

Summary of Guidelines for Adult Transfusion of Blood and Blood Products

This is a brief **SUMMARY DOCUMENT** of evidence-based indications for transfusion recommended by the Indianapolis Coalition for Patient Safety Blood Group. **For additional details, references, and contraindications, refer to the full guidelines document.**

LEUKOREDUCE RED CELLS: One unit of packed red cells in an adult will increase hematocrit by approximately 3% and Hemoglobin by 1g/dL in a non-bleeding patient.

- In patients with no active bleeding, **transfuse ONE unit**, then reassess need for additional units.
 - Hemoglobin less than or equal to 7 g/dL
 - Hemoglobin less than or equal to 8 g/dL **AND** Acute Coronary Syndrome, CHF, pre-existing ischemic cardiovascular disease, post-op, chemotherapy, or bone marrow suppression.
- Active Bleeding – transfuse as needed

APHERESIS PLATELETS: **ONE** apheresis (single donor) unit is equivalent to 4-6 whole blood concentrates. **One** Apheresis platelet is a standard adult dose that should increase the platelet count by 20,000-60,000/mL³.

- Prophylactic treatment in patients with a platelet count less than 10,000/mm³.
- Platelet count less than 20,000/mm³ in patients undergoing MINOR procedure or signs of hemorrhagic diathesis.
- Platelet count less than 50,000/mm³ in patients with active bleeding or planned MAJOR invasive procedures.
- Platelet count less than 100,000/mm³, **AND**
 - neurosurgical patient or intracranial bleed or invasive neurological procedure
 - intraocular bleed/ophthalmological procedure
 - diffuse microvascular bleeding following bypass or aortic balloon pump
 - uremic bleeding
- Platelet dysfunction AND active bleeding or high risk for bleeding (e.g. planned procedure).

PLASMA: A Dose of 10-20 mL/kg is usually adequate to correct coagulopathy.

- **Plasma is not indicated in the absence of bleeding or need for emergent invasive procedure regardless of the INR.**
- Regardless of bleeding status, correction of coagulopathy is not advised for an **INR less than 1.6**.
- Correction of coagulopathy with plasma may be transient due to half-life of key coagulation factors; pre-procedure administration of plasma must be timed accordingly.
- When time allows, correction of coagulopathy is more effective with specific therapies [e.g. Vitamin K, 3-factor or 4-factor Prothrombin Complex Concentrate (PCC), Cryoprecipitated, Antihemophilic Factor (AHF), specific factor concentrates].
- Give in a 1:1 ratio with Red Cells during Massive Transfusion events; during the treatment of uncontrolled hemorrhage, published evidence supports the use of Type A plasma as a substitute for Type AB plasma until blood type is known.
- May use for replacement of individual coagulation factors only when specific coagulation concentrates are not available.
- Plasmapheresis or plasma exchange procedures as needed

CRYOPRECIPITATED ANTIHEMOPHILIC FACTOR (AHF): One unit per 10 kg patient weight is usually adequate when cryoprecipitate is required. Cryoprecipitate is usually supplied in 5 or 10 unit pools

- Fibrinogen is less than 100 mg/dl
- Fibrinogen less than 200 mg/dl in massive transfusion situation
- Refer to full guidelines document for additional indications.