Sutter Health
Sutter Roseville Medical Center

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Owner:	*Nadera Poirier: Spvr, Transfusion Services*
Policy Area:	*Lab - Transfusion Service*
References:	
Applicability:	*Sutter Roseville Medical Center*

Selecting Blood and Components for Transfusion TS.NON 11.15-RV

Selecting Blood and Components for Transfusion

Purpose	This procedure describes guidelines for selecting compatible blood types that are acceptable for transfusion.
Policy	• ABO group-specific whole blood and ABO compatible red blood cell components will be provided • FFP/Plasma component type selected must be compatible with patient plasma • Patient ABO type will be confirmed on each admission or every 3 months for OP transfusions • An exception is made to support an adult during MTP: Up to 4 units of "A" plasma or irradiated liquid plasma within a 24 hr period may be substituted for AB plasma. • Platelets will be plasma compatible unless approved by ordering physician. • No more than 2 plasma incompatible platelets will be transfused to an adult within a 24 hrs period • Infants must receive only plasma compatible platelets • Type O red blood cells will be transfused when • specimens are determined unacceptable or incomplete • discrepant blood type results are determined • blood is needed before ABO testing is completed on current sample
	• When clinically significant unexpected antibody (ies) are found or a patient has a past history of such antibodies, whole blood or red blood cells must meet the specifications outlined in the Clinically Significant Antibody Policy in regards to being tested for the antigen to the corresponding antibody.
	• During Massive Transfusion protocol or during times of blood shortage, Rh positive blood may be substituted for Rh negative female patients greater than 50 years of age or male recipients. • If Rh positive red cell or platelet products MUST be used for a female patient less than 50 years old, the attending physician will be consulted to determine if the patient should

	receive Rh Immune globulin to prevent sensitization to the D antigen. • The following patients will be given Sickle Cell negative blood, whenever possible: • Patients undergoing exchange or intrauterine transfusion • Patients whose Sickle Cell disease state has been communicated to the Transfusion Service _____

Procedure	Follow the steps in the table below to perform this procedure.

Step	**Action**
	Perform the unit type confirmation of all red cell components prior to allocation.
	If the component to be transfused contains 2 ml or more of red cells, the donor's red cells must be ABO compatible with the recipient's plasma and a crossmatch must be performed.

Related Documents	• Issue Uncrossmatched Blood • Performing a Confirmation Test on a Donor Unit • Switching RBC Unit Type following Transfusion of ABO compatible RBCs
Attachments	A. Selecting Blood and Components for Adults or Pediatric patients B. Selecting Blood and Components for Infants (less than 4 months old) C. Special Need Recommendations (CMV, Irradiation, Leukoreduction)

Attachment A **Selecting Blood and Components for Adults or Pediatric patients**

COMPONENT	**RECIPIENT ABO GROUP**	**ACCEPTABLE ALTERNATIVE**	**COMMENTS**
Whole Blood	O	None	Must be identical to the patient's ABO group
	A	None	
	B	None	
	AB	None	
Red Blood Cells, Granulocytes	O	None	Must be compatible with the recipient's plasma
	A	O	
	B	O	
	AB	A,B or O	
Plasma	O	A, or B, or AB	
	A	AB	
	B	AB	
	AB	None	
Cryoprecipitate	O,A,B,AB	O,A,B,AB	Components plasma compatible

				with the recipient's red cells are preferred
Platelets		**Compatible**	**Incompatible**	OK to substitute plasma compatible products. Need Dr. OK for plasma incompatible products. Incompatible not to exceed 2 PP in 24 hr period
	O	A,B,AB	NA	
	A	AB	B, O	
	B	AB	A, O	
	AB	None	A, B or O	
	RECIPIENT RH TYPE			
Red Cells	Positive or Rh weak D with molecular genotype class I-3 Receives Rh positive	Negative		
	Negative or Rh weak D with molecular genotype other than class 1-3 Receives Rh negative	None*		***For male or female greater than 50 y/o :** Substitute Rh Pos during MT protocol or inventory shortage. If non MT protocol patient has used more than 4 units within 8 hrs, consult with pathologist regarding switch to Rh Pos
Plasma, Cryoprecipitate	Positive or Negative	No consideration of RH		
Platelets	Positive	No consideration of RH		
	Negative	No consideration of RH except where the patient is female and less than 50 years old, then Rh Negative is preferred.		

Attachment B	**Selecting Blood and Components for Infants (less than 4 months old)**		
COMPONENT	**RECIPIENT ABO GROUP**	**ACCEPTABLE ALTERNATIVE**	**COMMENTS**
Red Blood Cells, Granulocytes	O,A,B,AB	O	"O" CPDA unit, CMV Neg, less than 7 days from Irradiation Type compatible given if directed donor
Plasma, Cryoprecipitate	O,A,B,AB	AB	AB preferred
Platelets	O	A,B,AB	Compatible with infant's plasma.

	A	AB	
	B	AB	
	AB	None	
Whole Blood	O	None	Must be identical to the patient's ABO group.
	A	None	
	B	None	
	AB	None	
	RECIPIENT RH TYPE		
Red Cells	Positive	Negative	Rh Negative preferred
	Negative	None	
Plasma, Platelets, Cryoprecipitate	Positive or Negative	No consideration of RH	
Additional Requirements for Infants:			
If		Then	
Intrauterine or Exchange Transfusion		CMV Negative Sickledex Negative Irradiated	

Attachment C *Indications for Special Components*

Diagnosis/Condition	CMV neg	Irradiated	Leukoreduced
Pre-/post bone marrow (or progenitor cell or cord blood) transplant - allogeneic	R- Only if patient is CMV negative	R	R
Pre-/post bone marrow (or progenitor cell or cord blood) transplant- autologous	PO- Only if patient is CMV negative	R	R
Hematologic/solid malignancy other than Hodgkin's disease (with no plans to receive allogeneic or autologous transplant)	PO- Only if patient is CMV negative	PO	PO
Hodgkin's disease	PO- Only if patient is CMV negative	R	PO
Low birth weight neonate (<1200 grams)	R- If mom is CMV neg	R	NI
Neonatal exchange (near normal weight)	NI	R	NI
Intrauterine fetal transfusion	R-Regardless of mom's serology	R	NI

Pregnancy	R-Only if patient is CMV neg	NI	NI
Congenital immunodeficiency	R-Only if patient is CMV neg	R	NI
Pre/post solid organ transplant	R-Only if patient is CMV neg	R	PO* Recommended for kidney and heart transplants
HIV infection/AIDS	R-Only if patient is CMV neg	PO	NI
Thalassemia, sickle cell anemia, PNH	NI	NI	PO
History of >2 febrile, nonhemolytic transfusion reactions	N/A	N/A	R
Related or HLA-matched blood donor	N/A	R	N/A
Recipients who are heterozygous at an HLA haplotype for which the donor is homozygous	N/A	R	N/A
Use of fludarabine and 2-CDA (two chemotherapeutic agents used in the treatment of lymphoma)	N/A	R	N/A

Legend

Abbreviation/ Symbol	Meaning
R	Recommended
NI	Not indicated
PO	Physician's orders (i.e., may be done at request of physician; however, not strictly required)

All revision dates:

Attachments

No Attachments

Approval Signatures

Step Description	Approver	Date
Laboratory Director	Lindsey Westerbeck: Dir, Lab	pending