

Table 8: Transfusion of Blood Components: Recommendations Based on Serial Laboratory Values

Component	Content	Volume	Expected Change in Labs	Indication/ Trigger	Goals of Transfusion
Warm Fresh Whole Blood (WFWB)	Same components in same percentages as blood loss	400-500 mL	1 unit WFWB replaces all components of blood loss in similar ratio without loss of individual component function from storage. 1 unit WFWB increases Hgb approximately 1 g/dL or Hct by 3%.	Hgb < 8.0 g/dL in bleeding patient. If patient stable and not bleeding, Hgb < 6.0 g/dL; <u>or</u> Hgb < 8.0 g/dL and patient is symptomatic.	Hgb 10 g/dL, or Hct 30%
Packed red blood cells (PRBCs)	Red blood cells, preservative and anticoagulant solutions may vary. Hct of packed cells: 50%-65%; contains approximately 42.5-80 g of hemoglobin; contains approx 147-278 mg of iron.	128–240 mL red blood cells; plus contains average 50 mL donor plasma (range 20–150 mL); plus anticoagulant and preservative.	1 unit PRBC increases Hgb approximately 1 g/dL or Hct by 3% (assumes pt not bleeding or hemolyzing).	Hgb < 8.0 g/dL in bleeding patient. If patient stable and not bleeding, Hgb < 6.0 g/dL; <u>or</u> Hgb < 8.0 g/dL and patient is symptomatic.	Hgb 10 g/dL, or Hct 30%
Platelets	Random Donor Platelets (RDP) should contain $\geq 5.5 \times 10^{10}$ platelets in 50 mL plasma. Four to 10 RDPs are pooled prior to transfusion. Platelets Apheresis – Single Donor Platelets (SDP) should contain $\geq 3.0 \times 10^{11}$ (average is $3.5\text{--}4.0 \times 10^{11}$ per bag) in 250 mL plasma. SDP are ready for transfusion – no thawing needed.	Platelets (RDP) - 50 mL plasma x number of RDP in the pool. Platelets Apheresis (SDP) - 250 mL of plasma.	For each RDP given – increase count 7,000-10,000/mm ³ . For each SDP apheresis pack given – increase count 30,000-60,000/mm ³	Platelets <50,000 – 70,000/mm ³ in actively bleeding patients; <20,000/mm ³ in unstable non-bleeding patients; and <10,000/mm ³ in stable, non-bleeding patients.	>100,000/mm ³ in active bleeding patients
Fresh frozen plasma (FFP)	Non-cellular portion of blood that is separated from whole blood and frozen. Contains all coagulation factors. Dosing is based on patient current weight; or in uncontrolled bleeding, given as close as possible to a 1:1 PRBC:FFP ratio.	Approximately 200- 250 mL in one unit. Apheresis-derived units may be 400-600 mL.		PT >1.5 times the mid range of normal; aPTT >1.5 time high normal range; or factor assay less than 25%.	PT ≤ 1.5 x control; aPTT ≤ 1.5 x control; Fibrinogen > 100
Cryo-precipitated Antihemolytic Factor (AHF)	Each unit of cryoprecipitate AHF (Cryo) should contain at least 80 IU Factor VIII:C, and 150 mg of fibrinogen in 5 to 20mL of plasma. Cryo also contains Factor VIII:VWF (von Willebrand factor), Factor XIII and fibronectin.	5–20 mL per unit; see label for total number of units included.	Typical dose for stable hypofibrinogenemia is one unit per 7–10 kg of body weight; increases fibrinogen levels by 50 mg/dL in the absence of bleeding or consumption. In hemorrhage, Cryo may be given in increased doses of 1 unit/5 kg or 2 units/10 kg; and repeated as needed to maintain fibrinogen levels >100 mg/dL.	Fibrinogen <100 mg/dL	Fibrinogen >100 mg/dL

mL- milliliter, Hgb - hemoglobin, g/dL – grams per deciliter, Hct – hematocrit, g – gram, mm³ – millimeter cubed, PT – prothrombin time, aPTT – activated partial thromboplastintime, IU – international units, kg – kilogram, mg/dL – milligrams per deciliter

Reprinted with permission from the Association of Women’s Health, Obstetric and Neonatal Nurses (AWHONN) (www.awhonn.org). Transfusion of Blood Components: Recommendations Based on Serial Laboratory Values. From AWHONN (2019) High Risk and Critical Care Obstetrics, 4th Edition. Philadelphia; Wolters Kluwer.