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| **Exchange Transfusions, Patients > 1 Year** | | | | | | | |
| **Purpose** | This process describes the blood product selection and preparation used in exchange transfusion procedures for patient’s greater than one year old.  Exchange transfusion on patient’s over one year old are typically performed by therapeutic apheresis with the goal of removing the pathologic element-such as plasma proteins, red cells or leukocytes, from the blood. | | | | | | |
| **Policy Statements** | * Leukocyte reduced red cells shall be ≤ 5 days old. * ABO/Rh compatible RBCs shall be selected * ABO compatible plasma shall be selected. * Follow all special instructions in the patient’s BAD file for the selection/preparation of the units. * ABOi heart transplant patients need adsol removed RBCs for heart transplant surgery | | | | | | |
| **Process** |  | | | | | | |
|  | Activity | | | Key Considerations | | | Related Document |
|  | 1 | Review patient order history in function BOP. | | * Confirm the patient has a current Type &   Screen.   * Contact the patient caregiver and request   appropriate pre-transfusion testing if needed.   * Record the patient’s ABO/Rh, antibodies,   attributes, problems, and pertinent comments  on the patient’sTyas order.  Record the accession number on the order. | | | [TS 5.2 Blood Order Processing](http://khan.childrensmn.org/Manuals/Lab/SOP/TS/SpecRR/202247.pdf) |
|  | 2 | Determine compatibility testing requirements | | |  |  | | --- | --- | | **Antibody history of:** | **Then provide:** | | No clinically significant antibodies | Electronic crossmatched units | | Clincially significant antibody(s) | Units that are antigen negative that are compatible by AHG crossmatch. | | Unresolved positive antibody screen | Units that are compatible by AHG crossmatch. | | | |  |
| Final volume of RBCs should equal the provider’s requested volume plus an additional 75-100 mL for tubing and blood warmer volume | 3 | Review inventory for product availability meeting selection criteria. | | * Order products STAT from blood center as   needed.   * Notify provider of anticipated delays * Contact transfusion medicine specialist if needing assistance in   the selection of products. | | |  |
| 4 | Select the required number of RBCs units | | * Additive leukocyte reduced red cells * **Adsol removed for ABOi heart transplant surgery** * (≤ 5 days old) * ABO/Rh compatible * Crossmatched (See step 2). | | |  |
|  | 5 | Remove segments from RBCs for Hgb S testing if required. | | Only if known requirement in patient’s BAD file or if specified on the exchange orders. | | |  |
|  | 6 | Thaw FFP and cryoprecipitate per orders. | |  | | |  |
|  | 7 | Irradiate RBCs and platelets if required. | | Only if known requirement in patient’s BAD file or if specified on the exchange orders. | | |  |
|  | 8 | Complete Hgb S testing on RBC segments if required. | |  | | | [TS 7.16 Hgb S testing on Red Cell Products](http://khan.childrensmn.org/Manuals/Lab/SOP/TS/BPOrd/202476.pdf) |
|  | 9 | Allocate and tag products prepared for issue. | | * Follow Emergency Release Process if issue   of units requested prior to completion of  required pre-transfusion testing. | | | [TS 13.3 Allocating and Issuing of Blood Products for Emergency Release](http://khan.childrensmn.org/Manuals/Lab/SOP/TS/EmRel/202813.pdf) |
|  | 10 | Return products to proper storage pending issue. | | Notify patient caregiver when red cells and thawed plasma are ready. | | |  |
|  | 11 | Issue products | | * Issue multiple units in a cooler * May issue through pneumatic tube if   requested. | | | [TS 12.5 Issue of Products](http://khan.childrensmn.org/Manuals/Lab/SOP/TS/Alloc/202493.pdf) |
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| **Approval**  **Workflow** | Transfusion Service/Medical Director | | | | | | |
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| **Historical Record** | **Version** | | **Written/Revised by:** | | **Effective Date:** | **Summary of Revisions** | |
| 1 | | C Berglund | | 9/1985 | Initial Version | |
| 2 | | J Wenzel | | 9/1991 |  | |
| 3 | | J Wenzel | | 9/1994 |  | |
| 4 | | J Wenzel | | 12/1994 |  | |
| 5 | | J Wenzel | | 10/1995 |  | |
| 6 | | J Wenzel | | 9/1997 |  | |
| 7 | | J Wenzel | | 9/1999 | Merger, new to Mpls | |
| 8 | | J Wenzel | | 5/22/2001 |  | |
| 9 | | J Wenzel | | 6/25/2002 |  | |
| 10 | | J Wenzel | | 5/16/2003 | Hgb S negative for infants < 4 months | |
| 11 | | J Wenzel | | 1/22/2010 | New format replaces TS 11.6v10 | |
| 12 | | J Wenzel | | 4/10/2012 | CMS format | |
|  | 13 | | S. Cassidy | | 06/13/2022 | Updated for ABOi heart transplant | |