PURPOSE

To provide blood and components prior to completion of all required tests when a delay in transfusion could be detrimental to the patient. During an emergency, the patient's physician must weigh the risks of transfusing uncrossmatched or infectious disease / bacterial untested blood against waiting for the testing to be completed.

When blood is released before testing is completed, the records must contain a statement from the requesting physician indicating that the clinical situation was sufficiently urgent to require emergency release of blood. **Such a statement does not absolve the Transfusion Service from its responsibility to dispense properly labeled donor blood of an ABO group that is compatible with the patient. In extreme emergencies, the MD signed form can be obtained after the emergency is resolved.**

NOTE: Obtaining a patient sample and testing the sample to determine if the emergency released blood is crossmatch compatible must be performed as quickly as possible.

EQUIPMENT

A. 'Uncrossmatched' stickers.
B. Transfusion Service **Emergency Release of Donor Blood** form. This authorizes the release of uncrossmatched blood and compatibility testing.
C. Cooler and temperature indicator.
D. Two sets of two units of uncrossmatched O Neg pRBCs (with two segments from each unit in plastic tubes attached to their respective unit) in the 'Emergency' bin on the O Negative blood refrigerator shelf.
E. Two units of group AB, 5 day Thawed Plasma in the 'AB Units' bin on the AB blood refrigerator shelf.

SPECIMEN and REQUISITION

A. Refer to ***SFO-WI.0079 Blood Bank Specimen and Requisition*** and ***SFO-WI.0054 Double Check*** SOPs.
B. Time Stamp requisitions upon receipt.
C. **NOTE:** Because compatibility testing must be performed and resulted as quickly as possible, DO NOT WAIT for the requisition to be signed or corrected for missing/erroneous draw date or time, if the specimen is acceptable and properly labeled. Start processing the sample i.e. centrifuge and perform testing, while waiting for the corrected requisition.

CONTROLS

A. **Follow-up on all unsigned 'Transfusion Service Emergency Release of Donor Blood' form should be completed before the end of shift.**
B. Follow-up on the return of Blood Bank coolers should be done before the end of shift.
C. Supervisory/designee review of all emergency released units will take place as soon as possible and documented on the Emergency Release Review Log.

PROCEDURE

A. **Situations Requiring Emergency Release of Blood Products**

1. When blood products are urgently needed for transfusion **prior to completion of pre-transfusion testing** including compatibility testing, unit antigen typing, antibody identification.
2. When blood products are urgently needed for transfusion prior to completion of infectious disease / bacterial testing.
   a. If the transfused unit subsequently has a positive infectious disease marker, immediately notify the patient's physician and the Transfusion Service Medical Director.
3. Use the Emergency Release of Donor Blood form to document physician's approval for dispensing blood and blood products that deviate from established standard operating procedure.

B. **Two Sets of Two Units of O Negative pRBCs are Set-Up in Advance for Emergency Release**

1. Save two segments in a 12 x 75 mm tube labeled with the unit number, check digit and the component code. Attach the tube with segments to the unit using a rubber band.
2. Attach a temperature indicator on the back of each unit of pRBC. Attach an 'Uncrossmatched' sticker on the front of each unit.
3. Use a Transfusion Service **Emergency Release of Donor Blood** form for each set of two units.
   a. **Write** the **unit number** including **check digit**, **container ID if any**, **component code, unit ABORh** and **expiration date**.
   b. Attach the completed form to the set with a rubber band.
4. Store on O Neg pRBC shelf in the Emergency Release bin.
5. Prepare replacement sets after units are dispensed.

C. **Two Units of AB Plasma are Thawed in Advance for Emergency Release**

1. Thaw 2 units of AB FFP.
2. Process units to 5 day plasma in LIS.
3. Attach new ISBT face labels and perform Label Check in LIS.
4. Place thawed plasma in the ‘AB Units’ bin in the AB blood refrigerator shelf.
5. Prepare replacements after units are dispensed.

D. **One PRT Pooled Cryoprecipitate is Thawed in Advance for Emergency Release**

1. Thaw 1 unit of PRT Pooled Cryoprecipitate.
2. Process unit to 5 day expiration in LIS.
3. Attach new ISBT face label and perform Label Check in LIS.
4. Place thawed PRT Cryo in the RT Incubator.
5. Prepare replacement unit after it is dispensed.

E. **Initiate Emergency Release process when a phone call is received from ER, OR department or** nursing unit. **Inquire the patient's name and MR#, the number of units and**

blood product needed and the name of the requesting physician.

1. **Remind the caller to send the following:**
   a. A signed **Emergency Release of Donor Blood** form which can be used as both the requisition and pick-up form **OR**
   b. Any piece of paper with patient's full name and MR# **AND**
   c. **Pre-transfusion** specimen accompanied by requisition as soon as possible.

2. The signature of the physician including the 5-digit physician provider# can be obtained before or after the release of blood products.

3. **If time permits, check CIPS and LIS for the following:**
   a. A current Type and Screen and DBCK.
   b. If there are any blood products already set up or reserved for the patient.
   c. Patient's transfusion history for atypical antibodies and special requirements.

4. **If it is discovered that the patient has a history of antibody or positive antibody screen,** notify physician immediately that the uncrossmatched pRBCs are antigen untested. Refer to Critical Values section below.

NOTE: Do not delay the emergency release due to notification. It is assumed that the patient is exsanguinating whenever a physician initiates the emergency release of blood.

5. **Select blood product with the appropriate blood type based on the patient's current specimen status.** Do not use previous records or computer history alone to determine patient's ABORh.

Specimen Status	pRBC Selection		FFP selection
	1st choice	2nd choice	
No Current TYSC	O Neg **(Female over 50 years old or Male - Switch to O Pos pRBC after 2-4 units of O Neg pRBC)**	O Pos (during shortage for male & female over 50 years) **Notify requesting physician & pathologist**	AB **(Switch to group A FFP after 2-4 units of AB FFP – can only give maximum of 4 A FFP)**
No DBCK	O Neg **(Female over 50 years old or Male - Switch to O Pos pRBC after 2-4 units of O Neg pRBC)**	O Pos (during shortage for male & female over 50 years) **Notify requesting physician & pathologist**	AB **(Switch to group A FFP after 2-4 units of AB FFP – can only give maximum of 4 A FFP)**
Current ABORh + DBCK	Type Specific	Group Compatible	Type Specific or Group Compatible

NOTE:

a. If the continuation of emergency transfusion is expected to deplete the available inventory/supply of O Neg blood, i.e. in situations where the pre-transfusion sample is not received or not typed yet, evaluate switching to O Pos pRBC for male and female over 50 years.

b. If **Rh positive Platelets** was transfused to Rh Neg female < 50 years of age, notify patient's physician to consider administration of Rh immune globulin. Request that pathologist consult with the attending physician on appropriate RhIg dosage. Refer to ***SFO-WI.0078 Platelet Transfusion***.

6. Immediately go to the designated refrigerator shelf to get the blood product requested.

7. Retain 2 segments from each of the pRBC unit for subsequent crossmatch and antigen typing if needed.

8. Prepare a cooler if necessary/requested.

9. Remove the **Emergency Release of Donor Blood** form and write the following:
   a. Patient's full name
   b. MR#
   c. Location
   d. Doctor's name and provider's number.

10. **Complete the Transfusion Service section of the Emergency Release of Donor Blood Form to reflect the status of the transfusion testing specimen and the blood group given.**

TRANSFUSION SERVICE USE ONLY		
☐ Specimen not received	☐ Blood Sample typed AND ABORH confirmed	☐ Other _____
☐ Specimen received not typed	☐ Type and Screen completed	_____
RBC		**COMPONENTS**
☐ O Rh NEG released		☐ FFP/PLASMA released
☐ O Rh POS released		☐ PLATELET released
☐ Type specific/Group compatible released		☐ CRYO released

a. **Select the appropriate status of the specimen.**
   i. Specimen not received.
   ii. Specimen received not typed. Blood Sample typed and ABORh confirmed (ABORh done on current sample and DBCK done, but antibody screen incomplete and unknown compatibility units are issued).
   iii. Type and Screen completed (ABORh and DBCK done; antibody screen done, antibody identification incomplete, and unknown or incompatible units are issued - Refer to Critical Values section).
   iv. Other: Specify the status if none of the above apply.

b. **Select pRBC given whenever applicable.**
   i. Rh NEG released.

ii. Rh POS released.
iii. Type specific/Group compatible released.

c. **Select COMPONENTS given whenever applicable.**
i. FFP/PLASMA released.
ii. PLATELETS released.
iii. CRYO released.

11. Record the unit number with check digit, container ID if any, component code, unit ABORh, and expiration date on the Emergency Release form.

12. If **Massive Transfusion Protocol** is initiated in conjunction with the Emergency Release by MD or RN designee, refer to the MTP SOP, ***SFO-WI.0110***.

F. **DISPENSE UNCROSSMATCHED UNITS**

1. Time Stamp the pick-up form upon receipt. **The emergency release of blood products should be completed as quickly as possible (within 5 minutes).**

2. **Any piece of paper** with patient's complete identification can be used as blood product pick-up form:
a. **Patient's First and Last name, and MR#** (emergency identification e.g. John/Jane Doe with unique MR# is acceptable).

NOTE: If runner **does not bring** the necessary patient information for **pick-up**, they can **complete a manual pink pick-up slip in the Transfusion Service**, provided **they obtain by phone the patient's First and Last name and the Medical Record Number**.

3. CLS performs a **visual inspection** of the units. Document on the **Emergency Release of Donor Blood** form and the **Crossmatch Report**.

4. **DISPENSE in the LIS**
a. Accurately enter the patient's MR# from the pick-up slip into the Dispense module of the LIS. Scan the units. Carefully review any warning message that pops up and override warning as appropriate.

b. If the patient is not in the LIS database or accurate demographics information is unavailable (i.e. John or Jane DOE) or there is no current ENC, use **EMERGENCY DISPENSE** to issue the blood products and **link the units to the patient later**. Enter patient's last name, first name and MR# as freetext. Refer to Millenium Quick Reference for details.

c. Crossmatch/Component Reports will be printed by LIS at the completion of dispense. **Affix each Crossmatch/Component Label from the reports to the back of its corresponding unit.** It is NOT necessary for these Crossmatch/Component Reports to accompany the dispensed blood products.

5. **If time permits**, the CLS and the courier will **crosscheck** the following:
a. Match the patient's full name and MRN on the pick-up slip with the **Emergency**

Release of Donor Blood form.

b. Match the unit number, component, ABORh and expiration dates on the unit face labels with the information on the **Emergency Release of Donor Blood** form.

NOTE: Crosscheck can be omitted but the CLS must ensure that all identifying information and paperwork are accurate and complete.

6. Courier and CLS sign, date and time the **Emergency Release of Donor Blood** form.

7. Place the units in the cooler if using.

8. Place a **Cooler Dispense Label** on the cooler with the following information: Patient's first initial and last name, cooler expiration date and time, nursing department.

9. Complete the Cooler Dispense Log for tracking.

10. Keep the top copy of the Emergency Release of Donor Blood form if MD has already signed the form. Otherwise, give two copies of the Transfusion Service generated **Emergency Release of Donor Blood** form to the courier for MD to sign.
    a. Remind courier to return one signed copy. The other signed copy is documentation for the patient's medical record.

11. File the **Emergency Release of Donor Blood** form on the front counter as a reminder to follow-up on the return of the cooler or the MD signed copy of the form.
    a. It is the responsibility of the CLS to make sure that the signature is obtained.
    b. If the cooler is not returned on the same shift, ask the next shift to follow up.

G. OBTAINING THE PATIENT SPECIMEN

1. Obtain patient samples as quickly as possible following the emergency release by calling the ordering department. If patient specimens are not received after **15 minutes** following the emergency release, solicit assistance to escalate the request as follows:
    a. Notify supervisor if on site otherwise
    b. Call the Operator and ask to page the House Nursing Supervisor STAT. Inform House Supervisor of the Emergency Release and communicate the urgent need for patient specimen to be sent STAT to Transfusion Service lab.

2. Document all calls on **Emergency Release of Donor Blood** form.

3. Time Stamp all requisitions upon receipt.

H. TESTING

1. Immediately (**within 15 minutes** of specimen receipt) begin **Type and Crossmatch** testing by **manual methods**. **DO NOT WAIT for the signed requisition/order if the specimen is acceptable and labeled properly.**

2. Check patient's transfusion history in RILIS and CIPS and document history check on the requisition or the Emergency Release form. **If it is discovered that the patient has a history of antibody or positive antibody screen, notify physician immediately and**

document readback on the Emergency Release form. Refer to **Critical Values** section below.

3. Perform ABORh testing by tube method. **DO NOT** use previous records or computer history alone to determine the patient's ABORh.

4. If ABORh on the pre-transfusion specimen is complete and double checked either historically or with another specimen drawn separately, type specific blood can be issued.

5. If ABORh discrepancy is observed, continue to dispense O Neg RBCs if it does not deplete the inventory/supply. Refer to section about Low O Neg RBCs supply.

6. Perform antibody screen by manual gel method. **While antibody screen is in process,**
   a. **Commence extended crossmatch using Analyzer of the dispensed units and additional 2-4 units.**
   b. **Commence antigen typing of the dispensed units and additional 2-4 units if the patient has a history of clinically significant alloantibody(ies).**

7. At the conclusion of the antibody screen, if the patient is determined to qualify for electronic crossmatch (refer to ***SFO-WI.0089 Compatibility Testing***), extended crossmatch can be discontinued on any additional emergency released units.

8. Perform antibody identification if the antibody screen is positive. Refer to section for **Critical Values** below for positive antibody screen.

9. Enter results and interpretations in the computer as the tests are being read.

10. **Enter all Critical Values notification and readback as Result Comments at the appropriate interpretation fields.**

I. CRITICAL VALUES

<table>
<tr><th>Critical Results</th><th>Notification and Documentation</th><th>Additional Special Testing</th><th>Resulting in LIS</th></tr>
<tr><td>1. History of Positive Antibody Screen or Antibody following emergency release of uncrossmatched blood.</td><td rowspan="4">CRITICAL VALUES in the Emergency Release setting are to be called to the physician immediately, within 15 minutes.

Immediately notify the physician of the critical results and of the possibility of a transfusion reaction and advise that blood should be transfused cautiously (in vivo crossmatch). Notify the pathologist.

Communicate to the physician that there will be a time delay in order to provide fully tested units and ask if the physician wants to wait. If additional units must be released without the completed antibody ID and antigen screening, label such units as 'antigen untested'.

Document on the Emergency Release form the date / time and physician / nurse to whom the critical results were given and readback was obtained.</td><td rowspan="2">Proceed to ABID workup and antigen type the emergency released units.</td><td rowspan="4">Enter all Critical Values notification and readback as Result Comments in LIS at interpretation field. Use template CRIT: Critical results phoned to, and verification read-back made by, RN/MD NUID, Title RN/MD , Ext _____, Date/Time_____. Called by CLS NUID.</td></tr>
<tr><td>2. Positive Antibody Screen following emergency release of uncrossmatched blood.</td></tr>
<tr><td>3. Incompatible crossmatch of unit issued during emergency release.</td><td>Initiate transfusion reaction work up and request for post transfusion specimens.

Antigen screen available inventory and crossmatch donor units found to be antigen negative. Order blood from blood supplier if needed.

Perform DAT on crossmatched incompatible unit if incompatibility not due to antibody problem.</td></tr>
<tr><td>4. Emergency released unit is antigen positive for the patient's antibody either historically or newly identified.</td></tr>
</table>

J. **AUDIT of EMERGENCY RELEASE**

1. The audit of the emergency release should be performed ASAP by the same shift whenever possible or the next shift so that timely follow-up can be done in case of discrepancy or missing information.

K. **RECORD RETENTION**

1. Staple together the bottom page of the Emergency Release form, the signed requisition / Health Connect order, worksheets and printouts of test results.
2. File in the Emergency Release binder in the Transfusion Service. Retain the physician's signature for approval of emergency released units for a minimum of 10 years.

PROCEDURE NOTE(S)

A. To facilitate the release of uncrossmatched blood and enable the physician to remain with the patient, a Transfusion Service **Emergency Release of Donor Blood** form is available in the ER, OR, L&D, CVICU and CCL (Cardiac Cath Lab).

B. If blank Crossmatch Reports are needed, go to **Emergency Dispense** function in LIS and dispense the units to 'Emergency, Release to:', scan the units and save. Crossmatch/Component Reports will print. Attach each Crossmatch/Component Report to its corresponding unit. **NOTE:** Units will be automatically released to inventory when units are Returned in LIS.

REFERENCE

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

Appendix A. Transfusion Service Emergency Release of Donor Blood form

KAISER PERMANENTE®

PROOF 1

Name: _____

MR #: _____

TRANSFUSION SERVICE
EMERGENCY RELEASE OF DONOR BLOOD

IMPRINT AREA

AUTHORIZATION FOR THE RELEASE OF UNCROSSMATCHED BLOOD COMPONENTS

Due to the critical condition of my patient, I hereby authorize the Transfusion Service staff to release uncrossmatched (specify number of units) _____RBC _____FFP _____PLT _____CRYO for emergency transfusion. I understand that compatibility testing will be initiated upon receipt of an acceptable blood specimen from my patient and that any incompatibility will be reported to me immediately.

Physician _____ Provider Number _____ Dept./Ext. _____
SIGNATURE REQUIRED

Nature of Emergency _____ Date _____

TRANSFUSION SERVICE USE ONLY

☐ Specimen not received ☐ Blood Sample typed AND ABORH confirmed ☐ Other _____

☐ Specimen received not typed ☐ Type and Screen completed _____

RBC	COMPONENTS
☐ O Rh NEG released	☐ FFP/PLASMA released
☐ O Rh POS released	☐ PLATELET released
☐ Type specific/Group compatible released	☐ CRYO released

BLOOD COOLER ID	DATE NOTIFIED	TIME NOTIFIED
		AM/PM

Unit Number	Container	Component	Group/Type	Exp. Date	Transfused	Returned Date/Time	Acceptable For Reissue	Temp. if available
					☐ Yes ☐ No		☐ Yes ☐ No	
					☐ Yes ☐ No		☐ Yes ☐ No	
					☐ Yes ☐ No		☐ Yes ☐ No	
					☐ Yes ☐ No		☐ Yes ☐ No	
					☐ Yes ☐ No		☐ Yes ☐ No	
					☐ Yes ☐ No		☐ Yes ☐ No	
					☐ Yes ☐ No		☐ Yes ☐ No	

☐ Units incompatible, notified _____ at Ext. _____ Date _____ Time _____ By _____

Comments:

ISSUED BY _____ Visual inspection OK at issue ☐ Yes ☐ No

ACCEPTED BY _____ DATE _____ TIME _____ AM/PM

00756-000 (12-19) **DISTRIBUTION**: ORIGINAL = CHART W/MD SIGNATURE • COPY 1 = TRANSFUSION SERVICES • COPY 2 = TRANSFUSION SERVICES