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Work Instruction

Title:	**TS-Plasma Transfusion**	**WI Number** SFOWI-0075 **Revision:** 13
Department: Immunohematology **Area:** 2425 Geary Blvd SFO Hospital Lab	***Document is in the Final Approval Process. 2 - approvals are required***	
Type of Document: Work Instruction		**Review Period -** 340 **Days**

PURPOSE

To provide instructions for processing requests of thawed plasma.

A. FFP contains plasma proteins including all coagulation factors. FFP contains functional amounts of coagulation factors V and VIII (Labile Coagulation Factors) and serves as a source for deficient or defective plasma proteins. These being indicated in the following conditions:
   1. Management of preoperative or bleeding patients who require replacement of multiple plasma coagulation factors.
   2. Patients with massive transfusion who have clinically significant coagulation abnormalities.
   3. Patients on coumadin who are bleeding or need to undergo an invasive procedure before Vitamin K could reverse the coumadin effect.
   4. Patients with thrombotic thrombocytopenic purpura (TTP).
   5. Management of patients with selected coagulation factor deficiencies for which no concentrates are available.
   6. Management of patients with rare specific plasma protein deficiencies, such as C-1 esterase.

B. Plasma Frozen within 24 hours of Phlebotomy
   1. Plasma components containing reduced amounts of labile coagulation factors V and VIII.
   2. Contain stable coagulation factors such as Factor IX and fibrinogen in concentrations similar to that of FFP.

C. Plasma Cryoprecipitate Reduced
   1. Deficient in Factor VIII, Factor XIII, von Willebrand factor (vWF), fibrinogen, cryoglobulins and fibronectin.
   2. Proteins such as albumin, ADAMTS13, Factors II, V, VII, IX, X and XI remain in the same concentration as in FFP.

D. 5 day thawed plasma
   1. FFP or frozen plasma thawed between 30-37 $^{\circ}$C stored between 1-6 $^{\circ}$C for up to 5 days.

2. It is similar to FFP but contains 15-40% lower Factors V and VIII.
3 Thawed plasma should not be used for patients with Factor V or VIII deficiency, or as sole replacement for DIC, or for congenital fibrinogen deficiency.

EQUIPMENT

A. ThermoGenesis MT-210 Plasma Thawer
B. ThermoGenesis MT-204 Plasma Thawer
C. Plastic bags

SPECIMEN and REQUISITION

A. Refer to Blood Bank Specimen and Requisition SOP.
B. Frozen plasma stored at -18°C or below.
C. Plasma requisition does not need to be signed, dated or timed unless it is accompanied by a specimen.
D. The appropriate KPHC order is the one with the heading 'Prepare Fresh Frozen Plasma'.
E. A manual Transfusion Service requisition is also acceptable if properly completed with information when KPHC is unavailable.

PROCEDURE:

A. **Selection of appropriate ABO group plasma for transfusion**
   1. Check the patient's **ABO/Rh** and **Special Needs** in the LIS.
      a. **Inpatients and ER patients:** Two ABORh are required with one of the ABORh performed within the **current** admission before plasma can be dispensed.
      b. **Outpatients:** Two ABORh are required before plasma can be dispensed.
      c. Refer to ***Unusual Product Request Policy*** for **quantity and Special Needs restrictions** prior to filling the order.
   2. Search for Auto/DD availability.
   3. Select a unit of plasma that is ABO compatible with the patient.
   4. Rh need not be considered for plasma transfusion because plasma does not contain red cells.
   5. CMV negative, irradiated, leukoreduced or red cell antigen negative need not be considered.

Patient's ABO	Plasma Donor Selection
O	O , A , B , AB
A	A , AB
B	B , AB
AB	AB

B. **Thaw frozen plasma**
   1. Start thawing frozen plasma only when a requisition is received, unless in urgent situations i.e. patient in surgery or bleeding profusely when phone request is acceptable, which must then be followed ASAP with a written order.
   2. Use any thawed plasma no longer needed by the original patient first before thawing any additional frozen plasma.
   3. Carefully remove the frozen product from the freezer.
   4. Examine for cracks, broken port or tubing and signs of thawing during freezing.
   5. Process frozen component to thawed plasma in the LIS. (See Computer SOP and section C below).

6. Place the frozen plasma into the plastic plasma thawing bag to prevent contamination of entry ports.
7. Thaw plasma in ThermoGenesis MT210 plasma thawer or ThermoGenesis MT204 plasma thawer.
8. Leave the frozen plasma in the plasma thawer for 15-20 minutes or until thawed.

C. **Product Modification in LIS**

1. Modify the frozen component to 5 day-thawed plasma (except for component collected in an opened system and pedi-FFP- see Note) and assign to patient. **Note:** Thawed cryopoor plasma collected in a closed system has 5 days expiration. Thawed plasma and cryopoor plasma collected in an opened system has 24 hours expiration. Thawed pedi-FFP has 24 hours expiration.
2. New ISBT face label will print for all thawed products. After unit is thawed, affix the printed ISBT face label (minus the unit#) over the original face label leaving the original unit# visible. Proceed to Label Verification. Unit that fails verification must not be dispensed until after problem is resolved.
3. Initial and date on the LIS generated Component Tag. Affix the Component Label to the back of the unit.
4. Affix one Prepare FFP Accession# aliquot label on the top right quadrant of each yellow chart copy.
5. Leave the Transfusion Service Component Report with the requisition in the tray on the front counter.

D. Place thawed plasma in 1-6 ^{o}C blood storage refrigerators according to blood group.

PROCEDURE NOTE(S)

A. If a unit of plasma breaks in the plasma thawer,
   1. Final dispose the unit in the LIS to 'Destroyed' status.
   2. Fill out the appropriate blood supplier form for credit.
B. If the thawed plasma is not used before the expiration time (or overtemp when returned), destroy unit in the LIS. Document in the Blood Product Wastage Access database.
C. Thaw pedi-FFP for neonates.

REFERENCE

A. AABB, Standards for Blood Banks and Transfusion Service, current edition, Bethesda, MD.
B. AABB Technical Manual, current edition, Bethesda, MD.

Associated Documents:

External Documents

Blood Supplier forms

Associated Documents:

SFOWI-0107 -- TS-Unusual Product Request Policy
SFOWI-0140 -- TQ - Computer Downtime
SFOWI-0105 -- TS-Neonatal Transfusion
SFOWI-0079 -- TS-Blood Bank Specimen and Requisition
SFOWI-0054 -- TS-Double Check

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Documents Generated:

Document Revision History:

Revision: 13	Date Created: 09/21/2005 Date of Last Revision: 05/01/2018	Last Approval Date: 09/09/2016

Document Author:	Document Manager:
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Reason for Change:

Revision:	Sec/Para Changed	Change Made:	Date
1	Approver	New Lab Director	01/01/07
2	Attached table	Change computer from LifeLine to RILIS	05/14/07
3	Approver	New Lab Director	07/01/07
4	Attached table	Add ISBT product codes	04/27/04
5	Purpose C	Clerical correction: Factor VIII to Factor VII	10/17/08
6	Procedure	Thawed cryopoor plasma expired in 24 hours if collected in opened system	5/30/10
7	Procedure A Procedure C Approver	Added new requirement: One of the two ABORh must be performed within the current admission. Modify plasma to 5 days expiration (except for opened system and pedi-FFP) and affix with new ISBT face label. Cross out the Supplier's FDA registration and license numbers. Change Lab Director.	5/22/11
8	Procedure Notes Procedure 1.a.b. Purpose	Deleted C. Changed 'units' to 'ABO group plasma'. Clarified requirements for inpatients, ER patients and outpatients. Updated information using current version of 'Circular of Information' and corrected spellings.	12/7/11
9	Approver	New Lab Director.	5/8/13
10	Approver Procedure C.2.	New BB Medical Director. Added instructions when unit fails verification.	8/27/13
11	Associated Documents Procedure A.1.c.	Added related SOPs and forms. Added reference to SFOWI-0107 for restrictions prior to filling order.	8/20/15
12	Approver	New CLIA Director.	9/8/16
13	Specimen & Requisition Procedure C.	Updated requisition requirements. Revised due to BPAM implementation on 3/20/18. ISBT face label will be auto generated for all thawed products requiring Label Verify. Prepare FFP Acc# aliquot label is to be affixed on the top right quadrant of each yellow chart copy.	3/13/18

Notification List:

Approvals:

First Approver's Signature

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Second Approver's Signature

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Document History Section