

Tuolumne County Emergency Medical Services Agency  
EMS System Policies and Procedures

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**Policy: INTRAVENOUS INFUSION OF BLOOD or BLOOD PRODUCTS #552.88**

Creation Date: 11-09-2016

Medical Director: 

Revision Date:

EMS Coordinator: 

Review Date: 11-2021

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**PURPOSE:**

To provide a mechanism for paramedics to be permitted to monitor pre-existing infusions of blood or blood products during interfacility transports.

**AUTHORITY:**

Division 2.5, Health and Safety Code, § 1797.220

California Code of Regulations, Title 22, Chapter 4, Article 1, § 100145

**POLICY:**

- A. Only those paramedics who have successfully completed the training program approved by the Tuolumne County EMS Agency Medical Director on pre-existing infusions of blood or blood products will be permitted to monitor them during interfacility transports.
- B. Only those ALS ambulance providers approved by the Tuolumne County EMS Agency Medical Director will be permitted to provide the service of pre-existing infusions of blood or blood products during interfacility transports.
- C. Patients who are candidates for paramedic transport will have pre-existing infusions of blood or blood products in peripheral or central IV lines. Prehospital personnel will not initiate blood transfusions.

**PROCEDURE:**

- A. All patients will be maintained on a cardiac monitor and a non-invasive blood pressure monitor.
- B. The paramedic shall receive the transferring orders from the transferring physician prior to leaving the sending hospital, including a telephone number where the transferring and/or base hospital physician can be reached during the patient transport. Transferring physicians must be aware of the general scope of practice of paramedics. The written orders must include the transfusion rate.
- C. Paramedic personnel must be knowledgeable in the operation of the specific blood delivery/warming device(s).
- D. Regulation of the transfusion rate will be within the parameters defined by the transferring physician.
- E. Identify the patient and blood by checking the patient ID band against the blood label and blood order for name, blood type and unit identifying number.

- F. Vital signs will be monitored and documented every 15 minutes and immediately if there is any change in patient status or change in transfusion rate.
- G. Monitor the patient for any signs and symptoms of a transfusion reaction. Monitor temperature for adverse effects if transport time exceeds 15 minutes. The following are the most common types of transfusion reactions that may occur:
1. **Hemolytic reactions:** Hemolytic reactions are the most life-threatening. Clinical manifestations may vary considerably: fever, headache, chest or back pain, pain at infusion site, hypotension, nausea, generalized bleeding or oozing from surgical site, shock. The most common cause is from ABO incompatibility due to a clerical error or transfusion to the wrong patient. Chances of survival are dose dependent therefore it is important to stop the transfusion immediately if a hemolytic reaction is suspected.
  2. **Febrile non-hemolytic reaction:** Chills and fever (rise from baseline temperature of 1°C or 1.8°F). Document and report to hospital on arrival.
  3. **Allergic reaction:** Characterized by appearance of hives and itching (urticaria or diffuse rash).
  4. **Anaphylaxis:** May occur after administration of only a few ml's of a plasma containing component. Symptoms include coughing, bronchospasm, respiratory distress, vascular instability, nausea, abdominal cramps, vomiting, diarrhea, shock, and loss of consciousness.
  5. **Volume overload:** Characterized by dyspnea, headache, peripheral edema, coughing, frothy sputum or other signs of congestive heart failure occurring during or soon after transfusion. Restrict fluid.

**If a suspected transfusion reaction occurs:**

- Interrupt the transfusion immediately.
- Contact the transferring and/or base hospital physician.
- Consult appropriate treatment guideline.
- Document any suspected transfusion reactions.
- Report to hospital staff immediately upon arrival.

- H. The paramedic shall document on the patient care report (PCR) the total volume infused throughout the duration of the transport.

**CONTINUOUS QUALITY IMPROVEMENT (CQI):**

All calls will be audited by the provider agency CQI process. Audits will assess compliance with physician orders and Tuolumne County EMS Agency policies, including base hospital contact in emergency situations. Reports will be sent to the EMS Agency as requested.