ADULT, PEDIATRIC, AND NEONATAL TRANSFUSION GUIDELINES

Below are guidelines for transfusion and may be superseded by physician discretion where applicable.

ADULT TRANSFUSION GUIDELINES:

COMPONENT	PREPARATION AND COMPOSITION	INDICATIONS FOR USE	ABO-RH COMPATIBILITY	ADMINISTRATION	ADDITIONAL COMMENTS
Packed Red Blood Cells (RBCs) - Leukoreduced	Obtained from BB Contains RBCs. May also contain minimal platelets and plasma, and negligible WBCs.	Treatment of symptomatic anemia in patients who require an increase in oxygen-carrying capacity and red cell mass Generally indicated when Hgb is ≤ 7 g/dL or Hct is ≤ 21% Higher thresholds are utilized for specific clinic scenarios such as acute coronary syndrome, symptomatic chronic-transfusion dependent anemia	Recipient — Donor O — O A — A or O B — B or O AB — AB, A, B, or O Rh Pos — Rh Pos, Rh Neg Rh Neg — Rh Neg In some cases, Rh Pos RBC can be given to Rh Neg recipients	Filter: Standard blood filter required Preferred Needle Gauge: 16-20; 22 gauge for limited venous access Rate: 1-2 mL/min (60-120 mL/hr) for the first 15 minutes, then as rapidly as tolerated, 4mL/min (240-mL/hr) For patients at risk of fluid overload, may adjust flow rate to as low as 1mL/kg/hour DO NOT TRANSFUSE LONGER THAN 4 HOURS Volume: 300-350 mL	Expected Outcome: One unit of RBCs should increase Hgb by 1 g/dL or Hct by 3% to 4% Leukoreduction produces a CMV safe product which decreases the risk of CMV transmission and is equivalent to CMV negative product; decreases risk of alloimmunization to leukocyte or HLA antigens; and may reduce incidence of febrile transfusion reactions Other Considerations: Irradiation* Washed* *See Other Considerations Table below
Autologous Packed RBCs- Leukoreduced	Same as above Patient has donated own blood at a BWNW collection facility prior to surgical procedure	Same as above	Complete ABO-Rh compatibility to patient since blood was donated by patient prior to procedure	Same as above	Same as above

COMPONENT	PREPARATION AND COMPOSITION	INDICATIONS FOR USE	ABO-RH COMPATIBILITY	ADMINISTRATION	ADDITIONAL COMMENTS
Apheresis Platelets (PLTs)	Platelets, plasma, and small numbers of RBCs and WBCs	Treatment of bleeding associated with thrombocytopenia or abnormal platelet function Maybe also be used prophylactically in the setting of surgery / invasive procedures or marrow hypoplasia Generally indicated when platelet count < 50,000 µL or established platelet dysfunction Not usually effective in conditions of rapid platelet destruction (e.g. ITP and DIC)	Recipient — Donor O — O, A, B, AB A — A, AB, O, B B — B, AB, O, A AB — AB, A, B, O ABO incompatible platelets can be given if not grossly contaminated with red cells Generally, Rh- patients should receive platelets from Rh-negative donors. When this is not possible for women of childbearing age (<50 years old), consider giving RhoGam.	Filter: Standard blood filter required Preferred Needle Gauge: 20-22 Rate: 2-5 mL/min (120-300 mL/hr) for the first 15 minutes, then as tolerated, 300 mL/hr Usually given over 1-2 hours DO NOT TRANSFUSE LONGER THAN 4 HOURS Volume: Actual volume is printed on blood product label	Expected Outcome: One unit of apheresis platelets should increase platelet count by 30,000 – 50,000/µL. Other Considerations: Irradiation* HLA matched* *See Other Considerations Table below
Fresh Frozen Plasma (FFP), Frozen Plasma (FP)	Obtained from BB Plasma containing clotting factors	Treatment of multiple coagulation factor deficiencies in bleeding patients due to disease or the dilutional coagulopathy of a massive transfusion of blood or volume Maybe also be used prophylactically in the setting of surgery / invasive procedures Plasma may be given to patients with a vitamin K deficiency (warfarin anticoagulation therapy) when timing does not permit the use of Vitamin K or prothrombin complex concentrates (PCC) Generally indicated when INR is > 1.5	Recipient — Donor O — O, A, B, or AB A — A or AB B — B or AB AB — AB Rh is not significant	Filter: Standard blood filter required Preferred Needle Gauge: 18-20 Rate: 2-5 mL/min (120-300 mL/hr) for the first 15 minutes, then as rapidly as tolerated, 300 mL/hr DO NOT TRANSFUSE LONGER THAN 4 HOURS Volume: Actual volume is printed on blood product label	Expected outcome: A usual dose of 2-4 units of plasma should increase the level of coagulation factors by 20% Plasma expiring 5 days from thaw cannot be used for Factor VIII replacement

COMPONENT	PREPARATION AND COMPOSITION	INDICATIONS FOR USE	ABO-RH COMPATIBILITY	ADMINISTRATION	ADDITIONAL COMMENTS
Liquid Plasma (LP)	Obtained from BB at EH only Low-titer liquid Group A Plasma containing clotting factors	For use only at EH and only for traumas and/or patient's on MTP. Cannot be specifically ordered. Not for use for factor replacement of factor V or factor VIII	N/A All liquid plasma is low-titer Group A and is given to all adult trauma patients or adult patients on MTP	Filter: Standard blood filter required DO NOT TRANSFUSE LONGER THAN 4 HOURS Volume: Actual volume is printed on blood product label Additional administration guided by system MTP	Not for transfusion to pediatric patients younger than 18 years of age
Cryoprecipitate AHF – pooled (PCP)	Obtained from BB Factor VIII, Von Willebrand's factor, factor XIII, fibrinogen	Treatment of congenital or acquired fibrinogen deficiency (hypofibrinogenemia) Treatment of hemophilia A, von Willebrand disease or Factor XIII deficiency when factor concentrates are not available Generally indicated when fibrinogen is <100 mg/dL	N/A	Filter: Standard blood filter required Preferred Needle Gauge: 18-22 Rate: As rapidly as tolerated DO NOT TRANSFUSE LONGER THAN 4 HOURS Volume: Actual volume is printed on blood product label	Expected Outcome: Each unit of cryoprecipitate should increase fibrinogen by 5-10 mg/dL 5 units cryoprecipitate = 1 dose or pool, referred to as Pooled Cryoprecipitate (PCP)
Factor VIII Antihemophilic factor (AHF) Von Willebrand Factor (Humate P)	Obtained from Pharmacy Freeze-dried factor VIII	Factor VIII deficiency (Hemophilia A); some products can be used in Von Willebrand's disease	N/A	Filter: None required; filtered during preparation by pharmacy; follow package instructions to reconstitute at room temperature Preferred Needle Gauge: 22-24 Use plastic disposable syringes as proteins adhere to glass. Visually inspect for particulate matter or discoloration prior to administration. Do not refrigerate after reconstitution. Administer within 3 hours of reconstitution Rate: Slowly infuse the solution (max. rate 4 mL/min) with suitable intravenous set Volume: 10-30 mL	There is a risk of transmission of infectious disease Each bottle of AHF is labeled with activity expressed in international units

COMPONENT	PREPARATION AND COMPOSITION	INDICATIONS FOR USE	ABO-RH COMPATIBILITY	ADMINISTRATION	ADDITIONAL COMMENTS
Factor IX Recombinant coagulation factor IX (Benefit)	Obtained from Pharmacy Freeze-dried factor IX	Factor IX deficiency (Hemophilia B), also known as Christmas disease	N/A	Filter: None required; filtered during preparation by pharmacy Preferred Needle Gauge: 20-24 For IV use only. Visually inspect for particulate matter or discoloration prior to administration. Administer using tubing provided Rate: Adjust rate of administration based on patient's comfort level Volume: 10-30 mL	Each bottle of factor IX is labeled with activity expressed in international units
Normal Serum Albumin (NSA) 25% and 5% and plasma protein fraction (PPF) 5% Albumin	Obtained from Pharmacy Plasma proteins available in 5% or 25%	Hypovolemic shock associated with or without acute blood loss; cerebral edema; cardiopulmonary bypass	N/A	Filter: Some products may require filtration; refer to package insert Preferred Needle Gauge: 18-24 (age and patient dependent) For IV use only. Visually inspect for particulate matter or discoloration prior to administration. Do not begin administration more than 4 hours after the container has been entered Rate: Dependent on product, concentration, and patient's condition; see package insert DO NOT TRANSFUSE LONGER THAN 4 HOURS. Volume: 25% NSA (50 and 100 mL) 5% NSA (250 and 500 mL) 5% PPF (250 and 500 mL)	There is a risk of infectious disease transmission

PEDIATRIC TRANSFUSION GUIDELINES:

COMPONENT	PREPARATION AND COMPOSITION	INDICATIONS FOR USE	ABO-RH COMPATIBILITY	ADMINISTRATION	SPECIAL CONSIDERATIONS ADDITIONAL COMMENTS
Packed Red Blood Cells (RBCs) - Leukoreduced	Obtained from BB Contains RBCs. May also contain minimal platelets and plasma, and negligible WBCs	Treatment of symptomatic anemia in patients who require an increase in oxygen-carrying capacity and red cell mass Generally indicated when Hgb is ≤ 8 g/dL or Hct is ≤ 24% Higher thresholds are utilized for specific clinic scenarios such as acute coronary syndrome, symptomatic chronic-transfusion dependent anemia	Recipient / Donor O / O A / A or O B / B or O AB / AB, A, B, or O Rh Pos / Rh Pos, Rh Neg Rh Neg / Rh Neg In some cases, Rh Pos RBC can be given to Rh Neg recipients	Filter: Standard pediatric blood filter required Preferred Needle Gauge: 18-24 (Age and patient dependent) Rate: Usually administered over 2-4 hrs. Adjust rates according to patient's clinical status and needs. In states of shock or severe bleeding, a rapid infusion may be required. DO NOT TRANSFUSE LONGER THAN 4 HOURS Volume: as ordered	Expected Outcome for Infants and Small Children: 10 to 15 mL/kg should increase Hgb by 2 to 3 g/dL Leukoreduction, produces a CMV safe product, which decreases the risk of CMV transmission, and is equivalent to CMV negative product; decreases risk of alloimmunization to leukocyte or HLA antigens; and may reduce incidence of febrile transfusion reactions Other Considerations: Irradiation* Washed* *See Other Considerations Table below

COMPONENT	PREPARATION AND COMPOSITION	INDICATIONS FOR USE	ABO-RH COMPATIBILITY	ADMINISTRATION	SPECIAL CONSIDERATIONS ADDITIONAL COMMENTS
Platelet Apheresis (PLTs)	Platelets, plasma, and small numbers of RBCs and WBCs	Treatment of bleeding associated with thrombocytopenia or abnormal platelet function Maybe also be used prophylactically in the setting of surgery / invasive procedures or marrow hypoplasia Generally indicated when platelet count < 50,000 µL or established platelet dysfunction Not usually effective in conditions of rapid platelet destruction (e.g. ITP and DIC)	Recipient — Donor O — O, A, B, AB A — A, AB, O, B B — B, AB, O, A AB — AB, A, B, O ABO incompatible platelets can be given if not grossly contaminated with red cells. Generally, Rh- patients should receive platelets from Rh-negative donors. When this is not possible for women of childbearing age (<50 y.o.), consider giving RhoGam	Filter: Standard pediatric blood filter required Preferred Needle Gauge: 18-24 (age and patient dependent) Rate: Usually administered over 2-4 hrs. Adjust rates according to patient's clinical status and needs. In states of shock or severe bleeding, a rapid infusion may be required. DO NOT TRANSFUSE LONGER THAN 4 HOURS Volume: as ordered	Expected Outcome for Infants and Small Children: 5 to 10 mL/kg, should increase the platelet count by 50,000 – 100,000/µL. Children over 50kg can receive 1 apheresis platelet unit Other Considerations: Irradiation* HLA matched* *See Other Considerations Table below
Fresh Frozen Plasma (FFP), Frozen Plasma (FP)	Obtained from BB Plasma containing clotting factors	Treatment of multiple coagulation factor deficiencies in bleeding patients, due to disease or the dilutional coagulopathy of a massive transfusion of blood or volume Maybe also be used prophylactically in the setting of surgery / invasive procedures Plasma may be given to patients with a vitamin K deficiency (warfarin anticoagulation therapy) when timing does not permit the use of Vitamin K or prothrombin complex concentrates (PCC) Generally indicated when INR is > 1.5	Recipient — Donor O — O, A, B, or AB A — A or AB B — B or AB AB — AB Rh is not significant	Filter: Standard pediatric blood filter required Preferred Needle Gauge: 18-24 (age and patient dependent) Rate: Usually administered over 2-4 hrs. Adjust rates according to patient's clinical status and needs. In states of shock or severe bleeding, a rapid infusion may be required. DO NOT TRANSFUSE LONGER THAN 4 HOURS Volume: Actual volume is printed on blood product label	Expected Outcome for Infants and Small Children: 10 to 15 mL/kg should increase factor activity by 15-20% Plasma expiring 5 days from thaw cannot be used for Factor VIII replacement

COMPONENT	PREPARATION AND COMPOSITION	INDICATIONS FOR USE	ABO-RH COMPATIBILITY	ADMINISTRATION	SPECIAL CONSIDERATIONS ADDITIONAL COMMENTS
Cryoprecipitate AHF – pooled (PCP) or single (CP)	Obtained from BB Factor VIII, Von Willebrand's factor, factor XIII, fibrinogen	Treatment of congenital or acquired fibrinogen deficiency (hypofibrinogenemia) Treatment of hemophilia A, von Willebrand disease or Factor XIII deficiency when factor concentrates are not available Generally indicated when fibrinogen is <100 mg/dL	N/A	Filter: Standard blood filter required Preferred Needle Gauge: 18-24 (age and patient dependent) Rate: Usually administered over 2-4 hrs. Adjust rates according to patient's clinical status and needs. In states of shock or severe bleeding, a rapid infusion may be required. DO NOT TRANSFUSE LONGER THAN 4 HOURS Volume: Actual volume is printed on blood product label	Expected Outcome for Infants and Small Children: Dosing 1-2 units/10 kg should increase fibrinogen by 60 to 100mg/dL 5 units cryoprecipitate = 1 dose or pool, referred to as Pooled Cryoprecipitate (PCP)
Factor VIII Antihemophilic factor (AHF) Von Willebrand Factor (Humate P)	Obtained from Pharmacy Freeze-dried factor VIII	Factor VIII deficiency (Hemophilia A); some products can be used in Von Willebrand's disease	N/A	Filter: None required; filtered during preparation by pharmacy; follow package instructions to reconstitute at room temperature Preferred Needle Gauge: 22-24 Use plastic disposable syringes as proteins adhere to glass. Visually inspect for particulate matter or discoloration prior to administration. Do not refrigerate after reconstitution. Administer within 3 hours of reconstitution Rate: Slowly infuse the solution (max. rate 4 mL/min) with suitable intravenous set Volume: 10-30 mL	Expected Outcome: One unit/kg of Factor VIII should increase plasma Factor VIII level 2% Each bottle of AHF is labeled with activity expressed in international units. There is a risk of transmission of infectious disease.

COMPONENT	PREPARATION AND COMPOSITION	INDICATIONS FOR USE	ABO-RH COMPATIBILITY	ADMINISTRATION	SPECIAL CONSIDERATIONS ADDITIONAL COMMENTS
Factor IX Recombinant coagulation factor IX (Benefit)	Obtained from Pharmacy Freeze-dried factor IX	Factor IX deficiency (Hemophilia B), also known as Christmas disease	N/A	Filter: None required; filtered during preparation by pharmacy Preferred Needle Gauge: 20-24 For IV use only. Visually inspect for particulate matter or discoloration prior to administration. Administer using tubing provided. Rate: Adjust rate of administration based on patient's comfort level. Volume: 10-30 mL	Expected Outcome: One unit/kg of Factor IX should increase plasma Factor IX level 1% Each bottle of factor IX is labeled with activity expressed in international units Risk of transmission of infectious disease is reduced, but not eliminated by processing
Normal Serum Albumin (NSA) 25% and 5% and plasma protein fraction (PPF) 5% Albumin	Obtained from Pharmacy Plasma proteins available in 5% or 25%	Hypovolemic shock associated with or without acute blood loss; cerebral edema; cardiopulmonary bypass	N/A	Filter: Some products may require filtration; refer to package insert. Preferred Needle Gauge: 18-24 (age and patient dependent) For IV use only. Visually inspect for particulate matter or discoloration prior to administration. Do not begin administration more than 4 hours after the container has been entered Rate: Dependent on product, concentration, and patient's condition; see package insert. 5% solution: 1-10 cc/minute or more rapidly if patient in shock 25% solution: 0.2-0.4 cc/minute DO NOT TRANSFUSE LONGER THAN 4 HOURS Volume: 25% NSA (50 and 100 mL) 5% NSA (250 and 500 mL) 5% PPF (250 and 500 mL) Peds: 1 g/kg = 20 mL/kg (5% solution) or 4 mL/kg (25% solution)	There is a risk of infectious disease transmission

NEONATAL TRANSFUSION GUIDELINES:

COMPONENT	PREPARATION AND COMPOSITION	INDICATIONS FOR USE	ABO-RH COMPATIBILITY	ADMINISTRATION	SPECIAL CONSIDERATIONS ADDITIONAL COMMENTS
Packed Red Blood Cells (RBCs) - Leukoreduced	Obtained from BB Contains RBCs. May also contain minimal platelets and plasma, and negligible WBCs. NeoRBC5 is leukoreduced, irradiated blood product ≤ 5 days. NeoRBC28 is leukoreduced, irradiated blood product >5 days but <28 days.	Treatment of symptomatic anemia in patients who require an increase in oxygen-carrying capacity and red cell mass 1. Hemoglobin <13 g/dL or Hematocrit 40% in an infant a. requiring assisted ventilation and supplemental oxygen b. with severe pulmonary disease, cyanotic heart disease, or heart failure c. ECMO 2. Hemoglobin <10 g/dL or Hematocrit 30% a. significant apnea b. poor weight gain 3. Hemoglobin <8 g/dL or Hematocrit 24% in stable newborn with clinical manifestations of anemia 4. Acute blood loss >10% of total blood volume 5. Phlebotomy losses >5-10% of blood volume	Recipient — Donor O — O A — A or O B — B or O AB — AB, A, B, or O Rh Pos — Rh Pos, Rh Neg Rh Neg — Rh Neg	Filter: if packaged in a syringe, blood product has been filtered by blood bank. Standard filter is required for any product not in a syringe Preferred Needle Gauge: 24 - 26 (Age and patient dependent) Rate: Usually administered over 2-4 hrs. Adjust rates according to patient's clinical status and needs. In states of shock or severe bleeding, a rapid infusion may be required. DO NOT TRANSFUSE LONGER THAN 4 HOURS Volume: as ordered	Expected Outcome for Infants and Small Children: 10 to 15 mL/kg should increase Hgb by 2 to 3 g/dL Leukoreduction, produces a CMV safe product, which decreases the risk of CMV transmission, and is equivalent to CMV negative product; decreases risk of alloimmunization to leukocyte or HLA antigens; and may reduce incidence of febrile transfusion reactions Other Considerations: Irradiation* Washed* *See Other Considerations Table below
Platelet Apheresis (PLTs)	Platelets, plasma, and small numbers of RBCs and WBCs Neo PLT is leukoreduced and irradiated.	Treatment of bleeding associated with thrombocytopenia or abnormal platelet function Maybe also be used prophylactically in the setting of surgery / invasive procedures or marrow hypoplasia Not recommended for treatment of immune thrombocytopenic purpura (ITP), unless patient has life-threatening bleeding.	Recipient — Donor O — O, A, B, AB A — A, AB, O, B B — B, AB, O, A AB — AB, A, B, O Should be same ABO type as the neonate, when possible. If same ABO type is unavailable, platelet products that either contain plasma compatible with the neonate's RBCs or those	Filter: if packaged in a syringe, blood product has been filtered by blood bank. Standard filter is required for any product not in a syringe. Preferred Needle Gauge: 24 - 26 (Age and patient dependent) Rate: Usually administered over 2-4 hrs. Adjust rates according to patient's clinical status and needs. In states of shock or severe bleeding, a rapid infusion may be required.	Expected Outcome for Infants and Small Children: 5 to 10 mL/kg, should increase the platelet count by 50,000 – 100,000/µL. Children over 50kg can receive 1 apheresis platelet unit Other Considerations: Irradiation* HLA matched*

COMPONENT	PREPARATION AND COMPOSITION	INDICATIONS FOR USE	ABO-RH COMPATIBILITY	ADMINISTRATION	SPECIAL CONSIDERATIONS ADDITIONAL COMMENTS
		Infants less than or equal to 37 weeks gestation: 1. <50,000/uL in stable infant 2. <100,000/uL in sick infant a. ECMO b. Active bleeding c. Invasive procedure Infants greater than or equal to 37 weeks gestation: 1. <100,000/uL with active bleeding 2. <50,000/uL with need for invasive procedure 3. <20,000/uL in non-bleeding infant with failure of platelet production and risk factors, such as coagulopathy, sepsis, fever, etc. 4. <20,000/uL in non-bleeding infant with failure of platelet production 5. Bleeding with qualitative platelet defect regardless of platelet count 6. Diffuse microvascular bleeding following cardiac bypass, regardless of platelet count	with low titers of ABO antibodies are acceptable and will be provided. ABO incompatible platelets can be given if no other options are available and if not grossly contaminated with red cells. Generally, Rh- patients should receive platelets from Rh-negative donors. When this is not possible for women of childbearing age (<50 years old), consider giving RhoGam.	DO NOT TRANSFUSE LONGER THAN 4 HOURS Volume: as ordered	*See Other Considerations Table below

COMPONENT	PREPARATION AND COMPOSITION	INDICATIONS FOR USE	ABO-RH COMPATIBILITY	ADMINISTRATION	SPECIAL CONSIDERATIONS ADDITIONAL COMMENTS
Fresh Frozen Plasma (FFP), Frozen Plasma (FP)	Obtained from BB Plasma containing clotting factors	Treatment of multiple coagulation factor deficiencies in bleeding patients, due to disease or the dilutional coagulopathy of a massive transfusion of blood or volume Maybe also be used prophylactically in the setting of surgery / invasive procedures Plasma may be given to patients with a vitamin K deficiency (warfarin anticoagulation therapy) when timing does not permit the use of Vitamin K or prothrombin complex concentrates (PCC) 1. INR >1.5, aPTT >60 seconds, or factor assay <25% and active bleeding, or anticipated major surgery/invasive procedure within 24 hours 2. Diffuse microvascular bleeding and PT/PTT not available. 3. Plasma exchange in TTP/HUS (or cryo-poor FP) 4. Emergency reversal of bleeding associated with Coumadin 5. Protein C deficiency, Protein S deficiency, or ATIII deficiency if purified concentrate not available 6. Initial stabilization on ECMO circuit	Group AB is preferred for all neonates. Recipient Donor O O, A, B, or AB A A or AB B B or AB AB AB Rh is not significant	Filter: if packaged in a syringe, blood product has been filtered by blood bank. Standard filter is required for any product not in a syringe. Preferred Needle Gauge: 24-26 (age and patient dependent) Rate: Usually administered over 2-4 hrs. Adjust rates according to patient's clinical status and needs. In states of shock or severe bleeding, a rapid infusion may be required. DO NOT TRANSFUSE LONGER THAN 4 HOURS Volume: as ordered	Expected Outcome for Infants and Small Children: 10 to 15 mL/kg should increase factor activity by 15-20% Plasma expiring 5 days from thaw cannot be used for Factor VIII replacement

COMPONENT	PREPARATION AND COMPOSITION	INDICATIONS FOR USE	ABO-RH COMPATIBILITY	ADMINISTRATION	SPECIAL CONSIDERATIONS ADDITIONAL COMMENTS
Cryoprecipitate AHF – single (CP)	Obtained from BB Factor VIII, Von Willebrand's factor, factor XIII, fibrinogen	Treatment of congenital or acquired fibrinogen deficiency (hypofibrinogenemia) Treatment of hemophilia A, von Willebrand disease or Factor XIII deficiency when factor concentrates are not available Generally indicated when fibrinogen is <100 mg/dL	Group AB is used for all neonates.	Filter: if packaged in a syringe, blood product has been filtered by blood bank. Standard filter is required for any product not in a syringe. Preferred Needle Gauge: 24-26 (age and patient dependent) Rate: Usually administered over 2-4 hrs. Adjust rates according to patient's clinical status and needs. In states of shock or severe bleeding, a rapid infusion may be required. DO NOT TRANSFUSE LONGER THAN 4 HOURS Volume: as ordered	Expected Outcome for Infants and Small Children: Dosing 1-2 units/10 kg should increase fibrinogen by 60 to 100mg/dL 5 units cryoprecipitate = 1 dose or pool, referred to as Pooled Cryoprecipitate (PCP)
Normal Serum Albumin (NSA) 25% and 5% and plasma protein fraction (PPF) 5% Albumin	Obtained from Pharmacy Plasma proteins available in 5% or 25%	1. Hypoalbuminemia 2. Cardiopulmonary bypass and/or ECMO 3. No clinical benefit of using albumin over saline for hypovolemia	N/A	Filter: Some products may require filtration; refer to package insert. Preferred Needle Gauge: 24-26 (age and patient dependent) For IV use only. Visually inspect for particulate matter or discoloration prior to administration. Do not begin administration more than 4 hours after the container has been entered Rate: Replacement volume is 10-20 mL/kg per dose DO NOT TRANSFUSE LONGER THAN 4 HOURS	There is a risk of infectious disease transmission

OTHER CONSIDERATIONS:

CONSIDERATION	APPLICABLE PRODUCT ORDERS	INDICATIONS FOR USE	PREPARATION
Irradiation	RBC Product Order Platelet Product Order	• Hematologic malignancies or solid tumors • Peripheral blood stem cell/marrow transplant • Neonatal transfusions (infants less than 4 months old) • Prematurity, low birthweight, or erythroblastosis fetalis in newborns • Components that are HLA matched • Congenital immunodeficiencies • Intrauterine transfusions • Fludarabine therapy	The required dose of gamma radiation is Gy (2,500 cGy/rad) to the central point of the container and 15 Gy (1500 cGy/rad) to any other part The irradiation of product renders T-lymphocytes inactive for the prevention of transfusion associated graft-vs-host disease (TA-GVHD)
Washed	RBC Product Order	Decreases risk for alloimmunization to leukocyte or HLA antigens. Reduces incidence of urticarial and anaphylactic reactions to plasma proteins, such as anti-IgA in an IgA-deficient recipient Only ordered when reactions are not controllable with medications and leukodepleted products	RBC product is washed with normal saline. Hematocrit of washed product is 70-80%. Unless also irradiated, product contains viable lymphocytes and can induce GVHD The washing of RBCs removes plasma proteins
HLA Matched or HLA Compatible	Platelet Product Order	Used when patient is unresponsive to random donor platelet concentrates because of HLA alloimmunization Used for patients who have had a bone marrow transplant (BMT) within the last year or are scheduled for future transplant	Random-donor apheresis platelet product that is either HLA compatible or HLA matched (tissue matched) to the recipient Advance scheduling is required to obtain HLA-matched or HLA compatible platelets All HLA matched or compatible platelet products must be irradiated