

Transfusion Services

EMERGENCY USE OF BLOOD COMPONENTS

PROCEDURE FOR OBTAINING BLOOD DURING AN EMERGENCY

Experienced personnel are available in the Transfusion Service on a 24-hour basis to assist with the provision of blood and blood components during emergencies. Only Transfusion Service employees are allowed access to the blood inventory, or are permitted to issue blood for transfusion.

During an emergency, notify Transfusion Service personnel in a clear and calm manner as to the name and hospital medical record number of the patient (MRN), the nature of the situation, the amount of blood required, and how soon the blood is required. The technologist can then determine the extent to which compatibility testing can be performed.

If the urgency of the blood requirement precludes completion of standard compatibility testing before release of Red Blood Cells for transfusion during an emergency, this will be noted on the Unit Tag. The responsible physician must authorize in writing (using the Emergency Transfusion Request Form – facsimile below) the issuance of blood without compatibility testing during an emergency. It is not absolutely necessary that the physician's signature be obtained prior to transfusion, but it will be required eventually.

Emergency Transfusion Request Childrens Hospitals and Clinics Minneapolis/St. Paul, MN	
Patient Name:	
Medical Record Number:	
Patient's Location:	Date/Time:
Due to the critical condition of this patient, I request the immediate release of blood products for emergency transfusion. I understand and accept responsibility for the increased risks incurred by the lack of complete transfusion testing. (<i>Routine testing will be completed as soon as possible and the attending physician will be notified of any abnormal results</i>).	
Physician Signature:	
<i>Return signed form to Transfusion Service</i>	

In most emergency situations involving hypovolemic patients, the treating physician will transfuse volume expanders immediately, thereby allowing Transfusion Service personnel sufficient time to complete standard compatibility testing. If emergency use of blood is anticipated, direct consultation with Transfusion Service personnel will expedite the provision of the required blood components. Several options are available for obtaining blood under emergency circumstances. As the amount of compatibility testing decreases, the possible risk of transfusing incompatible blood increases. It also must be noted that many hemolytic transfusion reactions have occurred under emergency conditions when routine patient identification procedures are ignored or circumvented. The time required for provision of Red Blood cells in various settings follows:

Timetable for Obtaining Emergency Blood Products		
<i>Time available (approximate minutes)</i>	<i>Blood Bank Can Issue</i>	<i>Extent of Testing Done</i>
< 5	Type, O Rh-neg RBC's	None
5 – 10	RBC's of patient's own ABO and Rh types	Patient's ABO and Rh typing, no crossmatch
15	Crossmatched ABO and Rh specific RBC's. unexpected IgG antibody not ruled out	ABO and Rh typing, Crossmatch, (assuming "immediate spin" crossmatch), no antibody screen
45 - 60 (Assuming no unexpected antibody detection)	Serologically compatible RBC's	Full pretransfusion testing, including antibody screen

GROUP O RED BLOOD CELLS WITHOUT COMPATIBILITY TESTING

If a blood sample cannot be supplied, and/or the patient's blood is not available in the Blood Bank for typing, group O Red Blood cells should be transfused. However, a blood sample should be drawn for typing and crossmatching before transfusion is initiated. Blood Bank personnel will proceed with crossmatching of additional units of blood with the patient's blood specimen and provide group and type specific blood as soon as possible. The use of type specific blood in these situations, rather than group O Red Blood cells, conserves group O Red Blood Cells for patients who must receive it. Transfusion with group O Red Blood Cells usually does not preclude subsequent transfusion with group and type specific blood. Group O, Rh-positive, rather than group O, Rh-negative, Red Blood Cells may be used in some circumstances. Units of Group O, Rh-negative Red Blood Cells are available at all times in the Blood Bank for immediate release for emergency transfusion. Authorization must be signed by the responsible physician and sent to the Blood Bank as soon as possible.

NEW PATIENT BLOOD SPECIMEN REQUIRED – TYPE SPECIFIC BLOOD NEEDED BEFORE CROSSMATCH CAN BE COMPLETE

Approximately 5-10 minutes are required after receipt of the patient's specimen before ABO and Rh type specific blood can be supplied. Determinations of blood group by other facilities cannot be used. Even though blood is released before completion of compatibility testing, all tests will be carried to completion and telephone notification of the results will be given upon completion of testing.

TYPE AND SCREEN PERFORMED WITHIN THE PRECEDING 3 DAYS

Unless the patient has an unexpected antibody directed against red cells, approximately 5 minutes are required to provide crossmatched blood.

CROSSMATCHED BLOOD AVAILABLE IN THE BLOOD BANK

The component need only be transported to the patient care unit prior to transfusion. As always, patient name and registration number are required in order to secure the release of blood components from the Blood Bank.

BLOOD COMPONENTS FOR PATIENTS BEING TRANSPORTED

Forward completed Transfusion Record Forms for units transfused in transit to the Blood Bank. The Blood Bank will notify the original institution of the disposition of the components. Previously transfused blood may complicate the determination of the patient's true group and type. If the previous transfusion occurred elsewhere, provide the name of the transferring hospital to Blood Bank personnel as this information will often prove to be of value in resolving such problems.

If blood components are required for patients being transported by helicopter or ambulance originating at Children's Hospitals and Clinics, the Blood Bank will provide a maximum of two units of group O, Rh-negative Red Blood Cells, packed in a transport cooler. The transport cooler will contain cooling packs to maintain the temperature between 1 and 6 degrees Celsius. A temperature monitor will be attached to each unit or be packed in the container. Unused blood and the transport cooler must be returned to Children's Blood Bank/Transfusion Service. Blood components may be sent along with patients transferred from other facilities. During transport the Red Blood Cells must be cooled with wet ice. Untransfused units that are not needed for transfusion should be sent to Children's Blood Bank/Transfusion Service or returned to the originating facility.