

EL DORADO COUNTY EMS AGENCY

FIELD PROCEDURES

820

(on file)

EMS Agency Medical Director

Effective: 2/21/2025

SPECIAL CATEGORY TRANSPORT (SCT): INFUSIONS

PURPOSE:

To provide parameters for paramedic monitoring of magnesium sulfate, nitroglycerin (NTG), heparin, amiodarone and/or antibiotic infusions during SCTs

AUTHORITY:

- California Health and Safety Code, Division 2.5
- California Code of Regulations, Title 22, Chapter 4, Article 2

POLICY:

1. Only Provider Agencies approved by the El Dorado County EMS Agency may be authorized to provide SCT services.
2. Only specifically trained Paramedics employed by an approved SCT Provider may utilize SCT Optional Skills.
3. Training program and educational materials for SCT Optional Skills must be approved by the El Dorado County EMS Agency Medical Director, pursuant to **Administrative Policy 1106**.
4. When already initiated by the referring facility and connected to a patient via peripheral or central line, Paramedics may maintain pre-existing infusions of:
 - a. Magnesium Sulfate
 - b. Nitroglycerin
 - c. Heparin
 - d. Amiodarone, or
 - e. Antibiotics
5. Paramedics will not initiate infusions of any of the drugs noted in 4.(a-e)
6. Pursuant to **Administrative Policy 1107**, all drugs noted in 4.(a-e) will have been running for at least 15 minutes prior to transport.
7. Patients must maintain stable vital signs for at least 30 minutes prior to transport and must not have more than two (2) of the five (5) medication infusions running. Additional infusions that fall under the standard paramedic scope of practice need not be factored into this exclusion.

8. The timeframes listed in items 6. and 7. above will not apply to patients requiring immediate transport for critical interventions, when the transferring physician determines that immediate transport is necessary.

PROCEDURES:

1. All patients shall be maintained on a cardiac monitor, pulse oximeter, and a non-invasive blood pressure monitor, with vital signs monitored at least every 15 minutes.
2. Written transfer orders from the transferring physician shall be obtained prior to transport. These orders will be attached to the electronic Patient Care Report (ePCR). These orders shall include:
 - a. Orders for maintaining and adjusting infusion rate during transport.
 - b. Telephone number where the transferring physician can be reached during transport.
 - c. Type of solution, dosage, and rate of infusion.
3. Patients will be hemodynamically stable at time of transport.
4. If medication administration is interrupted, the paramedic may restart the infusion as delineated in the transfer orders.
5. All infusions included in this policy will be in the form of an IV piggyback, delivered and monitored by a mechanical pump familiar to the paramedic.
6. In cases of pump malfunction that cannot be corrected, the infusion shall be discontinued and the transferring physician notified as soon as possible.
 - a. If this (or any other untoward event) occurs, an EMS Event Report will be submitted to the EMS Agency.
7. The paramedic shall document on the PCR the total volume infused throughout the duration of the transport.

DRUG-SPECIFIC PARAMETERS:**Magnesium Sulfate**

1. Regulation of the infusion rate will be within parameters defined by the transferring physician.
2. If the patient develops signs/symptoms of magnesium toxicity, the medication drip shall be discontinued and the transferring physician will be notified as soon as possible.
3. Signs/symptoms of magnesium toxicity include:
 - a. Thirst
 - b. Diaphoresis

- c. Hypotension
 - d. Flaccid paralysis
 - e. Respiratory depression
 - f. Circulatory depression or collapse
 - g. CNS depression
 - h. Urine output <30mL/hr
 - i. Chest pain or pulmonary edema
 - j. Deep tendon reflexes (DTR) – depressed or absent
4. Vital signs, including DTR's, shall be monitored and documented at least every 15 minutes and immediately if there is any change in patient status or medication adjustment.

Nitroglycerin

1. Infusion fluid will be D5W.
2. Regulation of the infusion rate will be within parameters defined by the transferring physician, but in no case will changes be greater than 10mcg/minute increments every 10 minutes.
3. In cases of new, concerning or symptomatic hypotension, the medication drip will be discontinued and the transferring physician will be notified as soon as possible.
4. Discuss with transferring physician concomitant use of analgesics during transport (i.e., morphine sulfate, fentanyl).
5. Vital signs shall be monitored and documented at least every 15 minutes and immediately if there is any change in patient status or medication adjustment.

Heparin

1. Infusion fluid will be D5W or NS.
2. Infusion rates shall be verified with the sending RN following changeover to the mechanical EMS transport pump, and will remain constant during transport.
3. No regulation of the rate will be performed by the paramedic except to turn off the infusion completely.
4. Vital signs shall be monitored and documented at least every 15 minutes and immediately if there is any change in patient status

Amiodarone:

1. Infusion rates may vary between 0.25 – 1 mg/min.
2. Infusion rates will remain constant during transport. No regulation of the rate will be performed by the paramedic except to turn off the infusion completely.
3. Vital signs will be monitored and documented at least every 15 minutes and immediately if there is any change in patient status.
4. Y-Injection incompatibility – The following will precipitate with amiodarone hydrochloride:
 - a. Heparin.
 - b. Sodium Bicarbonate.
5. Amiodarone IV infusion monitoring is not approved for patients less than 14 years old without base physician contact.
6. For infusions greater than one hour, amiodarone concentrations should not exceed 1mg/mL unless a central venous catheter is used.

Antibiotics:

1. Infusion fluid will be D5W or NS.
2. Infusion rates shall be verified with the sending RN following changeover to the mechanical EMS transport pump (if required – given Antibiotics may just be running via gravity), and will remain constant during transport.
3. No regulation of the rate will be performed by the paramedic except to turn off the infusion completely.
4. Vital signs shall be monitored and documented at least every 15 minutes and immediately if there is any change in patient status.