## BLOOD BANK – PRODUCTS, POLICIES AND PROCEDURES

**PURPOSE:**

- **Available Blood Products:**
    - **Leukocyte-Reduced Packed Red Blood Cells:** Single donor blood with plasma and leukocytes removed. Crossmatch (compatibility testing) is required. The component of choice for most patients with anemia or blood loss in surgery.
    - **Frozen Plasma:** Single donor plasma, frozen within 24 hours after drawing. Thawing requires approximately 40 minutes. Used to replace coagulation factors and as a volume expander. Crossmatching is not required.
    - **Platelets:** The only blood component that supplies useful amounts of viable platelets. Usually used only when the circulating platelet count is below 25,000/cmm. Crossmatching is not required. *If platelets are requested, the blood bank must be informed of the intended transfusion date, as this component has a very short "shelf life", and must be special ordered from the Red Cross.*
    - **Autologous Whole Blood:** Whole blood collected at ECH prior to elective surgery by appointment with the blood bank and approval of the pathologist. If transfusion is required, the blood may be given as whole blood or may be packed for red cell only infusion. Crossmatching is required.

- **Availability of Blood Supplies**
    - Our blood products are received from the American Red Cross (Wilkes-Barre) via daily courier service (Monday – Saturday). In an emergency we can also get blood from neighboring hospitals.
    - If a patient has an unexpected antibody, units of blood for transfusion will be selected according to the absence of the corresponding antigen in the donor units and subsequent crossmatch compatibility. For some antibodies, we will have appropriate blood on hand. For others, we will need to order a special shipment from the Red Cross, causing some delay. For a very few cases, finding any compatible donor blood will be difficult or impossible.

**PROCEDURE:**

- **Ordering Blood Products**
    - The routine crossmatch procedure takes at least 70 minutes if all goes smoothly (including time to obtain a specimen to perform the compatibility testing). Please plan accordingly.
    - Blood for scheduled surgery must be ordered by noon the preceding day or it may not be available.
    - Emergency issue of blood without crossmatch requires the physician's signature on the request form. If time permits, a blood type will be performed so that type-specific blood can be issued.

- All specimens for compatibility testing must be drawn within 72 hours of the time that the transfusion is intended.
- Blood components are to be ordered using the Transfusion request form.
  - Please be as specific as possible concerning the number of units requested and when the blood is needed for transfusion.

**BLOOD BANK PRODUCTS AND TURNAROUND TIME**

| **Product Requested** | **Lab procedures Performed** | **Specimen Required** | **Turnaround Time** |
|---|---|---|---|
| Crossmatch for Packed RBCs | ABO and Rh, Antibody Screen, Compatibility testing for specified # of units | 1 plain, Brick colored or Red top tube | 1 hour |
| Frozen Plasma | ABO; thawing of product | 1 plain, Brick colored or Red top tube | 40 minutes |
| Platelets | None | None | Must be ordered in from another facility. Allow time for delivery |
| Crossmatch for Autologous Whole Blood | ABO and Rh, Antibody Screen, Compatibility testing of Autologous units | 1 plain, Brick colored or Red top tube | 1 hour |
| Type and Screen | ABO and Rh, Antibody Screen | 1 plain, Brick colored or Red top tube | 1 hour |
| Cryoprecipitate | ABO; thawing of product | 1 plain, Brick colored or Red top tube | 40 minutes |

- **Release of Blood component Units for Transfusion**
  - **Blood may be removed from the Blood Bank refrigerator only by the technologist on duty.**
  - The Blood Bank release log must be signed by both the technologist and the nursing staff member picking up the unit (s) for transport to the patient location.

- Both the technologist and the nursing staff member must check unit labels and transfusion tags when the units are signed out.

- **Return of Unused Blood Component Units**
  - If a unit is removed from the Blood Bank, but is not used, it must be returned within 30 minutes from the sign-out time. If this time is exceeded, the unit will be designated for discard.
  - The unit is to be given to the technologist on duty and the release record must be signed.

- **Safety Reminders for Transfusions**

  - Always check the patient's identity for a final time immediately before beginning the transfusion.
    - Check name and donor number written on the infusion tag.
    - Green infusion number on the blood bag must match the green number on the patient's wristband.
  - Never mix blood products with any IV solution except normal saline.
  - Use only a bloodwarmer to warm blood to 37 C.
  - Never put a unit of blood in a nursing station refrigerator. Blood must be kept in monitored refrigerators only.

- **Transfusion Reaction**

  - If any of the following occur during a blood transfusion, stop the infusion of blood. Continue normal saline at a slow rate.
    - Temperature rise greater than 2 F
    - Shortness of breath
    - Chest pain, back pain, or generalized aching
    - Severe chills uncontrolled with a blanket
    - Shock
    - Hives (the physician may choose to continue the transfusion after treatment with antihistamines)
  - Follow the procedure listed for transfusion reactions:
    - Notify the physician and the Blood Bank immediately.
    - Contact the phlebotomist to collect a blood specimen (7ml. Lav. and 10 ml. Red).
    - Fill out "Hospital Report of Transfusion Reaction", describing the patient's reaction, and send it with the unused portion of the blood transfusion unit to the Blood Bank.
    - Collect a post transfusion urine specimen and send it to the Blood Bank.

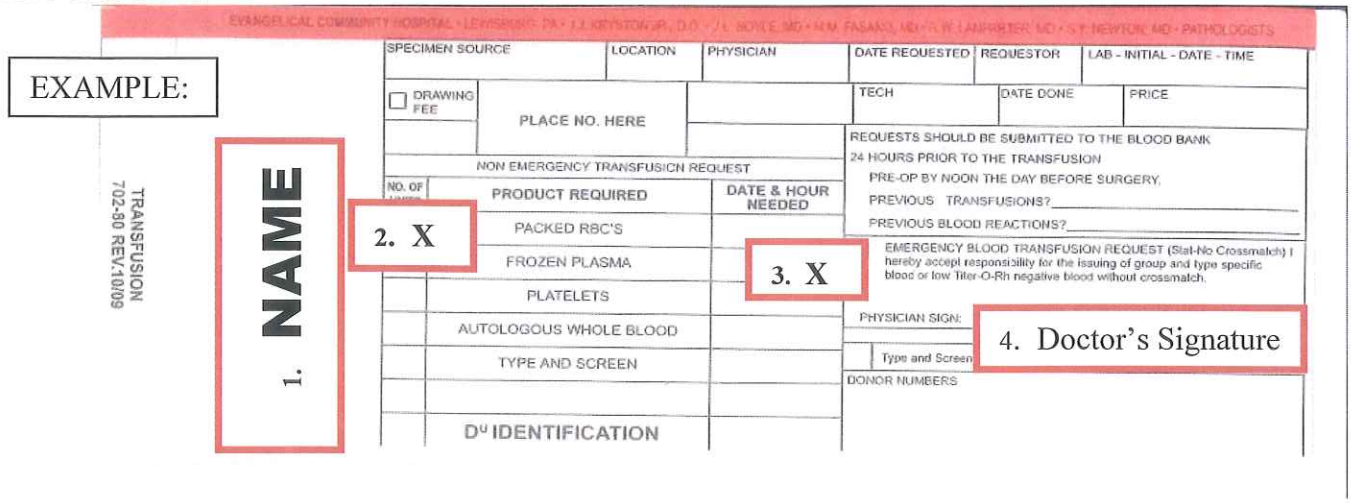
  - After the post-transfusion tests are completed, the pathologist will review the record and a copy will be posted for the patient's chart.

# Emergency Release of Uncrossmatched Blood

**PURPOSE:** This procedure provides instruction for obtaining blood products in the event of a life-threatening emergency when time is not available to perform crossmatch procedures.

**POLICY:** A major blood incompatibility is one of the few mistakes that can kill a patient almost immediately. Therefore, this procedure must be followed to obtain uncrossmatched blood products. It is the ordering physician's responsibility to sign for uncrossmatched product.

**PROCEDURE:**




Complete the 4 items on the Transfusion Request Slip (Indicated in RED Boxes on EXAMPLE).

1. **Name of Patient** !!! Stamped name is preferable, but a handwritten ID is acceptable. (The lab cannot release blood without a patient's name, and the lab tech cannot write this in based on a phone call to correct a missing name. Only ER personnel can fill this in "John Doe-#__" will suffice if the patient's identity is unknown.)
2. **Number of Units** of blood desired next to Packed RBC's.
3. **Check box** next to Emergency Transfusion Request
4. **Doctor's Signature** next to Physician Sign (authorizing blood to be given prior to crossmatching)

**Notes:**

**Type Specific Blood vs O-Negative Blood.**

The lab often has only one or two units of O-Negative blood. If there is time (about 4 minutes) to determine the patient's blood type, this can provide a much greater supply. e.g. if the patient is found to be A+ the patient can receive both type A and type O blood – at least 30 units are available on most days.

**Wrist band the patient for crossmatching if possible.**

If the lab has a properly identified sample, a crossmatch will be done while the unmatched blood is being given. This will permit a continuous supply of blood without delay after the immediate crisis is past. A blood sample cannot be used for crossmatching unless it has been properly identified with the matching number from a patient's green wrist band.

**Phone the lab and briefly explain the patient's status.**

Knowing the status of the patient allows lab personnel to organize to meet the demands of the situation and anticipate ongoing needs. Knowing that someone is coming for blood can save time finding appropriate blood, and doing the record keeping necessary to release the blood.

## HIV Testing, Pennsylvania Requirements

**PURPOSE:** HIV testing cannot be performed without first securing the written informed consent of the patient. Consent must be preceded by an explanation of the test, including its purpose, potential uses, limitations, and the meaning of its results. Prior to performance of the HIV related test, information on the measures for the prevention of, exposure to and transmission of HIV must be made available to the patient.

**POLICY:** All outpatients presenting orders for HIV testing must bring with them a signed consent form from the physician's office indicating that the outpatient has received pre-test counseling from an appropriate person in the doctor's office. The laboratory phlebotomists are not trained in HIV pre or post-test counseling.

**PROCEDURE:**

- There are two types of HIV consent forms available from the hospital forms room.
  - Consent to HIV Testing
  - Body Fluid Exposure Report.
  - Examples of both forms are in this manual.

- The **"Consent to HIV Testing", form is to be used for routine HIV testing.**
  - Mark the appropriate request for positive and or negative results.
  - Print the tested patient's name.
  - Have patient or authorized substitute/guardian sign consent form.
  - Record date form is signed.
  - Witness to (patient/authorized signer) must also sign in designated area.
  - Keep the white copy in the patient's chart.
  - Send the blue copy with the specimen and/or patient to the laboratory.

- The **"Body Fluid Exposure Report", form is to be used when a "significant exposure" has occurred.**
  - (see example of forms on the following pages)
  - The entire form should be completed.
  - Keep the white copy in the patient's chart.
  - Send the pink copy to employee health or occupational medicine.
  - Send the blue copy with the specimen and/or employee/patient to the laboratory.
  - Refer to specific step by step explanations on the back of the form.

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## *CONSENT TO HIV TESTING*

***With my signature below I acknowledge that I have read (or have had read to me) and understand the following information:***

(1) I am giving my voluntary consent to have my blood drawn for baseline HIV-related testing.
(2) My blood will be tested for signs of an infection by the Human Immunodeficiency Virus (HIV), the virus that causes AIDS. If a positive result appears, additional confirmatory testing will be done to ensure accuracy:
(3) My consent to have my blood tested for HIV is FREELY given.
(4) My test results will be put into my medical record but are confidential and will only be released with my written permission or in accordance with Pennsylvania law. If my test result is positive it will be reported to the Pennsylvania Department of Health in accordance with PA Code, Title 28, Chapter 27 as amended 10/18/02.
(5) If I have any questions about the nature of the blood test, its purpose, uses, limitations or meanings of its results, I may ask those questions before I agree to the blood test.

**What a NEGATIVE Result Means:**

A negative test means that the laboratory has not found evidence of HIV infection in my blood sample. However, it may take up to 6 months for the body to produce HIV antibodies for the ELISA test to detect. Retesting in 2-6 months should be considered.

What a POSITIVE Test Result Means:

A. A positive HIV test means that I have my infection and can spread the virus to others by having sex or by sharing needles.
B. A positive HIV test DOES NOT mean that I have AIDS. Having HIV can cause AIDS, but does not automatically mean I have AIDS. Other tests are needed to make that determination.

**What Will Be Done For ME If My Test Is Positive:**

A. I will be told how to keep from spreading my infection by (1) Avoiding sexual intercourse or practicing SAFER sex; (2) Not sharing drug needles-or getting off drugs; (3) Not donating or selling blood, plasma, organs, or sperm; (4) Getting information about the risks of transmission to my baby during pregnancy, and (5) Not breast-feeding or donating breast milk.
B. I know that my local health department or doctor may assist me in notifying and referring my partners for medical services without giving my name to my partners.

Counseling:

I understand that I can request counseling about HIV and about my test results.
_____ I request that I receive face-to-face counseling only if my blood test results are positive.
_____ I request that I receive face-to-face counseling if my results are positive or negative.
_____ I have had a chance to have my questions about this test answered.
I understand that my physician (or designee) will make a good faith effort to inform me of the results of this test regardless of whether the test result is positive or negative.

This information has been disclosed to you from records protected by Pennsylvania law. Pennsylvania law prohibits you from making any further disclosure of this information unless further disclosure is expressly permitted by the written consent of the person to whom it pertains or is authorized by the Confidentiality of HIV-Related Information Act. A general authorization for the release of medical or other information is not sufficient for this purpose.

**I hereby agree to have my blood drawn for an HIV test.**

Name of Person Tested _____ Date _____

Signature of Patient or Authorized Substitute _____ Counselor and Witness of Signature _____

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# Body Fluid Exposure Report

**EXPOSED PERSON INFORMATION**
**o EMPLOYEE (On hospital payroll)** **o NON-EMPLOYEE**

Name: Department:

Normal Start Time:

Date of Birth: Social Security #:

Date of last tetanus injection:

Have you received Hepatitis B Vaccine? o YES o NO

If yes, number of doses received: What is your titer?

Date & Time of Exposure: AM/PM

Where & how injury occurred (describe in detail):

Witness(es):
I have experienced an exposure to a patient's blood/body fluids and I am requesting an evaluation by a physician to determine if the exposure is significant as defined by Act 148 and the Centers for Disease Control. I am requesting we seek the source patient's voluntary informed consent to HIV-related testing. o YES o NO

Exposed Person's Signature: _____ Date _____

Department Head/Supervisor signature: _____ Date _____

Employee Health Nurse signature: _____ Date _____

**II. SOURCE INFORMATION** - Obtain Supervisor or Employee Health Nurse's assistance.

Source's name: o Source Unknown

Source's location or Room #:

If source known, source agreed to be tested for hepatitis serology such as HbsAg and anti-HCV and HIV antibody. o YES o NO

Source signed consent for HIV testing. o YES o NO

Physicians of source patient contacted for orders. Orders written for HbsAg, anti-HCV, and HIV antibody on source patient's chart or outpatient order form. o YES o NO

**III. PHYSICIAN DOCUMENTATION OF SIGNIFICANT EXPOSURE** (Defined on reverse side)[1]

o I certify that significant exposure has occurred.
o I certify that a non-significant exposure has occurred.

Physician Signature[2] Printed Name

**IV. CONSENT TO HIV TESTING** [3]

With my signature below I acknowledge that I have read (or have had read to me) and understand the HIV testing information on the back of this form; and I hereby agree to have my blood drawn for an HIV test.

o I request face-to-face counseling only if my blood test results are positive.
o I request face-to-face counseling if my test results are positive or negative.

Name of Exposed Person Tested Date

Signature of Exposed Person or Authorized Substitute Counselor and Witness Signature

[1] **Definition of significant exposure**
A significant exposure is defined as direct contact with blood, certain body fluids (semen, vaginal secretions, CSF, peritoneal fluid, amniotic fluid, pericardial fluid, pleural fluid, synovial fluid) or body fluid that contains visible blood.
Direct contact includes:
*Percutaneous injury (e.g. needlestick, cut with sharp object)
*Contact of mucous membrane
*Contact of skin that is chapped, abraded or afflicted with dermatitis

[2] **Physician's Signature**
If physician documents a significant exposure (vs. non-significant), then physician orders an HIV test on the exposed person's chart or outpatient order form for exposed patient. In response to ordering an my test on the exposed patient, the Lab will send the ordering physician the source patient's test results (HIV, HbsAg, and anti-HCV) in addition to the exposed person's HIV test results.

[3] **DIV Testing Information**
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B. I know that my local health department or doctor may assist me in notifying and referring my partners for medical services without giving my name to my partners.

**Prior to placing my signature on the front of this page, I (the exposed person) have had a chance to have my questions about this test answered and I understand that my physician (or designee) will make a good faith effort to inform me of the results of this test regardless of whether the test result is positive or negative.**