ADULT TRANSFUSION GUIDELINES

ORDERED COMPONENT	PREPARATION AND COMPOSITION	INDICATIONS FOR USE	ABO-RH COMPATIBILITY	ADMINISTRATION	SPECIAL CONSIDERATIONS
Packed red cells (RBCs)	RBCs, WBCs, platelets & plasma (minimal)	Increase red cell mass and oxygen carrying capacity; generally indicated when Hgb is 7 gm or Hct 21 unless active cardiac disease is present.	Recipient Donor O O A A, O AB AB, A, B, O B B, O Rh+ Rh+, Rh- Rh- Rh- In some cases, Rh+ blood can be given to Rh- recipients.	Filter - standard blood filter Preferred needle gauge - 16-20; 22 gauge for limited venous access Rate – approximately 2 mL/minute (120mL/hour) for 1st 15 minutes, then increase rate to infuse over 1 to 2 hours (150-250 mL/hr), or as ordered. Do NOT hang longer than 4 hours. Volume - 300-350 mL	Expected outcome - increase Hg by one gram/unit or Hct 3%

ORDERED COMPONENT	PREPARATION AND COMPOSITION	INDICATIONS FOR USE	ABO-RH COMPATIBILITY	ADMINISTRATION	SPECIAL CONSIDERATIONS
Leukocyte-Reduced packed red cells (RBCs)	RBCs, WBCs (negligible), platelets & plasma (minimal)	Same as RBCs plus decreases risk for alloimmunization to leukocyte or HLA antigens and CMV transmission; reduces incidence of febrile transfusion reactions	Same as RBCs	Filter • If product is not leukocyte reduced, use leukocyte removal filter. • Otherwise standard blood filter. Preferred needle gauge – Same as RBC's Rate - Same as RBCs Volume - Same as RBCs	Same as RBCs
Red blood cells-washed	RBCs, minimal WBCs, no plasma, no platelets	Same as RBCs plus decrease risk for alloimmunization to leukocyte or HLA antigens; reduce incidence of urticarial and anaphylactic reactions to plasma proteins; only ordered when reactions not controllable with meds and leukodepleted products	Same as RBCs	Same as RBCs	Expiration time of unit is 24 hours after saline washing; Hct of product is 70-80%; contains viable lymphocytes and can induce GVHD
Autologous blood	RBCs, WBCs, and plasma; patient has donated own blood prior to surgical procedure	Increase red cell mass and oxygen carrying capacity	Complete ABO-Rh compatibility since blood was donated by patient prior to procedure	Filter - Same as RBCs Preferred needle gauge - Same as RBC's Rate - Same as RBCs Volume - 200-500 mL	Same as RBCs; 2-hour reinfusion is OK unless patient is volume sensitive;

ORDERED COMPONENT	PREPARATION AND COMPOSITION	INDICATIONS FOR USE	ABO-RH COMPATIBILITY	ADMINISTRATION	SPECIAL CONSIDERATIONS
Plasma: Fresh frozen plasma (FFP), frozen plasma (FP)	Plasma, with clotting factors	Hemorrhagic condition associated with a clotting factor deficiency; with (PT ≥18, INR > 1.5, or PTT ≥ 60) reverse excessive anticoagulant therapy; bleeding complications due to liver disease	Recipient Donor O O, A, B, AB A A, AB B B, AB AB AB	Filter - standard blood filter Preferred needle gauge - 18-20 Rate - TKO x 15 minutes, then as fast as tolerated (5-10 mL/min). Do NOT hang longer than 4 hours. Volume - actual volume is printed on product bag	Expiration time of product is 24 hours after thawing: usual starting dose is 2-4 units.
Platelet apheresis	Platelets, plasma, small numbers of RBCs and WBCs	To control or prevent bleeding associated with deficiencies in platelet number (count < 5,000 - 10,000 chronic, < 50,000 preop) or function; 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 used if not grossly contaminated with red cells. RH factor is significant only when platelets from Rh+ donor are used in a Rh- female (<_50 years).	Filter - standard blood filter or leukocyte reduction filter (per physician order). Preferred needle gauge - 20-22 Rate - TKO - first 15 minutes, then remaining volume within 20-30 minutes (5-10 mL/min). May be placed on infusion device if ordered over a specific amount of time. Volume -. Approximately 270 mL.	Prophylactic pre-transfusion medications (e.g., antihistamine and/or acetaminophen) may be ordered to decrease incidence of chills, fever and allergic reactions; one unit of pheresis platelets should increase platelet count by 20,000 to 30,000/ul
Platelets HLA-matched	Same as apheresis platelets but product is tissue matched	Same as random-donor platelets; used for patients unresponsive to random donor platelet concentrates because of HLA alloimmunization; used for patients who have had transplant within last year or are scheduled for future transplant	Same as platelet apheresis concentrates	Same as platelet apheresis concentrates	Advance scheduling to obtain HLA-matched platelets is required; all HLA matched platelets must be irradiated

ORDERED COMPONENT	PREPARATION AND COMPOSITION	INDICATIONS FOR USE	ABO-RH COMPATIBILITY	ADMINISTRATION	SPECIAL CONSIDERATIONS
Platelets crossmatched	Same as apheresis platelets but crossmatched with patient's serum	Same as random donor platelets but used for patients who are unresponsive to random donor pheresis or HLA matched platelet products; platelet antibody screen is positive	Same as platelet apheresis concentrates	Same as platelet apheresis concentrates	24-hour advanced scheduling required; new clot tube specimen required for each order
Cryoprecipitate (AHF)	Factor VIII, von Willebrand's factor, factor XIII, fibrinogen; product is frozen	Treatment of hypofibrinogenemia (fibrinogen < 100 mg/dl) and Von Willebrand's disease; may be used in hemophilia A but Factor VIII concentrate preferred. One unit yields 100-350 mg of fibrinogen.	ABO grouping may be disregarded; product has negligible amounts of plasma	Filter - standard blood filter Preferred needle gauge - 18-22 Rate - TKO x 15 minutes, then as fast as tolerated (5-10 mL/min) Volume - 10 mL/bag; volume is recorded on each bag. The usual adult dose is ten (10) units or approximately 100 mL.	Maximum patient benefit if used within 2 hours; usual starting dose for hypofibrinogenemia is 10 units
Factor VIII Antihemophilic factor(AHF) Von Willibrand factor (Humate P)	Freeze dried factor VIII	Factor VIII deficiency (hemophilia A); some products can be used in von Willebrand's disease	Not required	Filter –none required, filtered during preparation by pharmacy; follow package instructions to reconstitute at room temperature. 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. Slowly infuse the solution (max rate 4mL/Min) with suitable intravenous set. Preferred needle gauge - 22-24 Volume - 10-30 mL	Product is obtained from Pharmacy; each bottle of AHF is labeled with activity expressed in international units. There is a risk of transmission of infectious disease

ORDERED COMPONENT	PREPARATION AND COMPOSITION	INDICATIONS FOR USE	ABO-RH COMPATIBILITY	ADMINISTRATION	SPECIAL CONSIDERATIONS
Factor IX Recombinant coagulation factor IX (Benefit)	Freeze dried concentrations of factor IX	Factor IX deficiency (hemophilia B), also known as Christmas disease	Not required	Filter - none required, filtered during preparation by pharmacy. For IV use only. Visually inspect for particulate matter or discoloration prior to administration. Administer using tubing provided. Adjust the rate of administration based on the patient's comfort level. Preferred needle gauge - 20-24 Volume - 10-30 mL	Product is obtained from Pharmacy; 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	Plasma proteins available in 5% or 25%	Hypovolemic shock associated with or without acute blood loss; cerebral edema; cardiopulmonary bypass	Not applicable	Filter – Some products may require filtration; refer to package insert. 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. Once the transfusion is started it must be completed within 4 hours. Preferred needle gauge - 18-24 age and patient dependent. Rate - dependent on product, concentration and patient's condition; see package insert. Do NOT hang longer than 4 hours. Volume - 25% NSA, 50 and 100 mL; 5% NSA, 250 and 500 mL; 5% PPF, 250 and 500 mL	Product is obtained from Pharmacy There is a risk of infectious disease transmission

ORDERED COMPONENT	PREPARATION AND COMPOSITION	INDICATIONS FOR USE	ABO-RH COMPATIBILITY	ADMINISTRATION	SPECIAL CONSIDERATIONS
Irradiated blood products: RBCs, RBCs (leukodepleted and washed), platelets	Irradiated at a dose of 25 Gy (2,500 rads)	Congenital immunodeficiency states: severe combined immunodeficiency syndrome, thymic hypoplasia, Wiskott-Aldrich syndrome, Lenier's disease, 5' Nucleotidase deficiency Infants less than 4 months old: Neonatal transfusions, intrauterine transfusions, exchange transfusions, cardiac surgery (except ECMO) Acquired immunodeficiency states: ANC < 500 (any reason), highly immunosuppressive chemo, BMT (mobilization chemotherapy to 100 days post-transplant, then check with physician) Other: directed donor products from relatives, any HLA matched platelet product	Product specific; see packed red cells or platelet concentrates	Product specific; see packed red cells or platelet apheresis administration	Crossmatch compatibility and HLA match take preference over ABO and RH for platelets

PEDIATRIC TRANSFUSION GUIDELINES

ORDERED COMPONENT	PREPARATION AND COMPOSITION	INDICATIONS FOR USE	ABO-RH COMPATIBILITY	ADMINISTRATION	SPECIAL CONSIDERATIONS
Packed red cells (RBCs) leukocyte reduced	RBCs, WBCs (negligible), platelets and plasma (minimal)	Increase red cell mass and oxygen carrying capacity; generally indicated when Hgb is 8 gm or Hct 24 Decrease risk for alloimmunization to leukocyte or HLA antigens and CMV transmission; reduce incidence of febrile transfusion reactions.	<u>Recipient Donor</u> O O A A, O AB AB, A, B, O B B, O Rh+ Rh+, Rh- Rh- Rh- In some cases, Rh+ blood can be given to Rh- recipients	Filter - standard pediatric blood filter Preferred needle gauge - 18-24 age and patient dependent. Rate - TKO x 15 minutes, then infuse remaining volume over 1 to 2 hours, or as ordered. Transfusion time is approximately 2-5 mL/Kg hr for children Do NOT hang longer than 4 hours. Volume - as ordered. Maximum dose for single transfusion is 15 mL/Kg	All pediatric packs of RBCs are pre-storage leukodepleted so leukofilter is not required for transfusion Each mL/Kg given should increase the hematocrit by 1% or 10mL/Kg should raise the Hgb 3g/dL
Red blood cells-washed	RBCs, minimal WBCs, no plasma, no platelets	Same as RBCs plus decrease risk for alloimmunization to leukocyte or HLA antigens; reduce incidence of urticarial and anaphylactic reactions to plasma proteins; only ordered when reactions not controllable with meds and leukodepleted products	Same as RBCs	Same as RBCs	Expiration time of unit is 24 hours after saline washing; Hct of product is 70-80%; contains viable lymphocytes and can induce GVHD

ORDERED COMPONENT	PREPARATION AND COMPOSITION	INDICATIONS FOR USE	ABO-RH COMPATIBILITY	ADMINISTRATION	SPECIAL CONSIDERATIONS
Autologous blood	RBCs, WBCs, and plasma; patient has donated own blood prior to surgical procedure	Increase red cell mass and oxygen carrying capacity	Complete ABO-Rh compatibility since blood was donated by patient prior to procedure	Filter - standard pediatric blood filter Preferred needle gauge - 18-24 age and patient dependent. Rate - TKO x 15 minutes, then infuse remaining volume over 1 to 2 hours, or as ordered. Do NOT hang longer than 4 hours. Volume - as ordered	Same as RBCs; 2-hour reinfusion is OK unless patient is volume sensitive
Plasma: Fresh frozen plasma (FFP), frozen plasma (FP)	Plasma, with clotting factors	Hemorrhagic condition associated with a clotting factor deficiency; with (PT ≥18, INR > 1.5, or PTT ≥ 60) reverse excessive anticoagulant therapy; bleeding complications due to liver disease	<u>Recipient Donor</u> O O, A, B, AB A A, AB B B, AB AB AB	Filter - standard pediatric blood filter Preferred needle gauge - 18-24 age and patient dependent. Rate - TKO x 15 minutes, then as fast as tolerated (5-10 mL/min). Do NOT hang longer than 4 hours. Volume - actual volume is printed on product bag.	Expiration time of product is 24 hours after thawing if used for Factor VIII replacement; must be used within 5 days of thawing for other indications Dose is determined based on laboratory assays of coagulation function

ORDERED COMPONENT	PREPARATION AND COMPOSITION	INDICATIONS FOR USE	ABO-RH COMPATIBILITY	ADMINISTRATION	SPECIAL CONSIDERATIONS
Platelet apheresis	Platelets, plasma, small numbers of RBCs and WBCs	To control or prevent bleeding associated with deficiencies in platelet number (count < 5,000 - 10,000 chronic, < 50,000 preop) or function; 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 used if not grossly contaminated with red cells. RH factor is significant only when platelets from Rh+ donor are used in a Rh- female of childbearing age (≤50 years)	Filter - standard pediatric blood filter or leukocyte reduction filter (per physician order) Preferred needle gauge - 18-24 age and patient dependent Rate - TKO x 15 minutes, then remaining volume within 20-30 minutes (5-10 mL/min) Volume - as ordered	Prophylactic pre-transfusion medications (e.g., antihistamine and/or acetaminophen) may be given to decrease incidence of chills, fever and allergic reactions; repeated transfusions may lead to alloimmunization to HLA and other antigens and result in development of a refractory state manifested by unresponsiveness to platelet transfusion; expect *an increase in platelet count from 20,000 - 30,000 per pheresis unit*
Platelets HLA-matched	Same as apheresis platelets but with some donor HLA antigen in common with recipient; product is tissue matched	Same as random-donor platelets; used for patients unresponsive to random donor platelet concentrates because of HLA alloimmunization; used for patients who have had transplant within last year or are scheduled for future transplant	Same as platelet apheresis concentrates	Same as platelet apheresis concentrates	Prophylactic pre-transfusion medications may be given; advance scheduling to obtain HLA-matched platelets is required; plateletapheresis products expire five days after collection; HLA typing should be drawn before immunosuppressive therapy is started; all HLA matched platelets must be irradiated

ORDERED COMPONENT	PREPARATION AND COMPOSITION	INDICATIONS FOR USE	ABO-RH COMPATIBILITY	ADMINISTRATION	SPECIAL CONSIDERATIONS
Platelets crossmatched	Same as apheresis platelets but crossmatched with patient's serum	Same as random donor platelets but used for patients who are unresponsive to random donor apheresis or HLA matched platelet products; platelet antibody screen is positive	Same as platelet apheresis concentrates	Same as platelet apheresis concentrates	Advanced scheduling required - 24 hours to process and test product; compatible products not always available; HLA antibody and platelet antibody screens should be done prior to transfusion; new clot tube specimen required for each order
Cryoprecipitate (AHF)	Factor VIII, von Willebrand's factor, factor XIII, fibrinogen; product is frozen	Treatment of hypofibrinogenemia (fibrinogen < 100 mg/dl) and Von Willebrand's disease; may be used in hemophilia A but Factor VIII concentrate preferred	ABO grouping may be disregarded; product has negligible amounts of plasma	Filter - standard pediatric blood filter Preferred needle gauge - 18-24 age and patient dependent Rate - TKO x 15 minutes, then as fast as tolerated (5-10 mL/min) Volume - as ordered; preparations are reconstituted with NS; total volume is recorded on bag	Cryoprecipitate is stored frozen and must be thawed prior to use; maximum patient benefit if used within 2 hours; one unit (bag) yields a minimum of 80 units of Factor VIII and 100-350 mg of fibrinogen

ORDERED COMPONENT	PREPARATION AND COMPOSITION	INDICATIONS FOR USE	ABO-RH COMPATIBILITY	ADMINISTRATION	SPECIAL CONSIDERATIONS
Factor VIII Antihemophilic Factor (AHF) Von Willibrand Factor (Humate P)	Freeze dried factor VIII	Factor VIII deficiency (hemophilia A); some of newer concentrates can be used in von Willebrand's disease; prepared from pooled plasma, heat treated	Not required	Filter - filtered during preparation; follow package instructions to reconstitute at room temperature. Use plastic disposable syringes, as proteins adhere to glass. Visually inspect for particulate matter or discoloration prior to administration. Administer within 3 hours of reconstitution. Slowly infuse the solution (max rate 4 mL/min) with suitable intravenous administration set. Preferred needle gauge - 22-24 Volume - 10-30 mL	Product is obtained from Pharmacy; each bottle of AHF is labeled with activity expressed in international units There is a risk of infectious disease transmission 1 Unit/Kg of Factor VIII should increase plasma Factor VIII level 2 %
Factor IX Recombinant coagulation factor IX (Benefit)	Freeze dried concentrations of factor IX	Factor IX deficiency (hemophilia B), also known as Christmas disease	Not required	Filter - none required, filtered during preparation by pharmacy. For IV use only. Visually inspect for particulate matter or discoloration prior to administration. Administer using tubing provided. Adjust the rate of administration based on the patient's comfort level. Preferred needle gauge - 20-24 Volume -10-30 mL	Product is obtained from Pharmacy; 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 unit/Kg of Factor IX should increase plasma Factor IX level 1%.

ORDERED COMPONENT	PREPARATION AND COMPOSITION	INDICATIONS FOR USE	ABO-RH COMPATIBILITY	ADMINISTRATION	SPECIAL CONSIDERATIONS
Normal serum albumin (NSA) 25% and 5% and plasma protein fraction (PPF) 5% Albumin	Plasma proteins available in 5% or 25%	Hypovolemic shock associated with or without acute blood loss; cerebral edema; cardiopulmonary bypass	Not applicable	Filter - Some products may require filtration; refer to package insert. 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. Once the transfusion is started it must be completed within 4 hours. Preferred needle gauge - 18-24 age and patient dependent 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 hang longer than 4 hours. Volume - 25% NSA, 50 and 100 mL; 5% NSA, 250 and 500 mL; 5% PPF, 250 and 500 mL. Peds: 1g/kg = 20 mL/Kg (5% sol.) or 4 mL/Kg (25% sol.)	Product is obtained from Pharmacy There is a risk of infectious disease transmission

ORDERED COMPONENT	PREPARATION AND COMPOSITION	INDICATIONS FOR USE	ABO-RH COMPATIBILITY	ADMINISTRATION	SPECIAL CONSIDERATIONS
Irradiated blood products: RBCs, RBCs (leukodepleted and washed), platelets	Irradiated at a dose of 25 Gy (2,500 rads)	Congenital immunodeficiency states: severe combined immunodeficiency syndrome, thymic hypoplasia, Wiskott-Aldrich syndrome, Lenier's disease, 5' Nucleotidase deficiency Infants less than 4 months old: Neonatal transfusions, intrauterine transfusions, exchange transfusions, cardiac surgery (except ECMO) Acquired immunodeficiency states: ANC < 500 (any reason), highly immunosuppressive chemo, BMT (mobilization chemotherapy to 100 days post-transplant, then check with physician) Other: directed donor products from relatives, any HLA matched platelet product	Product specific; see packed red cells or platelet concentrates	Product specific; see packed red cells or platelet pheresis administration	Crossmatch compatibility and HLA match take preference over ABO and RH for platelets

Granulocytes (WBCs)	Will be irradiated, usually contain some RBCs (product will look red)	Granulocyte count below 500μl/mL, failure of antibiotic resolution of bacterial sepsis, fever for 24-48 hours unresponsive to appropriate antibiotic therapy	Same as for RBCs since the transfusion will have RBCs Product must be crossmatched	Will be given on several consecutive days to raise WBC count. Do not use leukopore or microaggregate filter Use standard 170 - 260 micron blood filter Resuspend cells every 30 minutes during transfusion	High risk for transfusion reaction. Patient can have a severe transfusion reaction to any WBC transfusion, not just the first transfusion Shelf life of WBCs after donor collection is 24 hours Prophylactic pre-transfusion medications (antihistamine and/or acetaminophen) may be given to decrease the incidence of allergic reactions Aburetrol should be used when transfusing WBCs if blood transfusion tubing is not compatible with infusion pump Patient should be in an intensive care setting. VS to include T, P, R, and BP should be taken before the transfusion, every 15 minutes during the transfusion and at completion of the transfusion Separate administration of WBC and amphotericn B by at least 6 hours from the completion of one product to the start of the second product

NEONATAL TRANSFUSION GUIDELINES

ORDERED COMPONENT	PREPARATION AND COMPOSITION	INDICATIONS FOR USE	ABO-RH COMPATIBILITY	ADMINISTRATION	SPECIAL CONSIDERATIONS
Packed red cells (RBCs) leukocyte reduced	RBCs, WBCs (negligible), platelets and plasma (minimal) NeoRBC28 is leukoreduced, irradiated blood product > 5 days < 28 days	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/hematocrit < 10 g/dl or 30% a. significant apnea b. poor weight gain 3. Hemoglobin/hematocrit < 8 g/dl or 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, O AB — AB, A, B, B — B, O Rh+ — Rh+, Rh- Rh- — Rh-	Filter --If packaged in a syringe, blood product has been filtered by blood bank Preferred needle gauge – 24 - 26 gauge and patient dependent Rate - Infuse volume over 2 to 4 hours, or as ordered. Start rate at slowest rate possible for first 15 minutes and then increase rate Volume – 10-15 mL/kg or as ordered	All packs of RBCs for neonates are pre-leukodepleted so leukofilter is not required for transfusion. Standard filter is still required if the product has not been filtered by blood bank
Red blood cells-washed	RBCs, minimal WBCs, no plasma, no platelets	Decrease risk for alloimmunization to leukocyte or HLA antigens; ECMO circuit priming; rarely for hyperkalemic patient	Same as RBCs	Same as RBCs	Expiration time is 24 hours after saline wash. Contains viable lymphocytes and can induce GVHD

ORDERED COMPONENT	PREPARATION AND COMPOSITION	INDICATIONS FOR USE	ABO-RH COMPATIBILITY		ADMINISTRATION	SPECIAL CONSIDERATIONS
Plasma: Fresh frozen plasma (FFP)	Plasma, with clotting factors	1. PT INR > 1.5, aPTT>60seconds, 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, protein S deficiency, or ATIII deficiency if purified concentrate not available 6. Initial stabilization on ECMO circuit	Recipient O A B AB	Donor O, A, B, AB A, AB B, AB AB	Filter - standard pediatric blood filter Preferred needle gauge - 24 – 26 gauge and patient dependent Rate - Infuse volume over 30 min.-2 hours dependent on patient's status. (Usual rates as ordered: 5 mL/Kg/hr or 2 mL/Kg /hr for cardiac dysfunction & severe anemia). May be pushed in certain circumstances Volume – 10-15 mL/kg every 12-24 hrs as indicated	Expiration time of product is 24 hours after thawing if used for Factor VIII replacement; must be used within 5 days of thawing for other indications. Usual starting dose is 10 - 15 mL/Kg (raises the overall level of clotting factor activity by 20 - 30 %)
			Group AB is preferred for all neonates			

ORDERED COMPONENT	PREPARATION AND COMPOSITION	INDICATIONS FOR USE	ABO-RH COMPATIBILITY	ADMINISTRATION	SPECIAL CONSIDERATIONS
Platelet apheresis	Platelets, plasma, small numbers of RBCs and WBCs NeoPlt is Leukoreduced, CMV negative, irradiated	Infants <=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>=37 weeks: 1. <100,000/ul with active bleeding 2. <50,000/ul with need for invasive procedure 3. <20,000/ul in non-bleeding patient with failure of platelet production and risk factors such as coagulopathy, sepsis, fever,etc. 4. <20,000 in non-bleeding patient 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	ABO compatible products will be used	Filter -If packaged in a syringe, blood product has been filtered by blood bank Preferred needle gauge - 24 – 26 gauge and patient dependent Rate – Infuse volume within - 30-60 minutes Volume – 10-15 mL/ kg or as ordered	Prophylactic pre-transfusion medications may be given

ORDERED COMPONENT	PREPARATION AND COMPOSITION	INDICATIONS FOR USE	ABO-RH COMPATIBILITY	ADMINISTRATION	SPECIAL CONSIDERATIONS
Cryoprecipitate (AHF)	Factor VIII, von Willebrand's factor, factor XIII, fibrinogen; product is frozen	1. Hypofibrinogenemia (fibrinogen < 100 mg/dl) and: a. active bleeding b. anticipated surgery or major invasive procedure 2. Factor XIII deficiency 3. Uremia with bleeding unresponsive to non-transfusion therapy 4. Fibrin glue 5. Active bleeding and Hemophilia A or vWD when purified factor concentrates not available	Group AB is used for all neonates	Filter - standard pediatric blood filter If packaged in a syringe, blood product has been filtered by blood bank Preferred needle gauge – 24 - 26 gauge and patient dependent Rate - may be given IV push or infuse volume over 1 hour Volume - order 1/3 unit for < 1.0 Kg infants; 1/2 unit for 1.5 kg, 1 unit for Term ECMO patient	Cryoprecipitate is stored frozen and must be thawed prior to use; maximum patient benefit if used within 2 hours; one unit = 8-12mL total. Yields a minimum of 80 units of Factor VIII and mg of 100-350 mg of fibrinogen
Granulocytes Refer to Pediatric Transfusion Guidelines					
Normal serum albumin (NSA) 25% and 5% and plasma protein fraction (PPF) 5% Albumin	Plasma proteins available in 5% or 25%	1. Hypoalbunemia 2. Cardiopulmonary bypass (ECMO) 3. No clinical benefit of using albumin over saline for hypovolemia	Not applicable	Filter - Some products may require filtration; refer to package insert. 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. Once the transfusion is started it must be completed within 4 hours Preferred needle gauge - 24 – 26 gauge age and patient dependent Replacement volume is 10-20mL/kg/dose	Product is obtained from Pharmacy There is a risk of infectious disease transmission