5–10 minutes if no improvement.	1. All EMT steps. 2. Establish peripheral IV or IO immediately. 3. Normal saline 500 mL–1 L IV bolus for hypotension. 4. Diphenhydramine 25–50 mg IV/IO. 5. Albuterol 2.5 mg nebulized for bronchospasm.	1. All EMT and AEMT steps. 2. Refractory hypotension: norepinephrine infusion titrated to MAP ≥65 mmHg. 3. Severe bronchospasm unresponsive to albuterol: epinephrine 1:10,000 0.1 mg IV slow push. 4. Airway compromise or impending arrest: intubate; prepare for surgical airway. 5. Contact DMO for refractory anaphylaxis.

TRANSPORT

Immediate transport to nearest ED. All anaphylaxis requires hospital evaluation regardless of symptom resolution — biphasic reactions occur in up to 20% of cases.

VIII-A4. BEHAVIORAL EMERGENCY

OVERVIEW

Behavioral emergencies may result from psychiatric illness, substance use, medical causes (hypoglycemia, hypoxia, head trauma, toxicologic), or a combination. Always rule out medical causes before attributing behavior to psychiatric etiology.

STANDING ORDERS

EMT	AEMT	PM
1. Ensure scene safety; law enforcement should be present for violent patients. 2. Attempt verbal de-escalation; approach calmly, non-confrontationally. 3. Apply cardiac monitor and obtain vitals when patient permits. 4. Obtain blood glucose. 5. Apply XD four-point restraints if credible threat to patient or crew safety. 6. Never transport restrained patient prone.	1. All EMT steps. 2. Establish peripheral IV if patient permits. 3. For hypoglycemia: administer dextrose 10% IV. 4. AEMT does not administer chemical sedation for behavioral indications.	1. All EMT and AEMT steps. 2. Chemical sedation for severe agitation threatening safety: midazolam 2–5 mg IV/IO/IM slow push; may repeat once at 5 minutes. 3. Ketamine is NOT authorized for psychiatric agitation. 4. Monitor airway and respiratory rate continuously after sedation. 5. Contact DMO for chemical sedation; consultation recommended but not required under standing order.

Rule out medical causes before attributing AMS to psychiatric illness: check glucose, SpO2, temperature, and pupils on every behavioral patient.

TRANSPORT

Transport to nearest appropriate facility. For involuntary psychiatric patients: follow Kansas mental health statute requirements (K.S.A. 59-2953 emergency detention). Ensure law enforcement involvement for all involuntary psychiatric holds.

VIII-A5. DIABETIC EMERGENCIES

OVERVIEW

Hypoglycemia (glucose <70 mg/dL with symptoms or <50 mg/dL) is the immediate life threat and must be treated before transport. Hyperglycemia without severe symptoms can be safely transported without prehospital glucose correction.

STANDING ORDERS

EMT	AEMT	PM
1. Obtain blood glucose immediately on all diabetic patients. **2.** Apply cardiac monitor. **3.** For hypoglycemia in alert patient who can swallow: oral glucose gel 15–25 g PO. **4.** Apply oxygen if SpO2 <94% or signs of shock. **5.** Recheck glucose 15 minutes after treatment.	**1.** All EMT steps. **2.** Establish peripheral IV or IO. **3.** For symptomatic hypoglycemia or patient unable to swallow: dextrose 10% 100–250 mL IV; recheck glucose at 5 minutes. **4.** For persistent hypoglycemia: repeat dextrose 10%; contact DMO. **5.** For hyperglycemia with signs of DKA (Kussmaul breathing, fruity breath, vomiting): normal saline 500 mL–1 L IV; transport.	**1.** All EMT and AEMT steps. **2.** For unconscious patient without IV access: glucagon 1 mg IM or IN. **3.** For DKA with hemodynamic compromise: aggressive IV fluid resuscitation; contact DMO. **4.** For hyperosmolar hyperglycemic state (HHS): IV fluids; contact DMO.

TRANSPORT

Hypoglycemic patients who fully recover with treatment and have a responsible adult present may be released after glucose confirmed ≥80 mg/dL and patient is asymptomatic — confirm with DMO. All other diabetic emergencies require transport.

VIII-A6. NAUSEA AND VOMITING

OVERVIEW

Nausea and vomiting are symptoms, not diagnoses. Assess for underlying life-threatening causes: bowel obstruction, mesenteric ischemia, increased ICP, MI, DKA, and medication toxicity. Manage airway and prevent aspiration.

STANDING ORDERS

EMT	AEMT	PM
1. Position patient laterally to reduce aspiration risk. 2. Have suction immediately available. 3. Apply oxygen if SpO2 <94%. 4. Obtain blood glucose. 5. Assess for associated symptoms suggesting serious etiology.	1. All EMT steps. 2. Establish peripheral IV. 3. Administer ondansetron 4 mg IV/IO/IM/IN. 4. Administer normal saline 250–500 mL IV bolus for dehydration or hypotension.	1. All EMT and AEMT steps. 2. For severe vomiting unresponsive to ondansetron: contact DMO for additional antiemetic order. 3. For altered mental status with vomiting: intubate if airway protection is compromised.

TRANSPORT

Transport all patients with persistent vomiting, dehydration, hematemesis, or associated serious symptoms. Patients with isolated mild nausea who improve fully may be evaluated for refusal per Consent and Refusal protocol.

VIII-A7. PAIN MANAGEMENT

OVERVIEW

Pain is the most common chief complaint in emergency medicine. Adequate prehospital analgesia improves patient outcomes and does not mask clinically important findings. Assess pain using a 0–10 numeric scale and reassess after each intervention.

STANDING ORDERS

EMT	AEMT	PM
1. Assess pain: location, severity (0–10), character, radiation, onset. 2. Apply splinting or positioning to reduce mechanical pain. 3. Apply ice wrapped in cloth for musculoskeletal injuries. 4. Reassess pain score after every intervention.	1. All EMT steps. 2. Establish peripheral IV. 3. Administer fentanyl 25–100 mcg IV slow push for moderate to severe pain; may repeat in 25–50 mcg increments; max 200 mcg total. 4. Fentanyl IN: 1–2 mcg/kg per nostril if IV unavailable. 5. Monitor SpO2 and respiratory rate after each dose.	1. All EMT and AEMT steps. 2. For pain unresponsive to fentanyl: contact DMO for additional analgesia order. 3. For procedural pain (IO insertion, splinting): lidocaine 40–50 mg IO slow push prior to flush.

Do not withhold analgesia from trauma patients due to concern about masking findings. Adequate pain control does not impair abdominal exam interpretation and significantly improves patient cooperation.

TRANSPORT

Transport all patients requiring IV analgesia. Reassess pain score and document response at departure and arrival.

VIII-A8. SEIZURES

OVERVIEW

Seizures may be primary epileptic, febrile (pediatric), metabolic (hypoglycemia, hyponatremia), toxic, or from structural pathology. Status epilepticus is defined as continuous seizure ≥5 minutes or recurrent seizures without return to baseline. Most seizures self-terminate within 2–3 minutes.

STANDING ORDERS

EMT	AEMT	PM
1. Protect patient from injury; do not restrain seizing extremities. 2. Position laterally to reduce aspiration risk. 3. Apply oxygen; target SpO2 ≥94%. 4. Obtain blood glucose immediately. 5. Time the seizure; document character and progression. 6. Apply cardiac monitor post-ictally.	1. All EMT steps. 2. Establish peripheral IV or IO. 3. For glucose <70 mg/dL: dextrose 10% 100–250 mL IV. 4. For active seizure >3 minutes: midazolam 5 mg IM or 2–5 mg IV/IO slow push; may repeat once at 5 minutes. 5. Midazolam IN: 5 mg (2.5 mg per nostril) if IV/IO unavailable.	1. All EMT and AEMT steps. 2. For refractory status epilepticus: contact DMO for additional benzodiazepine or antiepileptic order. 3. For airway compromise post-ictally (GCS ≤8): intubate. 4. For suspected eclampsia (pregnant patient with seizure): magnesium sulfate 4–6 g IV over 15–20 minutes; contact DMO.

TRANSPORT

Transport all seizure patients. First-time seizure, status epilepticus, seizure with trauma, and seizure in pregnancy require emergency evaluation. Post-ictal patients who return to full baseline with known seizure disorder may be evaluated for refusal with DMO concurrence.

VIII-A9. STROKE / CVA

OVERVIEW

Stroke is a time-critical emergency. “Time is brain” — approximately 1.9 million neurons die every minute during ischemic stroke. Use the Cincinnati Prehospital Stroke Scale (facial droop, arm drift, speech abnormality) for rapid screening. Last known well (LKW) time is the most critical piece of information to obtain.

STANDING ORDERS

EMT	AEMT	PM
1. Perform Cincinnati Stroke Scale; document time of symptom onset or last known well. **2.** Apply oxygen only if SpO2 <94%; avoid routine supplemental oxygen. **3.** Apply cardiac monitor. **4.** Obtain blood glucose immediately. **5.** Position head of stretcher at 0–30 degrees. **6.** Pre-alert receiving stroke center immediately upon identification. **7.** Minimize scene time — goal <10 minutes.	**1.** All EMT steps. **2.** Establish peripheral IV. **3.** For glucose <70 mg/dL: dextrose 10% IV; stroke mimics from hypoglycemia resolve with glucose correction. **4.** Do not lower blood pressure without specific physician order.	**1.** All EMT and AEMT steps. **2.** Obtain 12-lead ECG to identify atrial fibrillation as stroke etiology. **3.** For airway compromise (GCS ≤8): intubate; avoid aggressive hyperventilation. **4.** Contact stroke center with Cincinnati findings, LKW time, blood glucose, and ETA.

Do not routinely lower blood pressure in ischemic stroke. Permissive hypertension maintains penumbra perfusion. Only lower BP with explicit physician order and documented target.

TRANSPORT

Highest priority transport to nearest certified stroke center. Document LKW time, Cincinnati findings, blood glucose, and all interventions with precise times.

B. CARDIOVASCULAR

VIII-B1. CARDIAC ARREST AND RESUSCITATION

OVERVIEW

Cardiac arrest management prioritizes high-quality CPR and early defibrillation above all other interventions. Minimize interruptions to chest compressions. Target compression rate 100–120/min, depth 2–2.4 inches, full chest recoil, compression fraction >80%.

STANDING ORDERS

EMT	AEMT	PM
1. Begin CPR immediately; compress hard and fast with full recoil.	**1.** All EMT steps. **2.** Establish IV or IO access without interrupting CPR.	**1.** All EMT and AEMT steps.

EMT	AEMT	PM
2. Apply AED as soon as available; analyze and defibrillate for shockable rhythm. **3.** Ventilate with BVM at 10 breaths/min once advanced airway is placed (do not interrupt CPR for ventilation without airway). **4.** Minimize interruptions to compressions; switch compressors every 2 minutes. **5.** Apply mechanical CPR device when available. **6.** Identify and report bystander CPR status, time of collapse, and witnessed vs unwitnessed.	**3.** For non-shockable rhythm (PEA/asystole): administer epinephrine 1 mg IV/IO as early as possible, then every 3–5 minutes. For shockable rhythm (VF/pVT): administer epinephrine 1 mg IV/IO after initial defibrillation attempts have failed (typically after 2–3 shocks). **4.** For pulseless VT/VF: defibrillate at 200 J biphasic; resume CPR immediately after shock. **5.** For shockable rhythm: amiodarone 300 mg IV/IO after third shock; may repeat 150 mg x1.	**2.** Place advanced airway (iGel or ETT); confirm with waveform capnography. **3.** Target ETCO2 ≥10 mmHg during CPR; sustained rise suggests ROSC. **4.** For PEA or asystole: identify and treat reversible causes (5 H's and 5 T's). **5.** For refractory VF: lidocaine 1–1.5 mg/kg IV/IO as alternative to amiodarone. **6.** Contact DMO for prolonged resuscitation, special circumstances, or termination consideration. Note: ETCO2 ≤10 mmHg after 20 minutes of ACLS may be considered as one factor in a multimodal decision to terminate — do not use ETCO2 as the sole criterion.

The five H's: Hypovolemia, Hypoxia, Hydrogen ion (acidosis), Hypo/Hyperkalemia, Hypothermia. The five T's: Tension pneumothorax, Tamponade, Toxins, Thrombosis (pulmonary), Thrombosis (coronary). Identify and treat reversible causes in every PEA arrest.

TRANSPORT

Transport with ongoing resuscitation unless termination criteria are met. ROSC: manage per Post-Cardiac Arrest protocol. Transport to nearest cardiac capable facility.

VIII-B2. CHEST PAIN / ACUTE CORONARY SYNDROME

OVERVIEW

Chest pain with cardiac features requires 12-lead ECG acquisition within 10 minutes of patient contact. STEMI is a time-critical emergency requiring immediate activation of the receiving facility's catheterization laboratory. NSTEMI and unstable angina require urgent but not emergent transport.

STANDING ORDERS

EMT	AEMT	PM
1. Apply cardiac monitor and obtain 12-lead ECG within 10 minutes. **2.** Apply oxygen only if SpO2 <94%.	**1.** All EMT steps. **2.** Establish peripheral IV.	**1.** All EMT and AEMT steps. **2.** Nitroglycerin 0.4 mg SL every 5 minutes x3 if SBP ≥100 mmHg; hold if RV infarct suspected.

EMT	AEMT	PM
3. Administer aspirin 324 mg PO chewed if no contraindication and not already given. 4. Keep patient at rest; minimize exertion. 5. Assess pain: onset, radiation, severity, associated symptoms. 6. Pre-alert receiving facility immediately if STEMI identified.	3. Identify STEMI on 12-lead and notify Paramedic and receiving facility immediately. 4. Normal saline 250 mL IV bolus if hypotension without pulmonary edema. 5. Note: AEMT 12-lead interpretation is authorized for STEMI identification per AMR KC medical direction.	3. Fentanyl 25–50 mcg IV titrated for pain. 4. For ventricular dysrhythmia: treat per Cardiac Arrest or Tachycardia protocol. 5. For cardiogenic shock: norepinephrine infusion; contact DMO. 6. Activate STEMI alert at receiving facility and provide 12-lead transmission if capable.

TRANSPORT

Highest priority transport for STEMI to STEMI-receiving facility. All chest pain with suspected cardiac etiology requires emergency transport.

VIII-B3. BRADYCARDIA

OVERVIEW

Symptomatic bradycardia is defined by hemodynamic compromise (hypotension, altered mental status, signs of poor perfusion) or ischemic chest pain caused by the slow rate. Asymptomatic bradycardia does not require treatment.

STANDING ORDERS

EMT	AEMT	PM
1. Apply cardiac monitor; obtain 12-lead ECG. 2. Apply oxygen; target SpO2 ≥94%. 3. Maintain IV access if already established. 4. Position patient supine. 5. Notify Paramedic immediately of any hemodynamic compromise.	1. All EMT steps. 2. Establish peripheral IV. 3. Normal saline 250 mL IV bolus if SBP <90 mmHg. 4. Obtain 12-lead ECG; identify rhythm and report to Paramedic.	1. All EMT and AEMT steps. 2. Atropine 1 mg IV every 3–5 minutes (max 3 mg) for symptomatic bradycardia. 3. If atropine fails: initiate transcutaneous pacing. 4. For hemodynamic compromise refractory to pacing: epinephrine infusion 2–10 mcg/min IV titrated to effect; contact DMO. (Dopamine is not a carried agent.)

TRANSPORT

Immediate transport for symptomatic bradycardia. Asymptomatic bradycardia: transport for evaluation. Pacing patients require continuous monitoring throughout transport.

VIII-B4. TACHYCARDIA

OVERVIEW

Tachycardia management is guided by whether the patient is stable or unstable, and whether the rhythm is narrow or wide complex. Unstable (hypotension, altered mental status, ischemic chest pain, pulmonary edema) requires immediate synchronized cardioversion. Stable rhythms allow pharmacologic management.

STANDING ORDERS

EMT	AEMT	PM
1. Apply cardiac monitor; obtain 12-lead ECG. **2.** Apply oxygen if SpO2 <94%. **3.** Assess stability: blood pressure, mental status, chest pain, respiratory status. **4.** Notify Paramedic immediately of any hemodynamic instability.	**1.** All EMT steps. **2.** Establish peripheral IV. **3.** Obtain 12-lead ECG; identify rhythm and report to Paramedic. **4.** For pulseless VT/VF: initiate CPR; manual defibrillation at 200 J.	**1.** All EMT and AEMT steps. **2.** Unstable tachycardia with pulse: synchronized cardioversion — SVT at 50–100 J; A-fib at 200 J (AHA 2025); VT at 100 J. **3.** Stable narrow-complex SVT: adenosine 6 mg rapid IV push; may repeat at 12 mg x1. **4.** Stable wide-complex VT: amiodarone 150 mg IV over 10 minutes. **5.** Treat wide complex tachycardia as VT until proven otherwise. **6.** Contact DMO for refractory tachycardia.

> *If the patient is unstable (hypotension, altered mental status, ischemic chest pain), cardiovert first — do not delay for rhythm identification or IV access.*

TRANSPORT

> *Immediate transport for any unstable tachycardia. Stable tachycardia: urgent transport with continuous monitoring.*

VIII-B5. POST-CARDIAC ARREST CARE (POST-ROSC)

OVERVIEW

ROSC after cardiac arrest initiates the post-cardiac arrest syndrome: myocardial stunning, systemic ischemia-reperfusion, and ongoing risk of re-arrest. Management focuses on preventing secondary injury from hypoxia, hypotension, hyperthermia, and hyperglycemia.

STANDING ORDERS

EMT	AEMT	PM
1. Confirm ROSC: palpable pulse, ETCO2 rise, SpO2 improvement. 2. Apply oxygen; target SpO2 94–98% — avoid hyperoxia. 3. Apply cardiac monitor continuously. 4. Monitor blood pressure every 3–5 minutes. 5. Obtain blood glucose.	1. All EMT steps. 2. Maintain peripheral IV access. 3. Normal saline 250–500 mL IV bolus for SBP <90 mmHg. 4. Obtain 12-lead ECG to identify STEMI as arrest cause.	1. All EMT and AEMT steps. 2. Target MAP ≥65 mmHg; initiate norepinephrine if hypotension persists after fluid bolus. 3. For intubated patients: confirm ventilator settings; FiO2 titrated to SpO2 94–98%; avoid hyperventilation (target ETCO2 35–40 mmHg). 4. Passive cooling if patient is febrile (temperature >37.5°C); avoid active warming. 5. Contact DMO and receiving cardiac center for STEMI identified post-ROSC.

Avoid the four harms post-ROSC: hyperoxia (target SpO2 94–98%), hyperventilation (target ETCO2 35–40 mmHg), hypotension (target MAP ≥65 mmHg), and hyperthermia (avoid active warming).

TRANSPORT

Immediate transport to cardiac-capable receiving facility. STEMI identified post-ROSC warrants highest priority transport to STEMI center.

VIII-B6. TERMINATION OF RESUSCITATION

OVERVIEW

Termination of resuscitation (TOR) in the field is appropriate when continued resuscitation is futile and transport would expose crew and public to unnecessary risk without benefit to the patient. TOR requires DMO concurrence.

STANDING ORDERS

EMT	AEMT	PM
1. Continue resuscitation until Paramedic or DMO authorizes termination. 2. Document all resuscitation events with times. 3. Secure the scene and notify law enforcement as required.	1. All EMT steps. 2. Continue resuscitation until Paramedic or DMO authorizes termination.	1. Contact DMO for TOR authorization when ALL of the following criteria are met: 2. Arrest is not witnessed by EMS personnel. 3. No bystander CPR was performed prior to EMS arrival. 4. No shockable rhythm (VF or pulseless VT) was identified at any time during resuscitation.

EMT	AEMT	PM
		5. ROSC has not been achieved after a reasonable resuscitation attempt (minimum 20 minutes of ACLS). **6.** No special circumstances: hypothermia, pregnancy, pediatric patient, drowning, or suspected toxic etiology. **7.** Upon DMO authorization: cease resuscitation; document time; notify law enforcement; complete required documentation.

Special circumstances require continued resuscitation and transport regardless of standard TOR criteria: hypothermia, drowning, pregnancy, pediatric patients, and suspected reversible toxic etiology. When in doubt, transport.

TRANSPORT

If TOR is not authorized, transport with ongoing resuscitation. If TOR is authorized: remain on scene, secure the patient, notify law enforcement, and complete documentation. Do not transport deceased patients unless law enforcement or medical examiner directs otherwise.

C. RESPIRATORY

VIII-C1. AIRWAY MANAGEMENT

OVERVIEW

Airway management is the highest priority in any emergency response. The goal is to establish and maintain a patent airway with adequate oxygenation and ventilation. Use the least invasive effective airway adjunct. No RSI is authorized under AMR Kansas City protocols.

STANDING ORDERS

EMT	AEMT	PM
1. Open airway with head tilt-chin lift (non-trauma) or jaw thrust (trauma). **2.** Insert OPA or NPA as indicated. **3.** Suction as needed. **4.** Apply oxygen via appropriate delivery device; target SpO2 ≥94%.	**1.** All EMT steps. **2.** Initiate CPAP at 5–10 cmH2O for hypoxia unresponsive to NRB in alert cooperative patients. **3.** Insert iGel supraglottic airway for apneic patients.	**1.** All EMT and AEMT steps. **2.** Endotracheal intubation for definitive airway when indicated; maximum two attempts. **3.** If two attempts fail: ventilate with BVM and iGel; contact DMO.

EMT	AEMT	PM
5. Assist ventilation with BVM if respiratory effort is inadequate. **6.** Apply supraglottic airway (iGel) if BVM ventilation is inadequate.		**4.** Confirm ETT placement with waveform capnography. **5.** Surgical cricothyrotomy if airway cannot be established by any other method.

No RSI is authorized. Maximum two laryngoscopy attempts before escalating to supraglottic airway. A patent BVM-iGel airway is acceptable and preferable to repeated failed intubation attempts.

TRANSPORT

Airway compromise is always load-and-go. Manage the airway en route when possible rather than delaying transport on scene.

VIII-C2. BRONCHOSPASM / RESPIRATORY DISTRESS

OVERVIEW

Bronchospasm from asthma or COPD exacerbation presents with wheezing, prolonged expiration, accessory muscle use, and decreased air movement. Severe exacerbations may have silent chest (no wheeze due to severe obstruction) and are immediately life-threatening.

STANDING ORDERS

EMT	AEMT	PM
1. Apply oxygen; target SpO2 ≥94%; avoid hyperoxia in COPD. **2.** Assist patient to position of comfort (upright). **3.** Administer albuterol 2.5 mg nebulized; may repeat every 20 minutes. **4.** Administer ipratropium 0.5 mg nebulized combined with albuterol. **5.** Assess air movement, accessory muscle use, and speech pattern.	**1.** All EMT steps. **2.** Establish peripheral IV. **3.** Initiate CPAP at 5 cmH2O for moderate to severe hypoxia not responding to nebulized therapy. **4.** Normal saline 250 mL IV bolus for dehydration.	**1.** All EMT and AEMT steps. **2.** Magnesium sulfate 2 g IV over 20 minutes for severe refractory bronchospasm. **3.** For impending respiratory failure: intubate; note that positive pressure ventilation in severe bronchospasm carries risk of air trapping and pneumothorax. **4.** For anaphylaxis-associated bronchospasm: epinephrine 1:1,000 0.3 mg IM. **5.** Contact DMO for severe or refractory bronchospasm.

A silent chest in a bronchospasm patient is not improvement — it is a sign of critical deterioration. No wheeze means no air movement. Prepare for intubation immediately.

TRANSPORT

Immediate transport for severe bronchospasm, silent chest, altered mental status, or respiratory fatigue. Continue nebulized therapy en route.

D. TRAUMATIC CONDITIONS

VIII-D1. BURNS

OVERVIEW

Assess depth and TBSA (Rule of Nines). Assess for inhalation injury: singed nasal hair, carbonaceous sputum, hoarse voice, stridor. Stop the burning process immediately. Airway edema from inhalation injury progresses rapidly — intubate early if anticipated.

STANDING ORDERS

EMT	AEMT	PM
1. Stop burning process: remove from environment, remove clothing and jewelry, irrigate chemical burns 20 minutes minimum. **2.** Apply oxygen at 100% via NRB regardless of SpO2 if inhalation injury suspected (CO poisoning). **3.** Cover burns with dry sterile dressings; no ice, butter, or home remedies. **4.** Maintain patient warmth. **5.** Do not rupture blisters. **6.** Estimate TBSA and depth; initiate transport.	**1.** All EMT steps. **2.** Establish peripheral IV; avoid burned tissue. **3.** Administer fentanyl 1–2 mcg/kg IV/IO/IN for pain. **4.** Fluid resuscitation for burns ≥20% TBSA: initiate normal saline; contact DMO for Parkland formula rate.	**1.** All EMT and AEMT steps. **2.** Inhalation injury with stridor or impending airway compromise: intubate early. **3.** Chemical burns to eyes: continuous NS irrigation throughout transport. **4.** Contact DMO and burn center for: ≥20% TBSA, full thickness, facial, circumferential, or electrical burns.

TRANSPORT

Burns ≥20% TBSA, full thickness, facial/airway, circumferential, or electrical — transport to burn center. Divert immediately for airway compromise.

VIII-D2. CHEST INJURIES

OVERVIEW

Life-threatening chest injuries: tension pneumothorax, open pneumothorax, massive hemothorax, flail chest, cardiac tamponade. Mechanism guides suspicion. Apply vented chest seals to all open chest wounds. Chest injuries are load-and-go — scene time goal <10 minutes.

STANDING ORDERS

EMT	AEMT	PM
1. Apply oxygen; target SpO2 ≥94%. **2.** Apply vented chest seal immediately to all open chest wounds. **3.** Assess for tension pneumothorax: absent unilateral breath sounds, tracheal deviation, JVD, hypotension. **4.** Stabilize flail segment with bulky dressing or position onto flail side. **5.** Maintain spinal motion restriction if mechanism warrants. **6.** Notify Paramedic and initiate rapid transport.	**1.** All EMT steps. **2.** Establish large-bore IV. **3.** Normal saline 250–500 mL for hypotension (permissive: target SBP 80–90 mmHg for penetrating trauma). **4.** Monitor chest seal; burp if tension develops after sealing.	**1.** All EMT and AEMT steps. **2.** Tension pneumothorax with instability: needle decompression 2nd ICS MCL or 4th–5th ICS AAL. **3.** Cardiac tamponade (Beck's triad): fluid resuscitation; rapid transport is definitive — no prehospital pericardiocentesis without DMO order. **4.** Contact DMO for all penetrating chest trauma.

TRANSPORT

Load-and-go. Nearest Level I or II trauma center for penetrating chest trauma, tension pneumothorax, or hemodynamic instability.

VIII-D3. HEAD INJURIES

OVERVIEW

Traumatic brain injury (TBI) secondary injury is caused by hypoxia and hypotension. Prevent both aggressively. Target SpO2 ≥94% and SBP ≥90 mmHg throughout transport. Avoid hyperventilation — target ETCO2 35–40 mmHg except for impending herniation.

STANDING ORDERS

EMT	AEMT	PM
1. Manage airway; apply oxygen; target SpO2 ≥94%. **2.** Apply cervical collar; maintain spinal motion restriction. **3.** Assess GCS and pupils at scene and every 5 minutes en route. **4.** Apply cardiac monitor. **5.** Elevate head of stretcher 30 degrees.	**1.** All EMT steps. **2.** Establish peripheral IV. **3.** Normal saline 250–500 mL IV bolus for SBP <90 mmHg; avoid over-resuscitation. **4.** Treat hypoglycemia: dextrose 10% IV.	**1.** All EMT and AEMT steps. **2.** For GCS ≤8: intubate; maintain ETCO2 35–40 mmHg; avoid hyperventilation. **3.** For signs of herniation (blown pupil, Cushing's triad): hyperventilate to ETCO2 30–35 mmHg as bridge only; contact DMO.

EMT	AEMT	PM
6. Initiate rapid transport; notify Paramedic.		**4.** For seizure: midazolam 2–5 mg IV/IO/IM. **5.** Maintain MAP ≥85 mmHg for confirmed TBI.

A single episode of hypotension (SBP <90 mmHg) in a TBI patient doubles mortality. A single episode of hypoxia (SpO2 <90%) also doubles mortality. These are not acceptable compromises — treat aggressively.

TRANSPORT

Immediate transport to trauma center with neurosurgical capability. Minimize scene time.

VIII-D4. MULTI-SYSTEM TRAUMA

OVERVIEW

Multi-system trauma is load-and-go. Scene time goal is <10 minutes for critical trauma. Life-threatening injuries are identified and managed simultaneously with rapid packaging. The primary survey drives all decision-making.

STANDING ORDERS

EMT	AEMT	PM
1. Scene safety; BSI precautions. **2.** Control massive hemorrhage immediately: tourniquet, wound packing, direct pressure. **3.** Airway; oxygen at 15 L/min via NRB. **4.** Vented chest seal for open chest wounds. **5.** Spinal motion restriction if indicated. **6.** Load and go; IV access, splinting, and secondary assessment en route.	**1.** All EMT steps. **2.** Two large-bore IVs en route; do not delay transport for IV access on scene. **3.** Normal saline; permissive hypotension for penetrating trauma (SBP 80–90 mmHg); standard resuscitation for blunt (SBP ≥90 mmHg).	**1.** All EMT and AEMT steps. **2.** Intubate for airway compromise; maintain in-line stabilization. **3.** Needle decompression for tension pneumothorax. **4.** Repeat primary survey every 5 minutes en route. **5.** Pre-alert trauma center: mechanism, identified injuries, GCS, vitals. **6.** Contact DMO for refractory shock.

Scene time >10 minutes in critical trauma significantly worsens outcome. If on scene >10 minutes without compelling reason, reassess the situation and expedite transport.

TRANSPORT

Immediate transport to Level I or II trauma center. Pre-alert en route.

VIII-D5. ORTHOPEDIC INJURIES

OVERVIEW

Isolated orthopedic injuries are rarely immediately life-threatening. Exceptions: femur fracture (up to 2 L blood loss), pelvic fracture (massive internal hemorrhage), and vascular injury causing limb ischemia. Assess neurovascular status before and after every intervention.

STANDING ORDERS

EMT	AEMT	PM
1. Control external hemorrhage with direct pressure. **2.** Splint fractures in position of comfort; do not forcibly reduce. **3.** Assess neurovascular status distal to injury: pulse, cap refill, sensation, motor. **4.** Apply traction splint for mid-shaft femur fracture. **5.** Apply pelvic binder for suspected pelvic fracture; do not repeatedly compress pelvis. **6.** Apply ice (wrapped) to reduce swelling.	**1.** All EMT steps. **2.** Establish peripheral IV. **3.** Fentanyl 1–2 mcg/kg IV/IO/IN for pain. **4.** Normal saline 500 mL IV bolus for femur or pelvic fracture with hypotension.	**1.** All EMT and AEMT steps. **2.** Vascular compromise: one attempt at gentle longitudinal traction to restore perfusion; notify receiving facility immediately. **3.** Open fracture: moist sterile dressing; do not reduce exposed bone. **4.** Pelvic fracture with refractory shock: norepinephrine if fluids fail; contact DMO.

TRANSPORT

Vascular compromise, open fracture, pelvic fracture, or associated hemorrhagic shock — trauma center. Isolated stable fractures — nearest appropriate ED.

VIII-D6. SHOCK AND HEMORRHAGE

OVERVIEW

Shock is inadequate tissue perfusion. Classify by etiology: hemorrhagic, distributive (septic, neurogenic, anaphylactic), cardiogenic, or obstructive (tension pneumothorax, tamponade). Treatment is etiology-specific but all shock requires aggressive management and rapid transport.

STANDING ORDERS

EMT	AEMT	PM
1. Control external hemorrhage immediately: tourniquet, wound packing, direct pressure. 2. Apply oxygen; target SpO2 ≥94%. 3. Position supine; keep patient warm. 4. Apply cardiac monitor. 5. Identify shock type by clinical presentation.	1. All EMT steps. 2. Establish two large-bore peripheral IVs. 3. Hemorrhagic: normal saline 250–500 mL bolus; permissive hypotension for penetrating (SBP 80–90), standard for blunt (SBP ≥90). 4. Distributive: normal saline 500 mL–1 L IV bolus; repeat if no response. 5. Neurogenic: normal saline 500 mL IV bolus; do not use Trendelenburg.	1. All EMT and AEMT steps. 2. Obstructive: treat cause (needle decompression for tension; pericardiocentesis only with DMO order for tamponade). 3. Cardiogenic: avoid aggressive fluid resuscitation; norepinephrine for MAP <65 mmHg; contact DMO. 4. Distributive refractory to fluids: norepinephrine infusion titrated to MAP ≥65 mmHg. 5. Hemorrhagic refractory to fluids: norepinephrine; expedite transport to trauma center.

TRANSPORT

All shock is immediate transport. Hemorrhagic shock — trauma center. Cardiogenic shock — cardiac-capable facility. Septic shock — nearest ED.

VIII-D7. SPINAL INJURIES

OVERVIEW

Prevent secondary spinal cord injury from movement, hypotension, and hypoxia. Apply spinal motion restriction (SMR) for high-risk mechanism with neurologic symptoms, midline tenderness, or altered mental status. Neurogenic shock presents with hypotension AND bradycardia — not tachycardia.

STANDING ORDERS

EMT	AEMT	PM
1. Manual in-line stabilization for all movement. 2. Apply cervical collar of appropriate size. 3. Apply SMR for: high-risk mechanism with neurologic complaint, midline tenderness, or altered mental status. 4. Apply oxygen; target SpO2 ≥94%. 5. Keep patient warm; neurogenic shock impairs thermoregulation. 6. Scoop or log-roll with minimum three providers.	1. All EMT steps. 2. Establish peripheral IV. 3. Neurogenic shock: normal saline 500 mL IV bolus; target SBP ≥90 mmHg. 4. Do not use Trendelenburg — may worsen respiratory compromise in cervical SCI.	1. All EMT and AEMT steps. 2. Refractory neurogenic shock: norepinephrine; target MAP ≥85–90 mmHg (higher than standard shock to maintain cord perfusion). 3. High cervical SCI with respiratory compromise: intubate with in-line stabilization maintained. 4. Bradycardia from neurogenic shock: atropine 1 mg IV if HR <50 and symptomatic. 5. Contact DMO for neurogenic shock.

TRANSPORT

Immediate transport to trauma center with neurosurgical capability. Maintain SBP ≥90 mmHg and SpO2 ≥94% throughout to minimize secondary injury.

E. ENVIRONMENTAL

VIII-E1. DROWNING

OVERVIEW

Outcome is determined by duration of hypoxia. Cold water may confer neuroprotection. All drowning patients require ED evaluation regardless of apparent recovery. Continue resuscitation in cold water cardiac arrest — do not pronounce until rewarmed.

STANDING ORDERS

EMT	AEMT	PM
1. Rescuer safety — do not enter water without training and equipment. **2.** Begin CPR immediately if pulseless and apneic. **3.** Apply oxygen at 100%; target SpO2 ≥94%. **4.** Remove wet clothing; dry and apply blankets. **5.** Apply AED; defibrillate shockable rhythms. **6.** Apply SMR if diving or trauma mechanism.	**1.** All EMT steps. **2.** Establish peripheral IV. **3.** Normal saline 250 mL IV bolus for hypotension.	**1.** All EMT and AEMT steps. **2.** Respiratory failure: CPAP or intubate if CPAP fails. **3.** Cardiac arrest: continue full ACLS; do not withhold resuscitation for cold water drowning. **4.** Hypothermia management per environmental protocol. **5.** Contact DMO for cold water cardiac arrest.

TRANSPORT

All drowning patients require transport. Cold water drowning with cardiac arrest: continue resuscitation and transport for in-hospital rewarming.

VIII-E2. ENVIRONMENTAL EMERGENCIES (HEAT AND COLD)

OVERVIEW

Heat stroke (temperature >40°C with altered mental status) and severe hypothermia (<28°C) are immediately life-threatening. Cooling is the treatment for heat stroke. Gentle handling and rewarming is the treatment for severe hypothermia.

STANDING ORDERS

EMT	AEMT	PM
1. HEAT: Remove from environment; cool ambulance; remove excess clothing. **2.** HEAT STROKE: Ice packs to groin, axillae, neck; fan; cool water to skin. Cooling is the treatment. **3.** COLD: Remove wet clothing; wrap in blankets; move to warm ambulance. **4.** COLD: Handle gently — rough movement precipitates VF in severe hypothermia. **5.** Apply cardiac monitor; hypothermia produces Osborn (J) waves. **6.** Obtain blood glucose.	**1.** All EMT steps. **2.** Establish peripheral IV. **3.** HEAT STROKE: Normal saline 1 L IV bolus; continue active cooling. **4.** COLD: Warmed normal saline 250–500 mL IV if available for hypotension. **5.** Dextrose 10% for hypoglycemia.	**1.** All EMT and AEMT steps. **2.** HEAT STROKE with seizure: midazolam 2–5 mg IV. **3.** SEVERE HYPOTHERMIA with VF: defibrillate once; if no response, continue CPR and transport for rewarming before further defibrillation. **4.** HYPOTHERMIA: Reduce medication doses — impaired metabolism causes accumulation. **5.** Contact DMO for heat stroke with AMS and severe hypothermia with cardiac arrest.

TRANSPORT

Heat stroke with AMS and severe hypothermia: immediate transport. Hypothermic cardiac arrest: transport with ongoing CPR for in-hospital rewarming.

F. OBSTETRICS

VIII-F1. OBSTETRIC EMERGENCIES AND FIELD DELIVERY

OVERVIEW

Assess gestational age, contraction frequency, urge to push, crowning, and bleeding. Imminent delivery: crowning, strong urge to push, contractions <2 min apart. Eclampsia: severe hypertension (>160/110 mmHg) with seizure after 20 weeks. Position in left lateral decubitus for all pregnant patients to relieve aortocaval compression.

STANDING ORDERS

EMT	AEMT	PM
1. Position in left lateral decubitus. **2.** Apply oxygen; target SpO2 ≥94%.	**1.** All EMT steps. **2.** Establish peripheral IV.	**1.** All EMT and AEMT steps.

EMT	AEMT	PM
3. For imminent delivery: prepare OB kit; delivery takes priority over transport. **4.** Guide delivery: support presenting part, guide shoulders, deliver gently. **5.** After delivery: clamp and cut cord; dry and stimulate newborn; wrap in warm blanket. **6.** Assess newborn APGAR at 1 and 5 minutes. **7.** For postpartum hemorrhage: uterine fundal massage; transport immediately.	**3.** Hypotension: normal saline 500 mL IV bolus. **4.** Postpartum hemorrhage with hypotension: aggressive fluid resuscitation; rapid transport. **5.** Newborn requiring resuscitation: BVM at 40–60 breaths/min; chest compressions at 3:1 ratio if HR <60 after 30 seconds of ventilation.	**2.** Eclampsia: magnesium sulfate 4–6 g IV over 15–20 minutes. **3.** Eclamptic seizure: midazolam 2–5 mg IV if magnesium not available. **4.** Newborn resuscitation: epinephrine 0.01 mg/kg IV/IO if HR <60 after adequate ventilation and compressions. **5.** Cord prolapse: elevate presenting part manually, knee-chest position, moist sterile dressing on cord, immediate transport — do not attempt to reposition cord. **6.** Contact DMO for eclampsia, placenta previa, abruption, and newborn requiring resuscitation.

Cord prolapse: do not attempt to reposition the cord. Elevate the presenting part manually throughout transport to relieve compression. This is a surgical emergency.

TRANSPORT

Eclampsia, placenta previa with active bleeding, and newborn requiring resuscitation — nearest OB-capable facility. Imminent delivery: deliver on scene then transport. Postpartum hemorrhage with hemodynamic compromise — immediate transport.

VIII-A10. POISONINGS AND OVERDOSES

OVERVIEW

Identify the toxidrome first — opioid (miosis, respiratory depression, AMS), cholinergic (SLUDGE), sympathomimetic (tachycardia, hypertension, hyperthermia, agitation), anticholinergic (dry skin, tachycardia, delirium), sedative-hypnotic (CNS and respiratory depression), or serotonin syndrome (clonus, hyperthermia, agitation). Treat the toxidrome, not a specific drug. Collect pill bottles and containers to bring to the receiving facility.

STANDING ORDERS

EMT	AEMT	PM
1. Scene safety — do not enter an environment with toxic atmosphere without appropriate PPE. **2.** Assess and manage airway; position laterally if unconscious without airway control. **3.** Apply oxygen; target SpO2 ≥94%. **4.** Obtain blood glucose immediately. **5.** For suspected opioid overdose with respiratory depression: naloxone 2 mg IN or 0.4 mg IM; may repeat. **6.** Collect substances, pill bottles, or containers for the receiving facility. **7.** Apply cardiac monitor.	**1.** All EMT steps. **2.** Establish peripheral IV or IO. **3.** Naloxone IV/IO: 0.4–2 mg titrated to respiratory effort for opioid overdose. **4.** Dextrose 10% 100–250 mL IV for hypoglycemia. **5.** Normal saline 250–500 mL IV bolus for hypotension without pulmonary edema. **6.** For organophosphate (cholinergic) toxicity: atropine via DuoDote autoinjector IM; repeat every 5–10 minutes until secretions dry.	**1.** All EMT and AEMT steps. **2.** TCA overdose with QRS >120 ms or dysrhythmia: sodium bicarbonate 1–2 mEq/kg IV; titrate to QRS narrowing. **3.** Beta blocker overdose with bradycardia and hypotension: glucagon 3–5 mg IV/IM; atropine; transcutaneous pacing if refractory. **4.** CCB overdose with hemodynamic compromise: calcium gluconate 1–2 g IV; glucagon; contact DMO. **5.** Seizure from toxic etiology: midazolam 2–5 mg IV/IO/IM/IN. **6.** Refractory hypotension: norepinephrine infusion; contact DMO. **7.** Contact Poison Control (1-800-222-1222) and DMO for all complex toxicology.

Re-sedation after naloxone is predictable. Naloxone half-life is shorter than most opioids. Monitor respiratory rate and SpO2 continuously throughout transport — a patient who is alert at departure may become apneic en route.

TRANSPORT

Transport all significant poisoning and overdose patients. Contact Poison Control (1-800-222-1222) en route for agent-specific guidance. Divert for airway compromise, hemodynamic collapse, or uncontrolled seizure.

VIII-A11. HYPERTENSIVE EMERGENCY

OVERVIEW

A hypertensive emergency exists when severely elevated blood pressure (typically SBP >180 mmHg or DBP >120 mmHg) is causing acute end-organ damage. Target organs include the brain (hypertensive encephalopathy, hemorrhagic stroke, PRES), heart (ACS, acute heart failure), kidneys (acute kidney injury), and aorta (aortic dissection). Hypertensive urgency (severe BP without end-organ damage) is less time-critical but still requires transport. Prehospital BP reduction is generally NOT indicated unless specific clinical features require it.

STANDING ORDERS

EMT	AEMT	PM
1. Obtain blood pressure in both arms if possible (unequal readings suggest aortic dissection). **2.** Apply cardiac monitor and 12-lead ECG. **3.** Assess for end-organ damage: neurologic deficits, visual changes, chest pain, dyspnea, altered mental status. **4.** Apply oxygen only if SpO2 <94%. **5.** Position patient upright or semi-recumbent; reduce stimulation. **6.** Initiate transport — do not delay for pharmacologic intervention.	**1.** All EMT steps. **2.** Establish peripheral IV. **3.** For acute pulmonary edema with hypertension (SBP >100 mmHg): nitroglycerin 0.4 mg SL; CPAP per protocol. **4.** Do not reduce BP aggressively in suspected ischemic stroke — permissive hypertension maintains penumbra perfusion. **5.** Obtain 12-lead ECG; identify STEMI or LVH strain pattern.	**1.** All EMT and AEMT steps. **2.** For hypertensive encephalopathy or PRES with severe hypertension and altered mental status: contact DMO for antihypertensive order; do not treat aggressively without explicit parameters. **3.** For eclampsia (pregnant patient, severe hypertension, seizure): magnesium sulfate 4–6 g IV over 15–20 minutes; contact DMO for antihypertensive order. **4.** For suspected aortic dissection (tearing chest or back pain, unequal BP, pulse deficit): target SBP 100–120 mmHg with DMO guidance; avoid excessive drops. **5.** For acute pulmonary edema with severe hypertension refractory to NTG: nitroglycerin infusion per DMO order. **6.** Do not drop BP more than 20–25% in the first hour in any hypertensive emergency without specific indication.

The urgency of prehospital BP reduction depends entirely on the clinical presentation. Ischemic stroke: do not lower BP. Hemorrhagic stroke: modest reduction may be appropriate with DMO guidance. Aortic dissection: reduce to SBP 100–120 mmHg. ACS with HTN: nitroglycerin per protocol. When in doubt, transport without treating and let the receiving physician manage.

TRANSPORT

Urgent transport for all hypertensive emergencies with end-organ damage. Highest priority for altered mental status, aortic dissection, or eclampsia. Stroke center for neurologic presentations. Cardiac-capable facility for ACS or aortic dissection.

VIII-A12. SEPSIS AND SEPTIC SHOCK

OVERVIEW

Sepsis is life-threatening organ dysfunction from infection. Septic shock is sepsis with hemodynamic compromise requiring vasopressors to maintain MAP ≥65 mmHg despite adequate fluid resuscitation. Prehospital recognition and early fluid resuscitation improve outcomes. Screen using qSOFA: altered mental status, respiratory rate >22/min, and SBP ≤100 mmHg — two of three criteria suggests sepsis.

STANDING ORDERS

EMT	AEMT	PM
1. Screen with qSOFA: altered mental status, RR >22/min, SBP ≤100 mmHg. Two or more criteria — suspect sepsis. **2.** Apply oxygen; target SpO2 ≥94%. **3.** Apply cardiac monitor. **4.** Obtain blood glucose. **5.** Keep patient warm — septic patients are often hypothermic. **6.** Pre-alert receiving facility: suspected sepsis, vital signs, mental status.	**1.** All EMT steps. **2.** Establish two large-bore peripheral IVs. **3.** Administer normal saline 500 mL IV bolus; repeat to total 30 mL/kg (approximately 2 L for 70 kg adult) if SBP <90 mmHg and lungs are clear, or until clinical improvement — whichever comes first. Reassess after each bolus. **4.** Obtain blood glucose; treat hypoglycemia with dextrose 10%. **5.** Reassess lung sounds after each fluid bolus — stop fluids if signs of pulmonary edema develop.	**1.** All EMT and AEMT steps. **2.** For septic shock refractory to 30 mL/kg fluid resuscitation: initiate norepinephrine infusion; titrate to MAP ≥65 mmHg. **3.** For altered mental status with suspected source (UTI, pneumonia, wound): obtain history of fever, chills, dysuria, productive cough. **4.** For airway compromise: intubate; be aware that intubation in septic shock often causes severe hemodynamic decompensation — have vasopressor ready. **5.** Contact DMO for septic shock requiring vasopressors.

Intubating a patient in septic shock is a high-risk procedure. Loss of sympathetic drive from induction agents combined with positive pressure ventilation can cause profound hemodynamic collapse. Have norepinephrine infusion running or ready before intubation. Consider push-dose epinephrine (10–20 mcg IV) if hemodynamics deteriorate acutely post-intubation.

TRANSPORT

Urgent transport to nearest ED. Pre-alert as sepsis activation if your receiving facility has a sepsis protocol. Document qSOFA findings, vital signs, fluid volumes administered, and any vasopressor use.

BROSELOW TAPE: Use the Broselow length-based tape for all pediatric patients to determine weight and reference color-coded dosing. If the patient exceeds the tape length, use adult dosing. If the patient is below the minimum length, use the minimum dose indicated.

PEDIATRIC DRUG DOSING QUICK REFERENCE

MEDICATION	PEDIATRIC DOSE
Epinephrine (cardiac arrest)	0.01 mg/kg IV/IO (1:10,000); max 1 mg per dose; every 3–5 min
Epinephrine (anaphylaxis)	0.01 mg/kg IM (1:1,000); max 0.3 mg per dose
Epinephrine (croup)	0.5 mg/mL racemic epinephrine 0.05 mL/kg nebulized (max 0.5 mL); or L-epinephrine 5 mg nebulized
Atropine (bradycardia)	0.02 mg/kg IV/IO; minimum 0.1 mg; maximum single dose 0.5 mg
Amiodarone (cardiac arrest)	Adult cardiac arrest: 300 mg IV/IO fixed dose (do not calculate weight-based for adults). Pediatric cardiac arrest: 5 mg/kg IV/IO push; max 300 mg per dose
Adenosine	0.1 mg/kg IV rapid push (max 6 mg first dose); 0.2 mg/kg repeat (max 12 mg)
Midazolam (seizure)	0.1 mg/kg IV/IO (max 5 mg); 0.2 mg/kg IN (max 5 mg); 0.1–0.15 mg/kg IM (max 5 mg)
Naloxone	0.01–0.1 mg/kg IV/IO/IM (titrate to effect); 0.1 mg/kg IN (max 2 mg)
Dextrose 10%	2–4 mL/kg IV/IO; recheck glucose 5 min after
Fentanyl	1–2 mcg/kg IV/IO slow push (max 50 mcg per dose); 1–2 mcg/kg IN
Albuterol	2.5 mg nebulized for all ages; MDI 2–4 puffs with spacer
Normal saline bolus	20 mL/kg IV/IO; reassess after each bolus; max 60 mL/kg without DMO
Magnesium sulfate	25–50 mg/kg IV over 20 min (max 2 g) for severe asthma or torsades
Dexamethasone (croup)	0.6 mg/kg PO/IM/IV (max 10 mg); single dose

VIII-G1. PEDIATRIC CARDIAC ARREST (PALS)

OVERVIEW

Pediatric cardiac arrest most commonly results from respiratory failure or shock leading to hypoxic arrest, rather than primary cardiac arrhythmia. The underlying cause is usually reversible. Aggressive airway management and high-quality CPR are the highest priorities. Use Broselow tape for all weight-based dosing. Shockable rhythms (VF and pulseless VT) are less common in pediatric arrest but must be identified and treated promptly.

STANDING ORDERS

EMT	AEMT	PM
1. Begin CPR immediately: rate 100–120/min, depth one-third AP chest diameter (approximately 1.5 inches infant, 2 inches child), full recoil. **2.** Single rescuer: 30 compressions to 2 ventilations. Two rescuers: 15 compressions to 2 ventilations. **3.** Apply AED as soon as available; use pediatric pads/attenuator for patients <8 years or <25 kg. **4.** Ventilate with appropriately sized BVM; do not over-inflate — use only enough volume to see chest rise. **5.** Minimize interruptions to compressions; switch compressors every 2 minutes. **6.** Identify and report: witnessed vs unwitnessed, bystander CPR, estimated time of arrest.	**1.** All EMT steps. **2.** Establish IV or IO access using Broselow-guided needle size; IO is preferred in pediatric arrest. **3.** For non-shockable rhythm (PEA/asystole): administer epinephrine 0.01 mg/kg IV/IO (1:10,000) as early as possible — do not delay first dose. Then every 3–5 minutes. For shockable rhythm (VF/pVT): administer epinephrine after initial defibrillation attempts fail. Use Broselow tape for weight-based dose; max 1 mg per dose. **4.** For VF or pulseless VT: defibrillate at 2 J/kg first shock; 4 J/kg subsequent shocks. **5.** Resume CPR immediately after each defibrillation attempt.	**1.** All EMT and AEMT steps. **2.** Place advanced airway: correctly sized iGel or ETT; confirm with waveform capnography. **3.** After advanced airway: ventilate at 1 breath every 2–3 seconds (20–30 breaths/min for infant, 15–20 for child) without pausing compressions. **4.** For VF/pulseless VT after second shock: amiodarone 5 mg/kg IV/IO push; may repeat x1. **5.** Identify and treat reversible causes: hypoxia, hypovolemia, hypothermia, hypoglycemia, tension pneumothorax, tamponade, toxins. **6.** Check blood glucose; treat hypoglycemia with dextrose 10% 2–4 mL/kg IV/IO. **7.** Contact DMO for prolonged resuscitation, special circumstances, or termination consideration. Note: ETCO2 ≤10 mmHg after 20 minutes of ACLS may be considered as one factor in a multimodal decision to terminate — do not use ETCO2 as the sole criterion.

Pediatric cardiac arrest is usually hypoxic in origin. Aggressive airway management and oxygenation is the most important intervention. Treat the cause: hypoglycemia, hypoxia, and tension pneumothorax are immediately reversible causes that must be identified and treated in every pediatric arrest.

Two-rescuer pediatric CPR uses a 15:2 compression-to-ventilation ratio (not 30:2). Switch to continuous compressions with asynchronous ventilation after advanced airway placement.

TRANSPORT

Transport with ongoing resuscitation. ROSC: manage per post-cardiac arrest principles — avoid hyperoxia (SpO2 94–98%), hypotension, and hyperthermia. Transport to pediatric-capable facility.

VIII-G2. PEDIATRIC RESPIRATORY DISTRESS

OVERVIEW

Respiratory distress is the most common serious pediatric emergency. Causes include upper airway obstruction (croup, foreign body, anaphylaxis), lower airway disease (bronchiolitis, asthma), pneumonia, and cardiac causes.

Assessment focuses on work of breathing: retractions, nasal flaring, head bobbing (infants), grunting, stridor, and positioning (tripod, sniffing). A child who is too tired to maintain accessory muscle use is in respiratory failure — not improvement.

STANDING ORDERS

EMT	AEMT	PM
1. Allow child to remain in position of comfort; do not force supine positioning — it may precipitate complete obstruction. **2.** Apply oxygen by blow-by for infants and young children who will not tolerate a mask; move to NRB as tolerated. **3.** Assess severity: mild (alert, speaking/crying normally, mild retractions), moderate (speaking in short phrases, significant retractions, nasal flaring), severe (cannot speak, marked retractions, cyanosis, altered mental status). **4.** For suspected foreign body obstruction with complete obstruction: perform age-appropriate choking interventions. **5.** Keep child calm; anxiety increases oxygen demand significantly. **6.** Notify Paramedic and initiate transport.	**1.** All EMT steps. **2.** For bronchospasm component (wheezing): administer albuterol 2.5 mg nebulized; may repeat. **3.** CPAP is not routinely recommended for pediatric respiratory distress outside of bronchiolitis with significant hypoxia — contact DMO before initiating. **4.** Establish IV if child allows; do not cause significant distress trying to place IV in a child with moderate-severe respiratory distress.	**1.** All EMT and AEMT steps. **2.** For severe bronchospasm unresponsive to albuterol: magnesium sulfate 25–50 mg/kg IV over 20 minutes (max 2 g). **3.** For anaphylaxis with respiratory involvement: epinephrine 0.01 mg/kg IM (max 0.3 mg). **4.** For impending respiratory failure: BVM ventilation followed by intubation with correctly sized ETT (Broselow color for size). **5.** Uncuffed ETT for children <8 years unless cuffed tube specifically indicated. **6.** Confirm ETT placement with waveform capnography and bilateral auscultation. **7.** Contact DMO for any pediatric requiring intubation.

> *A quiet child who was previously working hard to breathe is not improving — exhaustion and respiratory failure are imminent. Grunting in an infant is an ominous sign of severe distress. Act before the child stops breathing.*

> *Do not force a child into a position that increases distress. A child sitting upright in a parent's lap maintaining a sniffing position is managing their own airway — let them.*

TRANSPORT

> *Moderate to severe pediatric respiratory distress is immediate transport. Keep child with parent when possible during transport to minimize distress. Pediatric-capable facility preferred.*

VIII-G3. CROUP (LARYNGOTRACHEOBRONCHITIS)

OVERVIEW

Croup is a viral upper respiratory infection causing subglottic edema, typically in children 6 months to 3 years. Classic presentation: barky (seal-like) cough, inspiratory stridor, hoarse voice, low-grade fever, worse at night. Symptoms are exacerbated by agitation. Most cases are mild and self-limiting, but severe croup with stridor at rest requires prehospital treatment.

STANDING ORDERS

EMT	AEMT	PM
1. Keep child calm; allow to remain in position of comfort with parent. **2.** Apply cool mist oxygen by blow-by if tolerated (cool humidified air reduces subglottic edema). **3.** Do not examine the oropharynx with a tongue depressor — may precipitate complete obstruction. **4.** Assess stridor: absent at rest (mild), present at rest (moderate), with severe retractions or cyanosis (severe). **5.** Minimize interventions that agitate the child. **6.** Transport all children with stridor at rest.	**1.** All EMT steps. **2.** Establish IV if child allows and clinical severity warrants. **3.** Dexamethasone 0.6 mg/kg PO/IM/IV (max 10 mg) for moderate to severe croup; single dose.	**1.** All EMT and AEMT steps. **2.** For moderate to severe croup with stridor at rest: nebulized racemic epinephrine 0.05 mL/kg of 2.25% solution (max 0.5 mL) in 2.5 mL NS; or L-epinephrine 5 mg (5 mL of 1 mg/mL) nebulized. **3.** Epinephrine effect lasts 1–2 hours; child must be observed for rebound at hospital — do not release at scene after epinephrine. **4.** For severe croup with impending airway failure: BVM ventilation; intubation with one size smaller ETT than calculated (subglottic edema narrows the airway); contact DMO immediately. **5.** Heliox (70:30 helium-oxygen) if available reduces work of breathing — rarely available prehospital.

> *After nebulized epinephrine, the child MUST be transported and observed for a minimum of 3–4 hours for rebound edema. Apparent clinical improvement after epinephrine does not mean the child is safe for discharge at scene.*

> *The key differentiator from epiglottitis: croup has a barky cough and gradual onset. Epiglottitis (rare since Hib vaccine) presents with drooling, dysphagia, toxic appearance, and NO barky cough. Treat epiglottitis as a surgical airway emergency.*

TRANSPORT

> *Any child with stridor at rest requires transport. All children who received nebulized epinephrine require transport for observation.*

VIII-G4. BRONCHIOLITIS

OVERVIEW

Bronchiolitis is a viral lower respiratory tract infection causing bronchiolar inflammation and mucus plugging, most commonly caused by RSV. It primarily affects infants under 2 years, with peak severity in infants under 6 months. Presentation: rhinorrhea progressing to cough, wheeze, increased work of breathing, and feeding difficulty. Hypoxia and apnea can occur, particularly in young infants.

STANDING ORDERS

EMT	AEMT	PM
1. Apply oxygen by blow-by or low-flow nasal cannula; target SpO2 ≥90–92% (lower threshold than older children — consult DMO if unsure). **2.** Allow infant to remain in parent's arms in position of comfort. **3.** Gentle bulb syringe nasal suctioning may provide temporary relief of nasal congestion. **4.** Assess for apnea: high-risk infants include premature infants, those under 2 months, and those with congenital heart disease. **5.** Monitor respiratory rate, effort, and SpO2 continuously. **6.** Transport all infants with SpO2 <90%, significant work of breathing, or apnea.	**1.** All EMT steps. **2.** Albuterol has limited evidence in bronchiolitis but may provide modest benefit in wheezing infants; administer 2.5 mg nebulized as a trial; if no improvement, do not repeat. **3.** Establish IV if infant is in moderate to severe distress or requires medications. **4.** Normal saline 20 mL/kg IV/IO bolus for hemodynamic compromise from dehydration.	**1.** All EMT and AEMT steps. **2.** For hypoxia unresponsive to supplemental oxygen: CPAP at 5–7 cmH2O may reduce work of breathing in infants who tolerate it; contact DMO before initiating. **3.** For apnea: BVM ventilation; intubation if apnea is prolonged or recurrent. **4.** For intubation: use correct Broselow-guided ETT size; bronchiolitis patients are difficult to ventilate due to air trapping — use slow rate and long expiratory time to avoid auto-PEEP. **5.** Epinephrine nebulized (L-epinephrine 3–5 mg) may provide short-term benefit; contact DMO. **6.** Contact DMO for all infants requiring CPAP or intubation.

Albuterol is not routinely recommended for bronchiolitis per current evidence (AAP guidelines). It may be tried once but should not be repeated if there is no objective improvement in SpO2 or work of breathing. Bronchiolitis is primarily managed with supportive care — oxygen and suctioning.

Young infants (<2 months) and premature infants are at high risk for apnea with bronchiolitis. Monitor continuously and have BVM immediately available throughout transport.

TRANSPORT

Transport all infants with SpO2 <90%, significant work of breathing, poor feeding, apnea, or age <2 months with any respiratory symptoms. Pediatric-capable or children's hospital preferred.

SECTION IX — OPERATIONAL POLICIES

The following policies govern operational conduct for all AMR Kansas City EMS providers across both interfacility transport and 911 mutual aid operations. Policies apply to all credential levels unless otherwise specified. These policies are authorized by the Medical Director and AMR Kansas City leadership and are subject to periodic review and update.

TP01. RADIO AND TELEPHONE COMMUNICATIONS

POLICY STATEMENT

All AMR Kansas City providers are responsible for clear, professional, and accurate communication via radio and telephone during all emergency and non-emergency operations. Communications must be conducted in accordance with FCC regulations, AMR corporate communication standards, and HIPAA privacy requirements.

RADIO COMMUNICATIONS

- Identify unit, location, and purpose at the beginning of all radio transmissions.
- Use plain language; avoid codes that are not standardized with the primary dispatch agency.
- Patient information transmitted by radio should be limited to the minimum necessary. Use landline or secure communication for detailed patient information when possible.
- All radio transmissions are recorded. Conduct yourself accordingly.
- Report any radio malfunction to dispatch and supervisory personnel immediately.

MEDICAL CONTROL COMMUNICATION

- Identify yourself, unit, location, and patient acuity when contacting Direct Medical Oversight (DMO).
- Provide a concise patient report: age, sex, chief complaint, relevant history, assessment findings, interventions performed, and specific request.
- Follow DMO orders as given; if an order is unclear or appears unsafe, request clarification before proceeding.
- Document DMO contact time, physician name if obtained, and orders received.

PATIENT PRIVACY IN COMMUNICATIONS

- Do not use patient names over radio unless operationally necessary.
- Limit patient information transmitted by radio to what is clinically necessary.
- Written or verbal communications with receiving facilities should occur in private whenever possible.

> *Radio transmissions are not private. Assume any radio communication may be heard by the public, media, or other agencies. Never transmit information that would violate patient confidentiality unnecessarily.*

DOCUMENTATION REQUIREMENTS

- All DMO contacts: time, physician name if obtained, orders given.
- Any radio malfunctions or communication failures.
- Receiving facility notification time and provider spoken with.

TP02. INTERFACILITY TRANSFERS

POLICY STATEMENT

Interfacility transport (IFT) is the primary operational mission of AMR Kansas City. All IFT operations are conducted under the authority of the Medical Director and in accordance with applicable Kansas and Missouri regulatory requirements. Providers are responsible for ensuring a complete and accurate patient transfer of care at both the sending and receiving facility.

TRANSFER OF CARE — SENDING FACILITY

- Obtain a complete verbal report from the sending facility nurse or physician including: diagnosis, current status, active medications and infusions, relevant history, allergies, DNR/DPOA status, and transport parameters.
- Review the transfer order and confirm the receiving facility and level of care.
- Complete pre-departure verification for all active infusions per Section IV.
- Confirm patient identification using at least two identifiers.
- Verify and document IV access, airway status, and device function before departure.

TRANSFER OF CARE — RECEIVING FACILITY

- Provide a complete verbal report to the receiving nurse or physician: patient identity, sending diagnosis, interventions performed during transport, current status, and any clinical changes during transport.
- Transfer all accompanying documentation including transfer orders, medication lists, and imaging.
- Document receiving provider name and time of transfer of care.
- Do not leave the patient until a receiving provider has assumed care.

CREW CREDENTIAL REQUIREMENTS

- Crew level assigned to each transport is determined by dispatch based on the clinical requirements of the call.
- AEMT crews are dispatched only to calls within AEMT authorized scope per KBEMS medication authorization.
- If the clinical situation at the sending facility exceeds the assigned crew's scope, the crew must notify dispatch immediately and request appropriate intercept or reassignment before departure.

> *Do not depart with a patient whose active therapies or clinical status exceed your credential level. Contact dispatch and request appropriate resource.*

DOCUMENTATION REQUIREMENTS

- Sending facility provider name and time of verbal report.
- Patient identification method used.
- All active infusions at departure with rates verified.
- Clinical status at departure and any changes during transport.
- Receiving facility provider name and time of transfer of care.

TP03. DNR ORDERS, DPOA, AND ADVANCE DIRECTIVES

POLICY STATEMENT

AMR Kansas City providers must recognize and honor valid advance directives including Do Not Resuscitate (DNR) orders, Durable Power of Attorney for Healthcare (DPOA), and Living Wills in accordance with Kansas law, Missouri law where applicable, and AMR corporate policy. Providers must balance patient autonomy with the obligation to provide appropriate care.

VALID DNR ORDERS

- A valid Kansas out-of-hospital DNR (OHDN) must be on a state-approved form, signed by the patient and physician, and present at the scene.
- A valid POLST (Physician Orders for Life-Sustaining Treatment) form is also recognized.
- Hospital DNR orders presented with the patient on an IFT are valid and must be honored.
- Verbal DNR orders are not valid in the prehospital setting. A written document must be present.
- If a valid DNR is present and witnessed, do not initiate resuscitation. Provide comfort care as appropriate.

> *When in doubt about the validity of an advance directive, initiate resuscitation and contact DMO. It is legally and ethically safer to resuscitate a patient with an invalid DNR than to withhold resuscitation from a patient without a valid one.*

DPOA FOR HEALTHCARE

- A DPOA designates a surrogate decision-maker when the patient lacks decision-making capacity.
- The DPOA holder may consent to or refuse treatment on behalf of the patient.
- In emergency situations where life is immediately threatened, initiate life-saving care while attempting to contact the DPOA.
- Document DPOA holder name and any decisions made on the patient's behalf.

CONFLICTS AND FAMILY DISAGREEMENT

- If family members disagree with a valid DNR: honor the DNR. A family member cannot override a valid legal document.
- If family members claim a DNR exists but cannot produce it: initiate resuscitation and contact DMO.
- Document all family communications and conflicts regarding advance directives.
- Contact DMO for any ethical uncertainty surrounding advance directives.

DOCUMENTATION REQUIREMENTS

- Presence of advance directive: type, location on scene, and whether valid.
- Decision made based on directive and clinical basis.
- DMO contact if indicated.
- Family communication and any conflicts noted.

TP04. CONSENT AND REFUSAL OF TREATMENT

POLICY STATEMENT

All competent adult patients have the legal right to consent to or refuse EMS care and transport. Providers must ensure informed consent is obtained and must respect informed refusals from patients who demonstrate decision-making capacity. Minors and patients lacking capacity require surrogate consent.

TYPES OF CONSENT

- Expressed consent: the patient verbally or in writing agrees to treatment and transport.
- Implied consent: applied to patients who are unconscious, incapacitated, or otherwise unable to consent, where a reasonable person would consent to life-saving care.
- Informed consent requires that the patient understands: the nature of their condition, the proposed treatment, the risks of treatment, and the risks of refusal.

DECISION-MAKING CAPACITY

A patient has decision-making capacity if they can: understand the information provided, appreciate the consequences of their decision, reason about the options, and communicate a consistent choice. Capacity is not the same as competence (a legal determination) and may fluctuate.

- Intoxication, altered mental status, or psychiatric illness does not automatically eliminate decision-making capacity.
- Assess capacity on a case-by-case basis. When in doubt, contact DMO.
- A patient who demonstrates capacity has the right to refuse care even if the decision may result in harm or death.

REFUSAL OF CARE

1. Ensure the patient has decision-making capacity.
2. Inform the patient of the potential consequences of refusal, including the risk of death.
3. Attempt to address the reason for refusal and encourage transport.
4. Contact DMO for all refusals involving potentially life-threatening conditions.
5. If the patient maintains refusal after informed discussion: document the refusal thoroughly and have the patient sign the refusal form if possible.
6. Never abandon a patient. Advise the patient to call 911 if their condition changes.

> *A patient who signs a refusal and is later found dead or seriously harmed will result in a thorough review of the provider's documentation and decision-making. Document the conversation in detail: what you told the patient, their stated reason for refusal, and their demonstrated understanding of the risks.*

MINORS AND SURROGATE CONSENT

- Minors (under 18) generally require parental or guardian consent.
- Exception: emancipated minors (married, in military, financially independent, pregnant) may consent independently.
- In life-threatening emergencies involving a minor without a guardian present, implied consent applies — provide necessary care.
- Contact DMO for any uncertainty regarding minor consent.

DOCUMENTATION REQUIREMENTS

- Type of consent obtained and from whom.
- Assessment of decision-making capacity.

- For refusals: nature of condition, risks explained, patient's stated reason, DMO contact.
- Patient signature on refusal form if obtained.
- Disposition and follow-up instructions given.

TP05. PATIENT CONFIDENTIALITY

POLICY STATEMENT

All patient information obtained during EMS response is protected health information (PHI) under the Health Insurance Portability and Accountability Act (HIPAA). AMR Kansas City providers are legally and ethically obligated to protect patient confidentiality and may not disclose PHI except as permitted by law.

PERMITTED DISCLOSURES

- Treatment: sharing information with other healthcare providers involved in the patient's care.
- Payment: billing and insurance purposes.
- Healthcare operations: quality improvement, training, and audit activities.
- Public health reporting: required by law (communicable disease, gunshot wounds, abuse).
- Law enforcement: pursuant to lawful order or specific legal authority.
- Minimum necessary standard applies: share only the PHI required for the specific purpose.

PROHIBITED DISCLOSURES

- Discussing patient information in public areas where others can overhear.
- Sharing patient information with family members without patient authorization (unless DPOA or emergency circumstance).
- Posting patient information on social media in any form.
- Providing patient information to media without legal authorization.
- Discussing patient information with non-treating personnel.

> *Social media posts involving patients — even without names — may constitute a HIPAA violation if the patient could be identified from the context. When in doubt, do not post.*

BREACH REPORTING

- Any suspected HIPAA breach must be reported to AMR Kansas City management immediately.
- Do not attempt to investigate or resolve a breach independently.
- Cooperate fully with any compliance investigation.

DOCUMENTATION REQUIREMENTS

- PHI disclosures made to law enforcement or public health authorities: date, recipient, information disclosed, legal basis.
- Any patient-requested release of information.

TP06. INFECTIOUS DISEASE CONTROL

POLICY STATEMENT

AMR Kansas City providers must take appropriate precautions to prevent transmission of infectious disease to patients, crew members, and the public. Standard precautions apply to all patient contacts. Enhanced precautions are applied based on suspected or confirmed infectious disease.

STANDARD PRECAUTIONS

Standard precautions treat all blood, body fluids, secretions, and non-intact skin as potentially infectious regardless of diagnosis.

- Gloves: required for all patient contact.
- Eye protection: required when splash or spray of body fluids is possible.
- Mask: required for all airway procedures; N95 or higher for suspected airborne pathogens.
- Gown: required when body fluid contamination of clothing is anticipated.
- Hand hygiene: before and after every patient contact, after glove removal.

AIRBORNE PRECAUTION INDICATORS

- Suspected or confirmed tuberculosis (TB): N95 respirator minimum; ensure provider is fit-tested.
- Suspected measles or varicella: N95 respirator.
- COVID-19 or novel respiratory pathogen: follow current AMR and CDC guidance.
- Place a mask on the patient if tolerated during transport.

POST-EXPOSURE PROTOCOL

1. Report exposure immediately to supervisory personnel.
2. Wash exposed skin with soap and water; flush eyes or mucous membranes with copious water.
3. Seek medical evaluation within 2 hours of bloodborne pathogen exposure.
4. Complete required incident documentation per AMR policy.
5. Follow occupational health recommendations including prophylactic treatment if indicated.

> *Do not delay seeking medical evaluation after potential bloodborne pathogen exposure. Time-sensitive prophylaxis (HIV PEP) is most effective when initiated within 2 hours of exposure.*

UNIT DECONTAMINATION

- Decontaminate the patient compartment after any call involving suspected or confirmed infectious disease.
- Follow AMR-approved cleaning protocols and approved disinfectant agents.
- Notify the next crew of any decontamination performed.
- Remove and bag contaminated linens; do not shake.

DOCUMENTATION REQUIREMENTS

- PPE level used on each call.
- Any known or suspected infectious disease.
- Post-exposure incidents: nature, exposure site, time, and reporting action taken.
- Unit decontamination performed.

TP07. DOCUMENTATION OF PATIENT REPORTS

POLICY STATEMENT

The Patient Care Report (PCR) is a legal medical record and is the primary documentation of EMS care. Every patient contact that results in assessment, treatment, or transport requires a complete and accurate PCR. Documentation must be objective, accurate, timely, and thorough.

REQUIRED PCR ELEMENTS

- Patient identification: name, date of birth, address, sex.
- Insurance and billing information.
- Dispatch information: time of dispatch, response, arrival, departure, hospital arrival, and available.
- Chief complaint and nature of call.
- Patient history: relevant medical history, medications, allergies.
- Baseline assessment findings: mental status, airway, breathing, circulation, vital signs.
- Interventions performed with times: medications (dose, route, response), procedures, monitoring.
- Response to treatment and serial assessment findings.
- Receiving facility and provider name.
- Crew identifiers.

DOCUMENTATION STANDARDS

- Document objectively: record what you observed, not interpretations or opinions.
- Use the patient's own words when documenting reported symptoms (use quotation marks).
- Document negative findings when clinically relevant (e.g., "no diaphoresis, no JVD").
- Never alter a completed PCR. If an error is made, follow the correction protocol: note the error, correct it, and initial and date the correction.
- Complete the PCR as close to the time of care as possible; do not rely on memory for details.
- PCRs must be completed before the end of shift.

> *If it was not documented, it did not happen. Thorough documentation is your best protection in any legal proceeding. A well-documented PCR that shows competent clinical decision-making is more valuable than any verbal account after the fact.*

REFUSAL DOCUMENTATION

- Document the patient's capacity assessment, the risks explained, the patient's stated reason for refusal, and DMO contact.
- Note whether a written refusal form was signed and by whom.
- Document disposition and instructions given to the patient.

DOCUMENTATION REQUIREMENTS

- All PCRs must be completed and submitted per AMR Kansas City timelines.
- Any corrections to a completed PCR must follow the documented correction protocol.
- Quality issues identified in PCR review are addressed through the clinical education process.

TP09. MULTI-VICTIM / MASS CASUALTY INCIDENTS (MCI)

POLICY STATEMENT

A mass casualty incident (MCI) is any event that generates a number of patients exceeding the immediate response capability of the assigned units, requiring mutual aid, resource allocation, and command structure. AMR Kansas City providers responding to or encountering MCIs must immediately establish command structure and notify dispatch.

INITIAL RESPONSE ACTIONS

1. Notify dispatch immediately upon identifying an MCI: approximate number of patients, mechanism, hazards, and resource needs.
2. Establish or integrate into the Incident Command System (ICS); identify Medical Branch if not already established.
3. Do not self-deploy into the scene without confirming safety and scene control.
4. Do not begin individual patient treatment until triage is complete — triage the most patients in the shortest time.

START TRIAGE

Use START (Simple Triage and Rapid Treatment) triage for all adult MCI patients. JumpSTART for pediatric patients. Categories:

- BLACK (Expectant): not breathing after airway repositioning, or obviously fatal injury.
- RED (Immediate): breathing, but respirations >30 or <10; no radial pulse; altered mental status.
- YELLOW (Delayed): breathing, radial pulse present, follows commands — not walking wounded.
- GREEN (Minor): walking wounded; ambulatory with minor injuries.
- Tag and move on; do not stop to treat during triage phase.

> *In an MCI, the goal is the greatest good for the greatest number. This means that some patients who would receive aggressive individual treatment under normal circumstances will be triaged as expectant. This is ethically appropriate and legally recognized in MCI response.*

TREATMENT AND TRANSPORT

- After triage: establish treatment areas by triage category.
- Begin treatment in order: RED, YELLOW, GREEN, BLACK.
- Transport RED patients first to nearest appropriate facility; distribute patients across multiple facilities to avoid overwhelming one receiving facility.
- Coordinate transport destinations with medical control and receiving facilities.
- Maintain unit and patient tracking throughout the incident.

DOCUMENTATION REQUIREMENTS

- Number of patients triaged and triage categories assigned.
- Transport destinations for each patient.
- Time of MCI notification to dispatch and medical control.
- ICS role and documentation per incident command requirements.

TP10. CRIME SCENE MANAGEMENT

POLICY STATEMENT

EMS providers responding to crime scenes must balance the obligation to provide patient care with the responsibility to preserve physical evidence. Patient care takes priority; however, providers must be aware of their actions and minimize unnecessary disturbance of the scene.

SCENE SAFETY

- Do not enter a potentially unsafe crime scene until law enforcement has declared it secure.
- If the threat becomes apparent after arrival: immediately retreat to safety and notify dispatch.
- Patient care does not require you to remain in an unsecured scene.

EVIDENCE PRESERVATION

- Touch only what is necessary for patient care.
- Do not cut through bullet holes, stab wounds, or other wound patterns in clothing; cut around them when removing clothing.
- Note the original position of the patient and any items moved during care; document in the PCR.
- Do not clean or cover wounds unnecessarily before law enforcement documentation.
- Minimize foot traffic in the scene; stay to the established path of entry when possible.
- Do not move objects that are not directly interfering with patient care.
- If CPR is terminated and the patient is deceased: do not move the body; notify law enforcement.

WEAPONS

- Do not handle weapons at a crime scene unless an immediate safety threat requires it.
- If a weapon must be moved for safety: notify law enforcement, use gloves, note the original position.
- See Firearms and Weapons Policy (TP14) for specific weapon handling guidance.

COMMUNICATION WITH LAW ENFORCEMENT

- Cooperate fully with law enforcement; provide factual information about patient care activities.
- Patient medical information is protected under HIPAA; provide minimum necessary information for investigative purposes.
- You may be required to provide a written statement; coordinate with AMR management before doing so.

DOCUMENTATION REQUIREMENTS

- Patient’s position and condition on arrival.
- Items moved or disturbed during patient care and reason.
- Law enforcement presence and officer name if obtained.
- Any weapons identified and their disposition.
- Time of scene arrival and departure.

TP11. EMERGENCY DRIVING AND VEHICLE OPERATIONS

POLICY STATEMENT

Emergency vehicle operation is the highest-risk activity performed by EMS providers. AMR Kansas City providers must operate vehicles safely, legally, and within AMR corporate driving standards at all times. Lights-and-sirens (L&S) use must be clinically justified and does not exempt the driver from the obligation to operate safely.

LIGHTS AND SIRENS USE

- L&S response is authorized when a patient has a potentially life-threatening condition that would be worsened by response delay.
- IFT calls are not emergencies by default. L&S transport of an IFT patient requires clinical justification and must be documented.
- Research consistently demonstrates that L&S response saves minimal time (average 1–3 minutes) while significantly increasing crash risk.
- When L&S is used: maintain speeds appropriate to road and traffic conditions; clear each intersection before proceeding regardless of signal status.
- The driver retains full responsibility for safe operation at all times, including when using L&S.

> *Using lights and sirens does not create a legal right of way — it creates a conditional privilege. Other drivers must yield, but you cannot assume they will. Treat every intersection as a potential collision point.*

SAFE DRIVING STANDARDS

- Seatbelts are required for all occupants at all times the vehicle is in motion.
- Standing in the patient compartment while the vehicle is in motion is prohibited except when clinical necessity requires it; document the clinical reason.
- Cell phone use while driving is prohibited except for hands-free communication.
- Provider fatigue is a significant crash risk factor; report significant fatigue to supervisors.
- Back-up procedures: use a spotter whenever possible when backing; if no spotter is available, perform a walk-around before backing.

CRASH REPORTING

- All vehicle crashes must be reported immediately to dispatch and supervisory personnel regardless of severity.
- Do not move vehicles involved in a crash with injuries until law enforcement arrives, unless required for patient care or safety.
- Cooperate fully with any post-crash investigation.

DOCUMENTATION REQUIREMENTS

- L&S use: clinical justification documented in PCR.
- Any vehicle crash: time, location, circumstances, injuries, and agencies notified.
- Patient condition and any clinical changes related to transport conditions.

TP12. EXTRICATION OF PERSONS FROM ENTRAPMENT

POLICY STATEMENT

Extrication is a specialized function requiring trained personnel and appropriate equipment. AMR Kansas City EMS providers are responsible for patient care during extrication, not the extrication itself. Fire department and rescue personnel with specialized training perform vehicle extrication. EMS coordinates patient care in conjunction with extrication operations.

EMS ROLE DURING EXTRICATION

- Establish and maintain access to the patient as early as is safely possible.
- Provide initial assessment and stabilization while extrication is in progress.
- Apply spinal motion restriction as appropriate given mechanism and access.
- Monitor patient condition continuously throughout extrication; alert extrication team to any change in patient stability.
- Coordinate extrication timing with patient care needs: rapid extrication for unstable patients, controlled extrication for stable patients.
- Establish IV access and initiate treatment as space and access permit during extrication.

RAPID VS. CONTROLLED EXTRICATION

- Rapid extrication is indicated when the patient has: airway compromise, hemodynamic instability, a scene that becomes unsafe, or clinical deterioration.
- Controlled extrication is used for patients who are hemodynamically stable with an adequate airway and no immediate life threat.
- The decision for rapid vs. controlled extrication is a medical decision made by the senior EMS provider in conjunction with the incident commander.

SCENE SAFETY DURING EXTRICATION

- Do not enter a vehicle or structure for patient access until extrication team has made the area safe.
- Wear appropriate PPE including helmet, gloves, and eye protection during extrication operations.
- Be aware of hazards: fuel leaks, airbags that have not deployed, electrical hazards, and unstable vehicles.
- Maintain continuous communication with extrication team throughout the operation.

DOCUMENTATION REQUIREMENTS

- Type of extrication performed (rapid vs. controlled) and clinical rationale.
- Patient condition before, during, and after extrication.
- Agencies present and incident command structure.
- Time of extrication completion and departure.

TP13. HAZARDOUS MATERIAL INCIDENTS

POLICY STATEMENT

AMR Kansas City EMS providers are not trained or equipped for hazardous materials (HazMat) entry or decontamination operations. EMS providers stage in the cold zone and provide patient care to decontaminated patients only. HazMat operations are performed by specially trained and equipped personnel.

SCENE IDENTIFICATION AND STAGING

- Recognize HazMat incidents: placards, unusual odors, multiple patients with similar symptoms, visible chemical release, or dispatch information.
- Stage upwind and uphill from the incident; minimum 300 feet for most incidents.
- Do not enter the warm or hot zone under any circumstance without HazMat training, equipment, and authorization.
- Notify dispatch of suspected HazMat; request HazMat team response.

If you are exposed to a hazardous material while responding: retreat immediately, remove yourself from the area, remove and bag contaminated clothing, irrigate exposed skin and eyes with water, and notify dispatch. You cannot help patients if you become a victim.

PATIENT CARE IN HAZMAT INCIDENTS

- Accept patients only after gross decontamination has been performed by HazMat team.
- Even after decontamination, wear appropriate PPE: gloves, eye protection, and mask at minimum.
- For dermal exposure: manage as chemical burn; irrigate with copious water.
- For inhalation exposure: high-flow oxygen; monitor for respiratory compromise.
- For organophosphate/nerve agent exposure (SLUDGE toxidrome): atropine via DuoDote autoinjector (AEMT+); contact DMO.
- Reference the Emergency Response Guidebook (ERG) or contact CHEMTREC (1-800-424-9300) for agent-specific guidance.

UNIT DECONTAMINATION

- If the unit or equipment becomes contaminated: remove from service and notify supervisors immediately.
- Do not decontaminate the unit independently; follow AMR and local authority guidance.

DOCUMENTATION REQUIREMENTS

- Hazardous material identified or suspected.
- Staging location and distance.
- HazMat team and other agencies present.
- Decontamination confirmed before patient acceptance.
- Any provider exposure or potential exposure and actions taken.

TP14. MANAGEMENT OF FIREARMS AND OTHER WEAPONS

POLICY STATEMENT

EMS providers may encounter patients in possession of firearms or other weapons in both clinical and field settings. Provider safety is the priority. Providers are not law enforcement and are not responsible for weapon seizure or security; those functions belong to law enforcement.

WEAPON DISCOVERY DURING PATIENT CARE

- If a weapon is discovered on a patient during assessment: do not attempt to remove or secure the weapon unless it is creating an immediate safety threat.
- Notify law enforcement of the weapon’s presence as soon as safely possible.
- If the patient is conscious: request that law enforcement secure the weapon before transport.
- If the patient is unconscious or incapacitated: notify law enforcement; do not leave the patient unattended with an unsecured weapon.
- Document the discovery of the weapon and law enforcement notification.

WEAPON DURING TRANSPORT

- Do not transport a conscious patient with an unsecured weapon without law enforcement present or the weapon secured by law enforcement.

- If transport cannot wait for law enforcement: contact dispatch and DMO; document the circumstances.
- If a weapon is discovered during transport: notify dispatch; do not stop in an unsafe location.

> *Your safety and your partner's safety are the priority. If a patient or bystander presents an immediate weapon threat: retreat to safety, notify dispatch, and stage until law enforcement secures the scene. Do not attempt to disarm or confront an armed individual.*

GUNSHOT AND STAB WOUNDS

- Gunshot and stab wounds are mandatory reportable injuries in Kansas. Notify receiving facility.
- Preserve wound characteristics during care: cut around — not through — wound edges in clothing.
- Document wound location, character, and any trajectory information if apparent.
- Cooperate with law enforcement investigation per Crime Scene Management policy (TP10).

DOCUMENTATION REQUIREMENTS

- Weapon type and location when discovered.
- Law enforcement notification time and officer name if obtained.
- Any impact on patient care or transport.
- Wound characteristics for gunshot or stab wounds.

TP15. MUTUAL AID — PLAN FOR REQUESTING AND PROVIDING ADDITIONAL RESOURCES

POLICY STATEMENT

AMR Kansas City participates in the Kansas City Metro mutual aid system as both a provider and recipient of mutual aid resources. AMR crews operating under mutual aid function under AMR Kansas City medical direction and protocols regardless of which agency requested assistance.

REQUESTING MUTUAL AID

- Request mutual aid through dispatch when patient volume or acuity exceeds available AMR resources.
- Provide receiving agency with patient acuity, resource needs, and staging location.
- Maintain medical authority over AMR-managed patients when mutual aid units are assisting.

PROVIDING MUTUAL AID

- AMR crews respond to mutual aid requests through AMR dispatch; do not self-deploy.
- On arrival: integrate into the incident command structure; report to incident commander or medical branch.
- AMR crew members operate under AMR Kansas City medical direction and standing orders — not the requesting agency's protocols.
- If there is a conflict between AMR protocols and the requesting agency's direction: follow AMR protocols; document the conflict; contact DMO.

> *Operating under mutual aid does not transfer medical direction to the requesting agency. AMR providers follow AMR Kansas City protocols and are under AMR Kansas City medical direction at all times, regardless of the requesting agency.*

PATIENT CARE TRANSFER

- Complete a full verbal patient report when transferring care to another agency's unit.
- Document the transferring provider's name and agency.
- Do not transfer care to a provider who is operating outside their scope for the specific patient needs.

DOCUMENTATION REQUIREMENTS

- Mutual aid request: requesting agency, time, resource type.
- Incident command integration and role.
- Any protocol conflicts and DMO contact.
- Patient care transfer documentation per transfer of care standards.