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Work Instruction

Title:	**TS-Dispensing Blood and Blood Components**	**WI Number** SFOWI-0111 **Revision:** 16
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

A systematic approach for dispensing blood and blood components is necessary to ensure that all required information has been checked and verified to be correct and identical before units leave the blood bank. This is also the final step for blood bank to verify that suitable units are selected for the intended recipient and a proper Transfusion Service Crossmatch/Component Report/Record is issued with each unit or pool unit. The carrier must be trained that proper handling of blood components is critical to guard against unnecessary delay in the transport of the unit and/or exposure of the unit to extreme temperature conditions.

CONTROLS

Check copies of Transfusion Service Crossmatch/Component Report against Batch Transfusion Report every morning. Reconcile discrepancies before posting units to transfused status.

PROCEDURE

A. **Acceptable Transporter and Pick-up forms**.

1. **Only authorized runners** (trained and competent in prompt delivery), unit assistants, nurses, physician assistants or doctors can pick up blood products.

2. It is the **responsibility of the licensed person to confirm patient's consent** before picking up blood product.

3. The following are **acceptable forms of Pick-Up**:
   - a) **Transfuse Pick-up Slip** printed from KPHC for routine transfusion
   - b) **Manual Blood Bank Product Pickup** form
     - i) when KPHC is unavailable
     - ii) from the OR
     - iii) from L&D OR
     - iv) for Emergency Release and MTP (Refer to respective SOPs for details)

4. The **Pick-Up forms must have t**he following required information:
   a) **Patient's full name** and **Medical Record number** (**MR#**)
   b) The **component** and **number** of units needed
   c) **Initials/Signature and/or NUID of licensed person**/perfusionist who completed the form
   d) **Inpatient KPHC Transfuse Pick-up Slip** should also include the **Blood Bank Communication.**

NOTE: ***In general, only one unit of blood product will be dispensed at a time unless in an emergency or if the patient has multiple lines. See Procedure Notes for other exceptions.***
Refer to Urgent requirements for Blood and Components SOP for emergency dispense.

B. **Locating and Selection of unit for Dispense.**

1. **CLS** first locates the Transfusion Service requisition and product chart copies for the appropriate blood product(s) indicated on the pick-up form.
   a. For RBCs, look for Crossmatch Report in the crossmatched slots.
   b. For platelets, FFP and cryoprecipitate, look for Component Reports on the tray in the front counter.
   c. For neonatal transfusion, look in the Baby TX slot.
   d. **Select Autologous first, Directed next and random units last.** Remove the Transfusion Service Crossmatch Report/Component Report with the shortest expiration date.
   e. Retrieve the matching unit from the refrigerator, platelet agitator or on the front counter.
   f. If the unit is an autologous or a designated unit, check the name and DOB on the unit tag against the pickup to ensure that it is the correct unit for the patient.

C. Visual inspection by a CLS.
1. Visually inspect the unit for abnormal signs such as **discoloration, hemolysis, bacterial growth, icterus and clots**.
2. Make sure that the **unique identification** affixed by the collecting or pooling facility is **not obscured, altered, or removed**.
3. Make sure there is **a temperature indicator attached** on the back of RBC units dispensed to OR or in cooler and the indicator is within 10^{0}C.
4. **Check** off the appropriate box for **visual inspection (the CLS will initial also if the dispense is being performed by a Lab Asst.)**.
5. If the unit **appears unsuitable for dispense**, **STOP** the dispense.
   a) Return the suspicious unit to blood supplier using Final Disposition  in LIS. Inform blood supplier of the unsuitable unit and its return. Fill out the appropriate blood supplier return form.
   b) Attach a note 'Do Not Use' on the unit and place it on the top shelf (labeled Return to Blood Supplier) of refrigerator #4.

D. **Computer Dispense.**

1. Selects Dispense mode in Dispense and Assign Products  module.

2. **Scan/enter the MR# from the pick-up form. Select the correct Encounter. Verify that the patient's name on the computer** screen is identical to the name on the pick-up form. **Review all information** displayed in this window:

Step	Action
a	Age and sex. **Be aware that Rh negative female patient 50 years old or younger should receive Rh negative cellular blood products.** If Rh-negative cellular blood products are not available, notify provider for approval before issuing Rh positive cellular products. Inform provider that RhIg administration is needed due to transfusion of Rh positive cellular products. **NOTE:** RhIg prophylaxis is not feasible for large volume transfusion of Rh positive RBC.
b	**Antibodies. Two blood types.**
c	**Blood bank comments.** If needed, click on  to enlarge and resize the comment field.
d	**Transfusion requirements. Note:** If patient requires Hgb-S negative, CMV negative, IRR or Antigen negative blood products, check attributes on unit face label and/or blood bank comments to make sure special requirements are honored.
e	**Any flag in 'Alerts' including Auto/DD units.**
f	Make sure there is **DBCK and a current TS (performed locally)** by clicking on  .

3. **Visually verify that the amount and the type of blood component** requested on the pick-up form match the unit(s) to be dispensed.
4. **Scan the Prepare Order Acc# that is affixed to the yellow product chart copy. NOTE:** For surgery, the Prepare Order Acc# is affixed to the original TYSC/TYXM requisition. **Skip this step for Emergency Release and MTP which are exempted from Prepare Order.**
5. Ensure that the Prepare Order matches the blood component to be dispensed e.g. Prepare RBC for RBC, Prepare FFP for FFP and etc.
6. **Scan the unit number. Scan the Ecode** if the 'Select Blood Product' window opens.
7. Ensure that the **product code** and **container number** that populate the Product Information field of the Dispense module **are identical to** that on the **unit** face label, Crossmatch/Component Report and Crossmatch/Component label on the back of unit.
8. **Discrepancies or warnings must be resolved before dispense.**
9. Enter courier's first initial and last name. For surgery, also include the OR#.
10. Enter location if defaulted location is incorrect or select SFO-HPS for surgery.
11. **DEVICE defaults** to **SFO BPAM** for inpatients and **SFO Ambulatory** for outpatients. **Important: Do not change the defaulted DEVICE.**
12. Select **SFO Surgery** or **SFO COOLER** for the Cooler field. If dispensing in cooler, document on ***Cooler Dispense Log*** .

E. **Crosscheck information.**

1. **Person accepting/picking up the unit must read** out loud from the **Crossmatch/Component Report** while the **CLS** dispensing the unit **must observe** that the **information being read is correct and identical** to that of the **Crossmatch/Component label attached on the back of the blood container**

and **on the unit face label**.

2. The following is the information that is read and checked for accuracy:
   a) **Patient's first and last name and MR# on**
      i) Blood Bank Product Pickup form or KPHC Transfuse Pick-up form.
      ii) Crossmatch/Component label on back of unit.

   b) **ABO group, and Rh type of the recipient and donor ABO group and Rh type on**
      i) Crossmatch/Component label on back of unit.
      ii) Unit face label.
      iii) Time out. Check if donor blood type is compatible with patient's ABO/Rh.

   c) **Unit number and product/component code on**
      i) Crossmatch/Component label on back of unit.
      ii) Unit face label.

   d) **Expiration date of the unit**
      i) Crossmatch/Component label on back of unit.
      ii) Unit face label.

   e) **Interpretation of compatibility tests if performed.**
      i) Crossmatch label on back of unit.
      ii) **NOTE:** For Incompatible Crossmatch Due To Autoantibody, attach the signed physician's approval form with the yellow chart copy and pick-up slip.

   f) **Special requirements/needs (CMV-, IRR, Ag, SIC- etc) and Auto/DD if any, from the**
      i) Crossmatch/Component label on back of unit.
      ii) Unit face label.
      iii) Unit tag.

3. **Resolve any discrepancy before dispense.** Do not dispense unit if discrepancy cannot be resolved.

Note: When the blood product is being dispensed by a Lab Asst., a CLS must:
i) visually inspect the unit for abnormal signs such as discoloration, hemolysis, bacterial growth, icterus and clots.
ii) check off the appropriate box for visual inspection and initial.

F. **Dispense during Downtime**
Refer to Computer Downtime SOP.

G. **Documentation on the Crossmatch/Component Report.**
1. If the information is correct, the issuer signs or initials at the space 'Issued by'. The runner signs at the space 'Accepted by' and writes the date and time.
NOTE: ***A CLS will perform visual inspection and initial when the dispense is performed by a Lab Asst.***

2. Issuer separates the yellow lab copy and attaches the white Transfusion Service Crossmatch/Component Report to each unit.
3. Issuer gives the unit to the runner. Issuer staples the pink Blood Bank Product Pickup form or KPHC Transfuse Pick-up form to the yellow lab copy.
4. Issuer files the yellow lab copy in the Issued Units file box.

H. **Transport.**

1. The **runner immediately transports** the unit and the accompanying Transfusion Service Crossmatch/Component Report to the appropriate nursing station or medical department.
2. Care should be taken to **avoid any unnecessary delay** in the transport of the unit **or exposure to extreme temperature** conditions.

I. **Return of Blood**

1. Blood and components that have been returned to the blood bank **can be reissued only if** the following conditions have been met:

   a. **Unit is intact**
   The unit bag closure has not been disturbed. If it is opened, discard the unit into the Biohazard waste container. Dispose unit in LIS and write a Variance log.

   b. **Within acceptable temperature range**
      i) Returned RBC and FFP should be within 1-10°C. Returned Platelet and Cryoprecipitate should be within 20-24°C.
      ii) RBC units dispensed to OR or in coolers are monitored by attached temperature indicators.
      iii) **Check temperature**
      Non-surgery blood product should be returned within 30 minutes of dispense or as soon as the decision is made not to transfuse.
      - If there is no temperature indicator attached, use the calibrated infrared thermometer to determine the actual temperature of the unit. ***Refer to Traceable Infrared Thermometer SOP.***
      - If temperature is within acceptable range, document temperature 'OK' in the LIS.

      iv) If there is a temperature indicator attached, **the temperature indicator should not** indicate breach of upper temperature limit.

   c. **One integral segment attached**
      i) At least one sealed segment of integral donor tubing must remain attached to the blood product container.
      ii) The alpha numerics on any unattached segment must be compared to the attached segments before the former can be used for testing.

2. It is not necessary to fill out the 'RETURN RECORD' section on the Crossmatch/Component Report unless it is during computer downtime.

3. **Return unit in LIS** 
   a. Use Return Products to return unit to BB.
   b. Return and simultaneously release products to inventory if units are no

longer needed.

c. Return and simultaneously release products returned from non-CVOR for patients without special needs who qualify for electronic crossmatch.
NOTE: ***Refer to Processing Blood Units for CVS and OR SOP for more information and when to release units returned from CVOR.***

4. **Document** acceptance of inspection for reissuance in the computer or on the Crossmatch/Component Report during computer downtime.
5. **Match the white and yellow** Crossmatch/Component Reports and return the unit to the appropriate storage areas. **Indicate on the pick-up form, the number and component returned.**
6. **File** the Crossmatch/Component Reports in the **appropriate** tray/slots.

J. For issues relating to BPAM, refer to the appropriate BPAM documents for resolution.

PROCEDURE NOTE(S)

A. If cooler is not used, **only one unit of blood product is dispensed to one runner at a time** unless the patient has more than one IV line or in an emergency.

B. **CVOR** have monitored refrigerators so they are allowed to **keep multiple units**.

C. Multiple units of platelets, FFP or cryoprecipitate for a patient can be dispensed to the runner at the same time if transfusion can be started within 30 minutes for each unit.

D. **Multiple units** for a patient can also be dispensed **for outpatient transfusion** in the Infusion Center and other medical areas by **transporting the blood in coolers** with icepacks, and the units monitored by **attached temperature indicators**.

E. Blood or components for more than one patient can be picked up by a runner, provided that the blood products are kept in separate coolers, labeled with patient's name and MRN.

F. If an accident occurs during transport (e.g. unit bag is dropped and broken), the runner must notify the Blood Bank and the nurse. The unit and Transfusion Service Crossmatch/Component Report should be returned to Blood Bank.

1. Destroy unit in LIS using Final Disposition  .
3. Fill out a Variance Log, the Wastage Log, documenting the incident.
4. Discard the unit in a Biohazard container.

G. Blood or components that are discovered not to conform to specified requirements after dispense, shall be evaluated to determine the effect of the **nonconformance** on the quality of the product. ***Refer to Unusual Occurrence Management SOP and Biological Product Deviation Reporting SOP.***

1. In cases where quality may have been affected, the nonconformance shall be reported to the physician and BB Medical Director.
2. Documentation of the nature of the nonconformance and subsequent actions taken including acceptance for use by physician, shall be maintained in a Variance Log and/or BB/Product Comments in LIS.

H. A **Circular of Information** is available upon request to the transfusionist. The Circular

provides labeling information which may not appear on each unit and describes components, indications and contraindications for use, as well as information about potency, safety and dosage. They are supplied to the Blood Bank free of charge by blood supplier and are replenished as needed.

REFERENCE

A. AABB, Standards for Blood Banks and Transfusion Services, current edition, Bethesda, MD.

Associated Documents:

External Documents

Blood Supplier forms

KPSF BPAM Workflow and Quick Reference_4-24-18.vsdx

Associated Documents:

SFOWI-0049 -- TC Infrared Thermometer
SFOWI-0110 -- TS-Massive Transfusion
SFOWI-0112 -- TS-Processing Blood Units for CVS and OR
SFOWI-0113 -- TS-Urgent requirements for Blood and Components
SFOWI-0140 -- TQ - Computer Downtime
SFOWI-0155 -- TQ-Unusual Occurrence Management
SFOWI-0156 -- TQ-Biological Product Deviation Reporting
SFOFCD-0441 -- AF0033 COOLER DISPENSE LOG
SFOWI-0069 -- TS-Transport and Storage of Blood Products
SFOWI-1266 -- TC Temperature Indicator

Click to Open an Associated Document

Documents Generated:

Document Revision History:

Revision: 16	**Date Created:** 09/22/2005 **Date of Last Revision:** 05/01/2018	**Last Approval Date:** 10/05/2016

Document Author: Cara H Lim/CA/KAIPERM	**Document Manager:** Richard Chui/CA/KAIPERM

Reason for Change:

Revision:	Sec/Para Changed	Change Made:	Date
1	N/A	Initial Issue of Document	12/25/06
2	Approver	New Lab Director	01/01/07
3	Procedure	Change to RILIS computer	5/14/07
4	Approver	New Lab Director	7/1/07
5	Procedure	Clarify courier read back procedure and change to OR monitored refrigerator instead of using coolers.	11/30/07
6	Procedure	Added "KPHC Order Details" as Pickup Form.	10/1/09
7	Whole document Procedure A. B.1. D	Formatted each section with heading. Added Millennium icons. Replace 'release' and 'issue' with 'dispense'. Changed RILIS Classic instructions to Millennium. Changed KPHC Order Details to KPHC print-out. Added 'Crossmatch and Dispense on Demand' section. Added Table with information that needs to be reviewed in the Dispense window.	9/11/11
8	Procedure D.table.a.	Added cellular blood product.	11/11/11

	Procedure D.table.b.	New instructions for Platelet dispense.	
9	Procedure A. Procedure D.1.b.	Added Transfusion Navigator. Deleted reference to 'Rh Neg Platelet Requirement Label' which is no longer use.	8/23/12
10	Procedure A. Procedure A.2. Procedure B. Procedure B.1. Procedure B.2., C., D, E, F & G. Procedure E.Note. Whole document. Procedure B.1.b. Procedure B, C, E, G, H. Procedure D.1.f.	Reformatted numbering and revised. New. Deleted blood bank issuer. Added (performed by CLS only). Added CLS or Lab Asst. Added current practice. Change KPHC print-out to KPHC Transfuse Pick-up form. Added to check the Specimen Availability icon for ABORh and ABSC which indicate that the TS is done at SFO. Reformatted. New.	4/2/13
11	Approver Procedure I. Procedure I.1.b.i) I) Whole document	New BB Medical Director. Reformatted and renumbered. Deleted instructions to stamp 'Cancelled' on returned chart copies. Revised. Added temperature indicator and reference to SFOWI-0049. Reformatted.	8/30/13
12	Procedure B.2.i)	Changed prefix 92 to 18. Prefix 18 is effective 12/3/13 @7pm.	11/25/13
13	Procedure D.2. Procedure G.	Added instructions for Issuer to visually verify the component and amount being dispensed match the pick-up slip. Rephrased and added instructions to separate the yellow and white copies of the Crossmatch/Component Reports.	10/14/15
14	Procedure A.4.c) Procedure B.1.b.i) Procedure E.3.Note.ii) and G.1. and C.4.	Changed from 'Initials and NUID' to 'Initials/Signature and/or NUID'. Added Acc# prefix 94 for KP Mission Bay MOB. Deleted instruction for CLS to co-sign as issuer. Instead CLS will initial for performing the visual inspection when unit is dispensed by Lab Asst.	5/2/16
15	Approver	New CLIA Director.	9/28/16
16	Whole document Procedure B.	Revised due to BPAM implementation on 3/20/18. Updated CM icons. Deleted #1 Computer Crossmatch and Dispense on Demand as no longer feasible for routine transfusion after BPAM. Moved #2 to #1.	3/6/18

Notification List:

Approvals:

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Document History Section