



LB.63 The blood bank and transfusion services implement a system for pre-transfusion testing of the recipient.

- LB.63.1 Pre-transfusion testing is performed on a specimen collected from the recipient with every admission and within three days of the scheduled transfusion time.
- LB.63.2 There is a consistency between patient's current and historical records (including group/type, antibody screening). Discrepancies are resolved before performing compatibility testing.
- LB.63.3 When there is no history for the patient in the transfusion services records or computer system, two determinations of the patients ABO/RhD must be made on two specimens collected during the current admission.
- LB.63.4 Pre-transfusion testing includes:
 - LB.63.4.1 Determination of the patient's forward ABO group (RBC grouping).
 - LB.63.4.2 Determination of the patient's reverse ABO group (Serum Grouping).
 - LB.63.4.3 Determination of the patient's Rh-D type.
 - LB.63.4.4 Detection and Identification (if applicable) of unexpected antibodies to red cell antigens.

Standard Intent:

The blood bank must have a policy defining the maximum interval during which a recipient sample may be used for crossmatching. This may not exceed 3 days in patients who have been transfused or pregnant within the past 3 months, or if relevant medical/transfusion history is unknown or uncertain. The day of sample draw is day 0. The ABO/Rh-D type of the patient's red blood cells must be determined by an appropriate test procedure. Tests on each sample must include forward and reverse grouping. The recipient serum/plasma must be screened for unexpected RBC antibodies including incubation with reagent RBC at 37°C and read at the antiglobulin phase.

Comparison of records of previous ABO and Rh typing are an essential step. Available laboratory records for each patient must be routinely searched. If no record of the patient's blood type is available from previous determination(s), the transfusion service should be aware that there is an increased probability of an incorrect blood type assignment and, consequently, of a hemolytic transfusion reaction. If a laboratory collects an additional sample for the purpose of verification of patient identity, a repeated antibody screening doesn't need to be performed on this specimen.

LB.64 The transfusion services develop a system for the selection of blood/blood product for transfusion.

- LB.64.1 There are policies and procedures for the selection of blood/blood product for transfusion to ensure the following:
 - LB.64.1.1 The selected red blood cells component is ABO group-specific or ABO group-compatible with the recipient's plasma.



LB.64.1.2 Only Rh-D negative red blood cell components are transfused to Rh-D negative patients.

LB.64.1.3 Identification of the conditions for the release of Rh-D positive red blood cells components to Rh-D negative patients.

LB.64.1.4 If the patient has current or previous history of clinically significant antibodies in the patient serum, the selected red cells must lack the corresponding antigen(s).

LB.64.2 There are policies and procedures for the selection of plasma components for transfusion to ensure the following:

LB.64.2.1 The selected plasma component is ABO group-specific or ABO group-compatible with the recipient's RBC.

LB.64.2.2 Conditions for the release of ABO-incompatible plasma are identified.

LB.64.2.3 In the presence of clinically significant antibody in the donor's plasma, the recipient red cells must lack the corresponding antigen.

LB.64.2.4 If the plasma components are visually contaminated with red blood cells (more than 2 ml of RBC), RBC selection criteria apply.

LB.64.3 There are policies and procedures for the selection of blood/blood components for patients with special requirements that address the following:

LB.64.3.1 The use of leukocyte-reduced cellular blood components.

LB.64.3.2 The use of irradiated-cellular blood components.

LB.64.3.3 Transfusion of known Hemoglobin-S patients.

LB.64.3.4 Massive transfusions.

Standard Intent:

Whenever possible, patients should receive ABO-identical blood; however, it may occasionally be necessary to make alternative selections. If the component to be transfused contains 2 mL or more of red cells, the donor's red cells must be ABO-compatible with the recipient's plasma.

D-positive blood components should routinely be selected for D-positive recipients. D-negative units will be compatible but should be reserved for D-negative recipients. D-negative patients (especially females of childbearing potential) should receive red-cell-containing components that are D negative to avoid immunization to the D antigen and possible HDFN. When ABO-compatible D-negative components are not available for a D-negative recipient, the medical director of the blood bank and the patient's physician should weigh alternative courses of action. Depending on the childbearing potential of the patient and the volume of red cells transfused, it may be desirable to administer Rh Immune Globulin (RhIG) to a D-negative patient who is given D-positive blood.