I. PURPOSE:
To provide a mechanism for paramedics to be permitted to monitor infusions of nitroglycerin and heparin during interfacility transfers.

II. POLICY:
A. Paramedics: Only those Paramedics who have successfully completed a training program approved by the Ventura County EMS Medical Director on nitroglycerin and heparin infusions will be permitted to monitor them during interfacility transports.

B. ALS Ambulance Providers: Only those ALS Ambulance providers approved by the Ventura County EMS Medical Director will be permitted to provide the service of monitoring nitroglycerin and/or heparin infusions during interfacility transports

C. Patients: Patients that are candidates for paramedic transport will have pre-existing intravenous heparin and/or nitroglycerin drips. Pre-hospital personnel will not initiate heparin and nitroglycerin drips.

III. PROCEDURE:
A. Medication Administration
1. The paramedic shall receive a report from the nurse caring for the patient and continue the existing medication drip rate
2. If medication administration is interrupted by infiltration or disconnection, the paramedic may restart or reconnect the IV line.
3. All medication drips will be in the form of an IV piggyback monitored by a mechanical pump familiar to the Paramedic who has received training and is familiar with its use.
4. In cases of pump malfunction that cannot be corrected, the medication drip will be discontinued and the receiving hospital notified.
B. Nitroglycerin Drips: Paramedics are allowed to transport patients on nitroglycerin drips within the following parameters:

1. Infusion fluid will be D5W. Medication concentration will be either 25 mg/250 mL or 50 mg/250mL.
2. Drip rates will remain constant during transport. No regulation of the rate will be performed except to turn off the infusion completely.
3. In cases of severe hypotension, defined as a systolic blood pressure < 90 mmHg, the medication drip will be discontinued and the receiving hospital notified.
4. Drip rates will not exceed 50 mcg/minute.
5. Vital signs will be monitored and documented every 10 minutes.

C. Heparin Drips: Paramedics are allowed to transport patients on heparin drips within the following parameters:

1. Infusion fluid will be D5W or NS. Medication concentration will be 100 units/mL of IV fluid (25,000 units/250 mL, 25,000 units/500 mL or 50,000 units/500 mL).
2. Drip rates will remain constant during transport. No regulation of the rate will be performed except to turn off the infusion completely.
3. The medication drip will be discontinued and the base hospital notified if the patient develops new, rapidly worsening, or uncontrolled bleeding.
4. Drip rates will not exceed 1600 units/hour.
5. Vital signs will be monitored and documented every 10 minutes.

D. All cases of IV Heparin and IV Nitroglycerin administration will be documented in the VCePCR, in accordance with VCEMS Policy 1000 – Documentation of Patient Care.

E. All calls will be audited by the service provider and by the transferring and receiving hospitals. Audits will assess compliance with VCEMS Policy, including base hospital contact in emergency situations. Reports will be sent to the EMS agency as requested.