


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

PURPOSE:

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

AUTHORITY:

- A. HSC, Division 2.5, § 1797.220.
- B. CCR, Title 22, Chapter 4, Article 1, § 100145.

POLICY:

- A. Only appropriately trained paramedics who are on duty with an S-SV EMS authorized paramedic IFT optional skills provider may monitor magnesium sulfate, nitroglycerin, heparin, &/or amiodarone infusions during IFTs.
- B. Patients will have pre-existing infusions in peripheral or central IV lines.
- C. Paramedics will not initiate magnesium sulfate, nitroglycerin, heparin, &/or amiodarone infusions.
- D. Magnesium sulfate, nitroglycerin, heparin, &/or amiodarone infusions should have been running for at least 10 minutes prior to transport.
- E. Patients should have maintained stable vital signs for the previous 30 minutes and will not have more than two (2) medication infusions running exclusive of potassium chloride concentrations authorized under the paramedic basic scope of practice.

PROCEDURE:

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

Paramedic Monitoring Of Magnesium Sulfate, Nitroglycerin, Heparin, &/Or Amiodarone Infusions During IFTs	841
---	------------

- B. The paramedic shall receive written orders from the transferring physician prior to leaving the transferring hospital. These orders shall include a telephone number where the transferring and/or base/modified base hospital physician can be reached during transport, in addition to the type of solution, dosage and rate of infusion. These written orders shall be attached to the completed PCR.
- C. Patients will be hemodynamically stable at time of transport.
- D. If medication administration is interrupted, the paramedic may restart the infusion as delineated in the transfer orders.
- E. All infusions (except for potassium chloride concentrations authorized under the paramedic basic scope of practice) will be monitored by a mechanical pump familiar to the paramedic. In cases of pump malfunction that cannot be corrected, the infusion shall be discontinued and the transferring physician and/or base/modified base hospital notified as soon as possible. S-SV EMS shall be notified of any mechanical pump malfunction no later than the end of the next business day.
- F. The paramedic shall document on the PCR the total volume infused throughout the duration of the transport.
- G. Magnesium sulfate infusion parameters:
1. Regulation of the infusion rate will be within parameters defined by the transferring physician.
 2. If the patient develops signs/symptoms of magnesium toxicity, the medication drip shall be discontinued and the transferring physician and/or base/modified base hospital will be notified as soon as possible. Signs/symptoms of magnesium toxicity include:
 - Thirst
 - Diaphoresis
 - DTR's (Deep Tendon Reflexes) – depressed or absent
 - Hypotension
 - Flaccid paralysis
 - Respiratory depression
 - Circulatory depression or collapse
 - CNS depression
 - Urine output < 30 ml/hr
 - Chest pain or pulmonary edema

Paramedic Monitoring Of Magnesium Sulfate, Nitroglycerin, Heparin, &/Or Amiodarone Infusions During IFTs	841
---	------------

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

H. Nitroglycerin parameters:

1. Infusion fluid will be D5W.
2. Medication concentration will be 50mg/250mL.
3. Regulation of the infusion rate will be within parameters defined by the transferring physician, but in no case will changes be greater than 10mcg/minute increments every 5-10 minutes. In cases of severe hypotension, the medication drip will be discontinued and the transferring physician and/or base/modified base hospital will be notified as soon as possible.
4. Discuss with transferring physician concomitant use of analgesics during transport (i.e., morphine sulfate, fentanyl).
5. Vital signs shall be monitored and documented every 15 minutes and any time there is a change in patient condition or medication adjustment.

I. Heparin infusion parameters:

1. Infusion fluid will be D5W or NS.
2. Medication concentration shall not exceed 100units/mL of IV fluid (25,000 units/250mL).
3. Infusion rates shall be verified with the sending RN following changeover to the mechanical EMS transport pump and will remain constant during transport. No regulation of the rate will be performed by the paramedic except to turn off the infusion completely.
4. Vital signs shall be monitored and documented every 15 minutes and any time there is a change in patient condition.

J. Amiodarone infusion parameters:

1. Medication concentration must be a minimum concentration of 150mg/250mL (0.6 mg/mL).
2. Infusion rates may vary between 0.25 – 1 mg/min.

Paramedic Monitoring Of Magnesium Sulfate, Nitroglycerin, Heparin, &/Or Amiodarone Infusions During IFTs	841
---	------------

3. Infusion rates will remain constant during transport. No adjustment of the rate will be performed by the paramedic except to turn off the infusion completely.
4. Vital signs will be monitored and documented every 15 minutes and any time there is a change in patient condition.
5. Y-Injection incompatibility; the following will precipitate with amiodarone hydrochloride:
 - Heparin
 - Sodium bicarbonate
6. Amiodarone hydrochloride intravenous infusion monitoring is not approved for patients less than 14 years old without base/modified base physician contact.
7. For infusions greater than one hour, amiodarone hydrochloride concentrations should not exceed 2mg/mL unless a central venous catheter is used.