Blood/blood products may be administered during transport in accordance with the following guideline:

A. Indications for transfusion.

1. Prior to blood administration in patients with hypovolemic shock, conventional IV fluid therapy for volume replacement should be initiated.

2. Patients with ongoing, or suspected ongoing, major hemorrhage based on their presenting injury or diagnosis, and with the clinical signs of shock (tachycardia, delayed capillary refill, hypotension, or mental status changes) should be given blood (if available) when the normal IV fluid volume replacement has not corrected the problem. Blood transfusion should also be considered in patients with known Hemoglobin less than 8.

3. Baseline vital signs should be obtained prior to blood administration, with continuous monitoring throughout the transfusion.

4. Blood Type: Blood for transfusion should be used, if available, in the following order of availability:

   a. 1st choice: fully cross-matched
   b. 2nd choice: type specific [appropriate for life threatening hemorrhage only]
   c. 3rd choice: type O Rh negative [universal donor blood]
   d. 4th choice: type O Rh positive [use as last resort in females of childbearing age]

CCT Class 1:

5. Dosage:

   Adults: 2 – 4 Units Packed Red Blood Cells (PRBCs)
   Pediatrics: 10 ml/kg PBRCs. May repeat this amount if needed.

CCT Class 2:

6. Blood administration is normally a CCT Class 1 procedure. However, for a patient receiving blood, a CCT Class 2 team, so as to not delay transport, may be given extra units of blood by a sending hospital to take with them for administration while enroute but only under the following circumstances:

   a. All blood compatibility cross-checks and patient identification must be signed off by the two required hospital personnel **before** leaving the sending facility **AND**,

b. The CCT team must recheck and verify the patient's armband identification that each unit of blood is for the correct patient before administration, **AND,**

c. The CCT team must receive a **direct order from the sending physician or MCP** as to the number of units of blood to be given enroute.

7. Contact Medical Command enroute with updated report on any patient needing emergency transfusion.

B. General Guidelines.

1. All blood not currently being administered should be transported in a cooler if possible.

2. If a squad obtains blood from a hospital, that hospital's blood bank procedures should be followed for obtaining blood.

3. Prior to administration, transport personnel must check and verify blood type, Rh factor, unit numbers, and expiration date.

4. Signatures are required on blood label by both transport medical personnel after checking above information.

5. In adults, blood should be administered through a large bore (at least 18 gauge) peripheral IV, central line, or intraosseous needle. Smaller bore is acceptable in children.

6. Blood should be administered through standard blood tubing with filter, and with 0.9% normal saline.

7. After transfusion is complete, amount transfused and patient's response should be documented.

8. All unused blood products and empty blood product bags should be handled according to your institutional policy.

C. Transfusion Reaction.

1. If signs of a transfusion reaction develop [fever, chills, hypotension, dyspnea, tachycardia, pain at the transfusion site, hives, etc.], stop the transfusion immediately.

2. The unit of blood, the IV bags, and all tubing must be discontinued and sent to the blood bank upon arrival at the receiving hospital.

3. Notify Medical Command immediately of all possible transfusion reactions and to obtain orders for treatment of transfusion reaction if necessary.