**Purpose**: To describe the ABO/Rh selection of platelets, plasma and cryoprecipitate at Harborview Medical Center (HMC) including alternative selections when ABO/Rh identical products are unable to be transfused due to inventory management issues.

**Policy:**

|  |  |  |
| --- | --- | --- |
|  | **General Statements** | **Related Documents** |
| 1 | * When inventory allows, ABO/Rh typed patients shall receive ABO identical platelets and ABO identical plasma.
 |  |
| **Platelets** |  |
| 2 | * Platelets can be given without reference to a patient’s Rh type, ***except*** *to neonates and infants < 4 months of age*.
* See Table 1.
 |  |
| 3 | * Patients without an ABO/Rh type from their current HMC encounter, and patients who do not have a total of 2 serologic ABO/Rh type results from 2 separate collections over all HMC encounters shall receive universal donor platelets: i.e.
* Group B, A or AB platelets if ≥ 4 months of age
* Group AB platelets if < 4 months of age
* If these ABO types are not available, please notify Transfusion Services (TS) Medical Director or Resident/Covering Physician for direction and approval of another ABO type.
* ABO compatible platelets can be given in cases where ABO testing has been performed in the current HMC encounter AND a second ABO has been tested on a separate collection.
 |  |
| 4 | * Group A, B and AB neonates and infants < 4 months of age shall receive ABO identical or group AB platelets. If these are not available, Transfusion Services Medical Director or Resident/Covering Physician approval is required to release other ABO groups
* Group O Neonates and Infants < 4 months of age may receive platelets of any ABO type
 |  |
| 5 | * Whenever ABO identical platelets are not available, alternative selections will be made in the order stated on the Alternative ABO Selections for Platelets Table (table 1)
 |  |
| 6 | * **Specially selected platelets** such as HLA-matched, crossmatch compatible, or HLA or HPA antigen negative will be provided based on medical director approval for patients who have been demonstrated to be refractory.
 |  |
|  | **General Statements** | **Related Documents** |
| 7 | * **Leukoreduced Platelets** will be routinely provided for:
* Neonates & Infants < 4 months age
* Pregnant females
* HIV positive patients
* Chronically transfused patients
* e.g. sickle cell disease, thalassemia
* Patient’s with hematologic malignancies
* e.g. leukemia, lymphoma, Hodgkin’s disease
* Hematopoietic progenitor cell (HPC)/”bone marrow” transplant candidates & recipients
* Solid organ transplant candidates & recipients
* e.g. kidney, liver, heart, lung transplants
* Patients with bone marrow failure
	+ e.g. severe aplastic anemia
		- Patient’s with congenital immunodeficiencies
* Patients on cardiac bypass (until 24 hours post op)
* Patients on intra-aortic balloon pumps, LVAD, artificial hearts, awaiting cardiac transplant.
* Intrauterine transfusion
 |  |
| 8 | * **Irradiated Platelets** will be routinely provided for:
	+ Neonates & Infants < 4 months age
* Patient’s with hematologic malignancies
* e.g. leukemia, lymphoma, Hodgkin’s disease
	+ Patients receiving fludarabine or other high dose chemotherapy
* Hematopoietic progenitor cell (HPC)/”bone marrow”/”stem cell” transplant candidates & recipients
* Patient’s with cellular immunodeficiencies
* e.g. SCID, Di George syndrome
* Recipients of HLA matched platelets & blood products
* Directed donor RBCs and Platelets
* e.g. parent, sibling, child, family friend donated unit
 |  |
| **Thawed Plasma** |  |
| 9 | * + - * Rh type is not a consideration in the selection of plasma units, therefore all patients may receive plasma of any Rh type
 |  |
| 10 | * + - * Neonates/Infants < 4 months/age shall ONLY receive ABO identical or group AB plasma
			* If this is not available, Transfusion Services Medical Director or Covering Attending physician approval is required to release other ABO groups
			* ABO compatible plasma can be given in cases where ABO testing has been performed in the current HMC encounter AND a second ABO has been tested on a separate collection.
 |  |
| 11 | * + - * For other patients, whenever group AB/ABO identical or ABO compatible plasma is not available, alternative selections may be made in the order stated on the Alternative ABO Selections for Plasma Table (table 2) ONLY with Medical Director or Covering Attending Physician Approval
 |  |
| 12 | * + - * Group A, B and AB patients shall not receive group O plasma
 |  |
| **Cryoprecipitate** |  |
| 13 | * + - * ABO/Rh type is not a consideration in selection of cryoprecipitate (cryo) in patients ≥ 4 months of age and any ABO/Rh type may be provided
			* In patients < 4 months age, group AB or ABO identical cryo should be provided. If not available and emergency transfusion required before this can be delivered by the blood supplier, contact TS physician for approval of a different ABO type. The Rh type is not a consideration
			* ABO compatible cryoprecipitate can be given in cases where ABO testing has been performed in the current HMC encounter AND a second ABO has been tested on a separate collection.
 |  |

**Table 1: Alternative ABO Selections for Platelets:\***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Recipient ABO** | **1st Choice** | **2nd Choice** | **3rd Choice** | **4th Choice** |
| **Unknown** | AB | A | B | O++ |
| **O** | O | B | AB | A |
| **A** | A | AB | B | O |
| **B** | B | AB | A | O |
| **AB** | AB | A | B | O |

 \* Neonates and infants < 4 months of age shall receive only Rh compatible, ABO identical or group AB platelets unless TS Physician approval obtained

++ Requires Medical Director approval

**Table 2:** **Alternative ABO/Rh Selections for Plasma:\***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Recipient ABO** | **1st Choice** | **2nd Choice** | **3rd Choice** | **4th Choice** |
| **Unknown** | AB | Medical Director approval required to issue group A, B or O |
| O | O | A | B | AB |
| A\* | A | AB | B\* | - |
| B\* | B | AB | A\* | - |
| AB\* | AB | A\* | B\* | - |

\* Neonates and Infants < 4 months of age shall only receive ABO identical or group AB plasma unless TS Medical Director or Covering Attending Physician approval obtained.

\* Medical Director or approval required to issue ABO incompatible plasma to patients > 4 months of age.

**References:**

Standards for Blood Banks and Transfusion Services, Current Edition, Bethesda, MD: American Association of Blood Banks.

Technical Manual, 16th Edition, J Roback (ed). 2008. AABB Press, Bethesda, MD.