

**LSUHSC-SHREVEPORT
CLINICAL LABORATORY POLICY AND INFORMATION MANUAL**

TRANSFUSION SERVICE - BLOOD BANK

SECTION CONTENTS

1	Identification of Patient and Blood Product
2	Rate of Infusion
3	Warming of Blood
4	Blood Administration Sets
5	Survival of Transfused Red Blood Cells
6	Replacement Policy
7	Blood Dispensation
8	Blood Return Policy
9	Transfusion Reactions
10	Services Offered
11	Autologous and Directed Donors
12	Donor Area
13	Orderable Tests
14	Nonorderable Tests
15	Nursing Policies - Typenex, Blood/Blood Component Transfusion
16	Serology

INFORMATION REQUESTED BY HOSPITAL PERSONNEL

Procedures done in Transfusion Service use blood drawn in a pink top tube and/or a purple top (EDTA tube).

Most transfused blood should be given as proper fractions rather than as whole blood: Leukopoor red cells for elevation of hemoglobin, fresh frozen plasma for coagulation defects, cryoprecipitate for fibrinogen deficiencies and platelets of decreased platelet counts.

Please contact the following in Transfusion Services or Serology for problems or questions:

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**LSUHSC-SHREVEPORT
CLINICAL LABORATORY POLICY AND INFORMATION MANUAL**

1 IDENTIFICATION OF PATIENT AND LICENSED BLOOD PRODUCT

Before beginning the transfusion, it is extremely important to identify CORRECTLY the patient and the blood product. Two licensed individuals working together at the patient's bedside are required to carry out the steps listed below, thus cross checking the information. For detailed information, consult Nursing Policy and Procedure Manual.

Identification of the Blood Product

- 1.1 Check the ABO group and Rh on the label on the blood container to be certain it also agrees with the Transfusion Record. Also check Typenex number on label with Typenex number on Transfusion Record.
- 1.2 Check the number on the label on the blood container to be certain it agrees with the Transfusion record.
- 1.3 Check the blood Transfusion Record for the patient's name and hospital number.
- 1.4 Verify information on Typenex wristband located on patient.

DO NOT begin the transfusion until any discrepancy in the above information is resolved.

2 RATE OF INFUSION

The rate of infusion depends upon the clinical condition of the patient and the product being transfused. In most administration sets, 15 drops equals 1 ml. Most patients who are not in congestive heart failure or in danger of fluid overload, tolerate the infusion of one unit of red blood cells in 1½ to 2 hours. The transfusion should be completed in less than 4 hours because of the dangers of bacterial proliferation and red blood cell hemolysis at room temperature. If the desired volume of red blood cells will not be infused within 4 (four) hours, the original unit should be divided and one portion stored in the Blood Bank until it is needed.

3 WARMING OF BLOOD

It is not necessary to warm blood before transfusion except in unusual circumstances such as (1) massive transfusions, (2) occasionally in exchange transfusion of newborns, or (3) extremely high titer of cold antibody (anti-I) in patient.

If blood must be warmed prior to transfusion, this should be performed by passing the blood through warming coils. Hemolysis may occur if temperature exceeds 40°C. Blood should never be warmed by placing near a radiator, heater, stove, or using a microwave oven. The Blood Bank will make a notation if warming is indicated.

B2

**LSUHSC-SHREVEPORT
CLINICAL LABORATORY POLICY AND INFORMATION MANUAL**

4 BLOOD ADMINISTRATION SETS

Red blood cells, whole blood, platelets, fresh-frozen plasma and cryoprecipitate should be transfused through a sterile, pyrogen-free transfusion set with a filter capable of retaining particles potentially harmful to the recipient.

Different sets and filters are available through Central Supply. They should be used according to manufacturer's directions and should be chosen in accordance with needs of the patient.

Because of the hazards of hemolysis and bacterial contamination, once a filter has been used and contains blood or debris, it should not be left for extended periods of time and then reused. Use proper filter for blood and proper filter for components. (See Nursing Manual for more explicit instructions.)

5 SURVIVAL OF TRANSFUSED RED BLOOD CELLS

The normal red cell has a life span of approximately 120 days. Each unit contains red blood cells of all ages between 1 and 120 days. As a unit of blood is stored, the red blood cells continue to age and these senescent red blood cells are removed from the circulation within 24 hrs. after transfusion. The remaining red cells survive normally and are destroyed linearly with a mean half-life of 50 to 60 days. The survival of transfused red blood cells is affected by the recipient's health and may decrease. General rule of thumb; 1 percent (1%) loss per day from storage to destruction.

6 REPLACEMENT POLICY

Under certain circumstances, patients may receive credit toward blood or components transfused. All credit information is handled through Life Share Blood Center.

7 BLOOD DISPENSATION

7.1 Blood for **one patient only** will be issued with proper dispensation form, to one floor representative. That representative may pick up multiple units for that patient, considering the Blood Return policy (see below).

7.2 If blood is required before proper completion of crossmatch or processing, a waiver will be obtained from the requesting physician. The blood bank personnel will complete the tests necessary to insure that the blood was or is safe for transfusion. Upon completion of necessary tests, the blood bank personnel will enter all pertinent data into the Sunquest computer system.

7.3 Upon request, multiple units may be issued to the OR suite in an igloo. Blood may remain in the igloo for a maximum of two (2) hours. (There are several special igloos available that can be issued to the OR for surgery that will maintain blood at appropriate temperature for 8 hours.) Any blood not used, **MUST** be returned in the igloo to the Blood Bank.

**LSUHSC-SHREVEPORT
CLINICAL LABORATORY POLICY AND INFORMATION MANUAL**

7.4 Blood may be issued to Emergency Room following the Trauma Dispensation Protocol. Units will be issued on waiver in an igloo to the trauma courier. Blood may remain in igloo for a maximum of **one (1) hour**. Testing on units/patients will follow current Emergency Dispensation protocol.

8 BLOOD RETURN POLICY

Blood will not be accepted for credit back in the Blood Bank after it has been out over thirty (30) minutes. The only controlled refrigerators in this hospital for blood are located in the Transfusion Service and in the 3rd floor OR suite. No floor refrigerators will suffice. **Blood is issued for immediate transfusion.**

9 TRANSFUSION REACTIONS

Any adverse symptom or physical sign occurring during transfusion of blood or its' components should be considered life-threatening. An adverse reaction is defined as any unexpected outcome resulting either during or within several hours following the blood transfusion. This includes, but is not limited to, any of the following:

- a. fever (2 degrees over baseline)
- b. chills
- c. back pain
- d. dyspnea, including wheezing
- e. hypotension
- f. hemoglobinuria
- g. bleeding
- h. respiratory distress

When a transfusion reaction is suspected:

- 9.1 STOP THE TRANSFUSION.
- 9.2 Notify responsible physician.
- 9.3 Keep I.V. line open with infusion of normal saline.
- 9.4 Check all forms, labels, and patient identification to determine if the patient received the correct blood or component.
- 9.5 Report the suspected transfusion reaction to blood bank personnel immediately.
- 9.6 Send completed transfusion reaction form, blood samples (one red top, one purple top), discontinued bag of blood, administration set, and all of the IV solutions to the blood bank.

10 SERVICES OFFERED

Serological Procedures: ABO and Rh typing, crossmatch/type and screen, antibody screen, direct coombs, antibody identification, antigen types, elutions, cold agglutinin titers, and antibody titers.

Components: Fresh Frozen Plasma, Apheresis Platelets, Cryoprecipitate, Leukopoor Red Cells, Rh(D) Immunoglobulin, and Irradiated Blood and components.

LSUHSC-SHREVEPORT
CLINICAL LABORATORY POLICY AND INFORMATION MANUAL

B4

**LSUHSC-SHREVEPORT
CLINICAL LABORATORY POLICY AND INFORMATION MANUAL**

The Transfusion Service is required to maintain an emergency level of blood. Sometimes the blood level goes below this minimum. When the level drops below this minimum, the Medical Director or in his absence, the Manager of the Transfusion Service, will confer with requesting physician for elective cases. The Emergency Department will also be notified.

11 AUTOLOGOUS AND DIRECTED DONORS

Patients needing or desiring autologous blood and/or directed donors for transfusions will need to have their physician complete a request form (obtained from the Blood Bank). The patient and/or directed donors must go to Life Share Blood Center to have units drawn. After testing is completed, these units will be sent to LSUHSC and reserved for the patient. Directed units will be reserved up to 7 days prior to expiration unless a patient's condition dictates otherwise. Autologous units will be reserved for the patient/ donor until expiration.

12 Special Procedure Area

The special procedure area at LSUHSC will perform therapeutic phlebotomies and apheresis procedures as necessary. Patients for therapeutic phlebotomies must have a written order from their physician. Patients are then evaluated by personnel in the special procedure area to assess ability to undergo procedure. Apheresis procedures include plasma exchanges and red cell exchanges. Apheresis procedures must be scheduled in advance through Apheresis Services. The special procedure area is staffed Monday thru Friday, 8:00am to 4:00pm. Apheresis services are available after hours on emergency basis only.

LSUHSC-SHREVEPORT
CLINICAL LABORATORY POLICY AND INFORMATION MANUAL

B5

**LSUHSC-SHREVEPORT
CLINICAL LABORATORY POLICY AND INFORMATION MANUAL**

13 ORDERABLE TESTS

LIS Code	Specimen Type	Tube Type	Special Instructions or Information	Patient Preparation
ABRH	Blood	Pink Top - 7 ml	ABO and Rh	None
AGI	Blood	Pink Top - 7 ml	Antigen typing	None
ARHG	Blood	Pink Top - 7 ml	Antenatal RHOAM	None
COLD	Serum	Red Top - 5 ml	Cold Agglutinin. Specimen must clot in 37°C water. Call lab before collection. 24 hr. turn around time.	
CRDBD	Cord Blood	Pink Top - 7 ml	Cord Blood - Hold	None
CDEV	Cord Blood	Pink Top - 7 ml	Cord Blood evaluation	None
DAT	Blood	Lavender	Direct antiglobulin test	None
ELUT	Blood	Lavender	Elution	None
NCM	Blood	Pink Top - 1 ml	Neonatal crossmatch (Patient <4 mo. old)	None
PREN	Blood	Pink Top - 7 ml	Prenatal ABO, Rh, antibody screen	None
RHEV	Blood	Pink Top - 7 ml	RHOAM evaluation	None
TIT	Blood	Pink Top - 7 ml	Titer: Must have clinically significant antibody	None
TYHD	Blood	Pink Top - 7 ml	Type and Screen TYPENEX labeling required, held 48 hours	None
XM	Blood	Pink Top - 7 ml	Crossmatch TYPENEX labeling required, held 48 hours	None

14 NONORDERABLE TESTS

Plasma Exchange	Scheduled through Apheresis Services	***
Red Cell Exchange	Scheduled through Apheresis Services	***
Therapeutic Phlebotomy	Scheduled through Special Procedures Services	***

*** contact Apheresis services

15 NURSING POLICIES

Typenex, Blood/Blood Component Transfusions: see Nursing Manual Sections

B6

**LSUHSC-SHREVEPORT
CLINICAL LABORATORY POLICY AND INFORMATION MANUAL**

16 SEROLOGY

The serology area of the clinical lab performs testing on patients on the day shift every day.

All blood specimens are collected by phlebotomists, doctors, medical students, or nurses and sent to the laboratory office. All specimens must be correctly labeled with the patient's name, medical record number, date, initials of collector, and time collected. Note: Rapid HIV 1/2 is only available for certain instances- bloodborne exposures, OB patients who have had no prenatal testing performed, amniocentesis patients prior to possible delivery, and to recheck results of certain high risk OB patients.

Tests performed are noted below:

LIS Code	Specimen Type	Tube Type	Special Instructions or Information	Patient Preparation
CMVPA	Blood	Red Top - 7 ml	CMV Panel CMV IgM (performed weekly)	None
CORMT	Blood	Red Top - 7 ml	Hepatitis B c Antibody IgM test	None
HBCAT	Blood	Red Top - 7 ml	Hepatitis B Core Antibody test	None
HBSAT	Blood	Red Top - 7 ml	Hepatitis B s Antigen test	None
HBSBT	Blood	Red Top - 7 ml	Hepatitis B Antibody test	None
HCVT HCV	Blood	Red Top - 1 ml	Hepatitis C Antibody test	None
HIV12	Blood	Red Top - 7 ml	Human Immunodeficiency Type 1 & Type 2	None
RPR	Blood	Red Top - 7 ml	RPR (Rapid Plasma Reagin)	None
RHIV	Blood	Red Top - 5ml	Rapid HIV 1/HIV2	None
HTL12	Blood	Red Top - 7 ml	HTLV- 1/2 Antibodies, Qualitative	None
HAVMT HAVM	Blood	Red Top - 7 ml	Hep A Antibody-IgM	
AHP3	Blood	Red Top - 7 ml	Acute Hepatitis Panel (includes HBsAg, HCV, Core M, and HAVAB- M	
MONO	Blood	Red Top - 7 ml	Mononucleosis Screen	
CRYO	Blood	Red Top - 7 ml	Cryoglobulins requires special handling	
TOXP	Blood	Red Top - 7 ml	Toxoplasma Panel currently sent out to reference	

**LSUHSC-SHREVEPORT
CLINICAL LABORATORY POLICY AND INFORMATION MANUAL**

Any positive test results must be confirmed in the next run. Most serology tests are time consuming tests, therefore results are not available "STAT".

B7