

Blood Bank

Information for use of Blood and Blood Components

Packed Red Blood Cells, Leukocyte Depleted

Red blood cells are prepared by removing most of the plasma and white cells from the whole blood unit. Preparation may be by sedimentation or centrifugation. Expiration date of blood is indicated on label.

- Transfusion Guidelines:
 - Must be given through an administration set containing a filter.
 - No medications or solutions except 0.9% sodium chloride may be added to or transfused with blood.
 - Blood may not be kept out of an unmonitored Blood Bank refrigerator for more than 30 minutes before beginning transfusion.
 - Infusion time is a maximum of 4 hours; if blood cannot be infused in that time, ask that the unit be divided.
 - Blood may not be warmed in an unmonitored waterbath, sink, or microwave oven.
 - Transfusion slip must be completed with appropriate signatures, date, time, and indication of reaction or no reaction, and be posted on the chart.

Fresh Frozen Plasma

This is the liquid portion of whole blood which is removed and frozen within 6 hours of draw from donor. Frozen plasma has an expiration date of 1 year; once thawed, plasma has an expiration of 24 hours.

- Transfusion Guidelines:
 - Approximately 30 minutes is required to thaw the unit; notify Blood Bank when product is ordered.
 - No crossmatch is required; however, plasma should be ABO compatible with patient's red cells.
 - Must be given through an administration set containing a filter.
 - Plasma may not be kept out of an unmonitored Blood Bank refrigerator for more than 30 minutes before beginning infusion.
 - If plasma is given as a volume expander, it may be transfused in 1 hour or less. If plasma is required for a coagulation deficiency, it should be transfused between 1 hour to 4 hours.
 - No medications or solutions except 0.9% sodium chloride may be added to or transfused with blood or components.
 - Transfusion slip must be completed with appropriate signatures, date, time, and indication of reaction or no reaction, and be posted on the chart.

Platelet Pheresis

A single donor platelet pheresis should contain more than 3×10^{11} platelets from 1 individual. Volume of plasma used for platelet suspension will vary between 200 mL to 500 mL. Platelets may be stored for a maximum of 5 days at ambient temperature with gentle agitation.

- Transfusion Guidelines:
 - Platelets are ordered from the American Red Cross as needed; notify Blood Bank when product is ordered.
 - No crossmatch is required; however, ABO compatible units are given when possible.
 - No medications or solutions except 0.9% sodium chloride may be added to or transfused with this component.
 - Platelets may be off the rotator in Blood Bank no longer than 30 minutes before beginning infusion.
 - Infusion time is determined by patient's volume tolerance; they must be infused within 4 hours.
 - Transfusion slip must be completed with appropriate signatures, date, time, and indication of reaction or no reaction, and be posted on the chart.

Cryoprecipitated Antihemophilic Factor (AHF)

Cryoprecipitate AHF is prepared by thawing fresh frozen plasma between 1° C to 6° C and recovering the cold precipitate. Cold-insoluble precipitate is refrozen. Frozen cryoprecipitate has an expiration date of 1 year; once thawed and pooled, it has an expiration of 4 hours.

- Transfusion Guidelines:
 - Cryoprecipitate concentrates for transfusion are ordered as a cryoprecipitate pool and the pool will usually contain 5 to 10 bags. Units will be thawed and pooled in Blood Bank immediately prior to transfusion since once pooled, the cryoprecipitate expiration becomes 4 hours.
Note: Allow approximately 45 minutes for thawing and pooling.
 - Cryoprecipitate pools are usually random donor, that is, any ABO/Rh may be given to recipient and a mix of different ABO/Rh types may be in the pool.
 - No medications or solutions except 0.9% sodium chloride may be added to or transfused with blood or components.
 - Infusion time is a maximum of 4 hours; usually a pool can be administered within 1 hour.

Instructions for Blood Bank Orders in Computer

- Order from Blood Bank Menu:
 - Type and crossmatch will require that you order “Type and Screen Prepare” and indicate the number of requested units in quantity field on the “Prepare” order.
 - Fresh frozen plasma, platelets, and cryoprecipitate will require a comment indicating number of units requested by physician.
- Order comment should include any information that Blood Bank should be aware of concerning order.
 - Example:** Call floor when ready; give 2 units as soon as possible.

Laboratory Testing for Component Availability

- Blood Bank Identification Bands:
 - After receiving orders for a “Type and Crossmatch” or “Type and Screen or Prepare,” the phlebotomist will obtain a specimen from patient.
 - If patient does not have a hospital arm band with correct medical record number, specimen cannot be drawn.
 - In emergency situations where patient has no arm band, the nurse must identify patient.
 - At time specimen is drawn, phlebotomist will identify patient and specimen by means of a Blood Bank band.
 - Blood Bank band has a unique 4 digit number that will be used on all requisitions and floor copies from Blood Bank.
 - Blood Bank band is required for identification of patient at time of transfusion.
 - Blood Bank band remains on patient through the 72-hour automatic release of crossmatched units set against the patient specimen. If band must be removed before units are released (ie, IV site covered by band), person removing band is responsible for reattaching band. That person will take the informational part of Blood Bank band and insert it into a special bracelet received from Blood Bank and reattach it to patient on other arm or a foot.
 - Note:** Each Blood Bank band is unique. If a band is discarded, Blood Bank cannot send you a duplicate; nor can the patient receive units set against that band.
- Type and Screen and Prepare:
 - Patient must be drawn for a blood specimen and identified with a Blood Bank band.
 - Patient specimen is tested for ABO group and Rh, screened for unexpected antibodies, and then crossmatched for requested number of units.
 - This work-up requires approximately 1 hour from time specimen is received in Blood Bank. Should problems arise during testing, the work-up would require more time and the floor would be notified of delay.
 - Prepared units are automatically released after 72 hours.
- Type and Screen or Type and Hold:
 - Patient must be drawn for a blood specimen and identified with a Blood Bank band as for a “Type and Screen and Prepare
 - Patient specimen is tested for ABO group and Rh and screened for unexpected antibodies. **No crossmatched units are set.**
 - This work-up requires approximately 30 minutes from time specimen is received in Blood Bank. Should problems arise during testing, the work-up would require more time and the floor would be notified of delay.
 - Units may be added to a “Type and Screen” specimen as long as it is less than 72 hours old and Blood Bank band is on patient. Notify Blood Bank that you are adding a Prepare to the “Type and Screen.”
- Fresh frozen plasma needs no crossmatch but approximately 30 minutes are needed to thaw frozen plasma.
- Platelet pheresis needs no crossmatch but, because of their short expiration, are not routinely stored at Saint Francis Medical Center. When an order is received for platelets, Blood Bank orders them from the American Red Cross Depot; approximately 1 hour is required for transport of the product to hospital. If platelets are not available locally and must be ordered from the American Red Cross in St. Louis, the floor will be notified.
- Cryoprecipitate needs no crossmatch but approximately 45 minutes are required to thaw frozen units and pool the product.
- Emergency Blood Without Crossmatch:
 - In an extreme emergency, upon attending physician’s request, Blood Bank can perform a STAT typing on patient and release the blood before complete work-up has been performed.
 - Note:** Physician requesting this service must sign the emergency release form assuming responsibility for administering this blood without a crossmatch or antibody screen.

Obtaining Blood/Components from Blood Bank

- Nursing Service:
 - Call Blood Bank when ready for the product; caller must have Blood Bank band number from patient’s armband before red cells can be issued. All other products require patient’s medical record number before issue of the product. A transfuse order sent to Blood Bank will not initiate this process.
 - Note:** Product will not be sent until Blood Bank has verbal notification.

- Blood Bank technologist will check appearance of the unit and verify that all patient and unit information corresponds on attached paperwork. If all information is accurate, the technologist will document on Blood Bank transfusion slip the issue date, time, acceptable appearance, and their employee number.
- Product will be sent through the pneumatic tube system to the nursing area by secured transaction.
- Person removing the product from pneumatic tube system must complete the received by and date and time on Blood Bank transfusion slip.

Administration of Blood/Blood Components

See Saint Francis Medical Center Patient Care Policy/Procedure, “Blood Transfusion, Administration of Whole Blood, Packed Cells, Fresh Frozen Plasma, Platelets, or Cryoprecipitate.”