HEALTH HOLDING

HAFER ALBATIN HEALTH CLUSTER
MATERNITY AND CHILDREN HOSPITAL

Department:	Laboratory and Blood Bank		
Document:	Multidisciplinary Policy and Procedure		
Title:	The Issue of Blood and Blood Components		
Applies To:	Blood Bank Staff, Treating Physicians and Nurses		
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1. PURPOSE:

1.1 To set the procedure and responsibilities for releasing and receiving of blood and /or blood components inside the hospital .
1.2 Acceptance of returned blood or blood components and further release .

2. DEFINITIONS:

2.1 **Cancellation:** the return of blood/blood components to the "available" inventory as soon as the potential need for a transfusion has passed.

3. POLICY:

3.1 Release and Acceptance of blood/blood components inside the hospital should be occurred under strict conditions to ensure safety of the patient .
3.2 The issue process of blood/blood components should ensure accurate identification of intended recipient and required blood components.
3.3 The process ensures the integrity of the donor unit identification label and the recipient identification label.
3.4 The process ensures confirmation that the donor's ABO/Rh is identical with the recipient's, or marked compatible.
3.5 Usually, except in the case of an emergency (or large-volume transfusion) and release to outside facility, blood bank allows the issue of only one unit of blood at a time.
  3.5.1 More than one blood unit can be released during surgery when the other unit is sure to be transfused.
  3.5.2 Several units of platelets and fresh frozen plasma may be issued at a time.
3.6 Issue of multiple blood components for multiple patients at any one time is also not allowed, except the release to outside facility.
3.7 Blood and blood products will be issued to physicians and nurses/ departmental technician.
3.8 The blood bank may receive back (from MCH departments and governmental hospitals) into the blood component inventory those units that meet acceptance specifications.
3.9 Corrective action is taken when nonconforming blood and blood components are released.
3.10 In dire emergencies, blood components may be released before completion of compatibility testing and/or infectious disease testing (NAT and/or Serological testing). Consent of the patient, or next of kin, for transfusion without (NAT and/or Serological testing) must be taken, when applicable.

4. PROCEDURE:

4.1 **General guidelines:**
  4.1.1 The blood ordering panel prompts consideration of whether the patient requires blood with special attributes or restrictions (e.g. leukocyte-reduced).

4.1.2 A new blood compatibility specimen (re-crossmatch) is required every 3 days (expiring at midnight of the 3rd day). since significant new antibodies may arise within 72 h if the patients have been transfused within the last 3 months. The specimen drawn for a re-crossmatch should be drawn no earlier than 2 hours before the re-crossmatch time, to limit unnecessary blood draws from the patient .

4.1.3 Only compatible and completely tested blood and blood components can be released.

4.1.3.1 ABO grouping and Rh typing of the recipient should be confirmed by performing it .

4.1.3.2 Before type specific RBC can be given, there must be two matching ABO/Rh types on file in the blood bank

4.1.3.3 ABO grouping and Rh typing of the donor unit segment should be repeated to be confirmed .

4.1.3.4 Ensures that the donor's ABO/Rh-D is identical with the recipient's or marked compatible .

4.1.3.5 If the same blood group is not available, the patient's physician should accept the substituted blood group available and specify it .

4.1.3.6 Manual checks for comparison with previous records .

4.1.3.7 Donor red cell selection and crossmatching procedures apply.

4.1.3.8 Serologic markers and NAT negativity of blood or blood components units submitted to issue should be confirmed before selection .

4.1.4 Ensure the integrity of the donor unit identification label and the recipient identification label before release.

4.1.5 If a standing blood order is set up for a patient who requires chronic blood transfusion according to a defined protocol (e.g. each time the Hb decreases to < 8 gm/dl) there is still a requirement for a separate "Transfuse" order, prior to each transfusion and also a new blood sample for compatibility testing every 3days.

4.1.6 Transport cooler is preferred for red blood products and fresh frozen plasma issuing.

4.1.7 Platelet products should not be placed in the transport cooler because of temperature storage requirements.

4.1.8 Blood taken from the blood bank should be transfused immediately. If the transfusion cannot be started promptly, return the blood product to the blood bank for optimal storage and re-issue when it is needed.

4.1.9 Blood products must not be stored, even temporarily, in a refrigerator on the ward. These fridges are not specifically designated, monitored, tested, and controlled, as are blood fridges. Only fridges approved and monitored by the blood bank are acceptable as blood fridges .

4.2 Issue and delivery of components to the patient area:

Issue of any blood components is conducted via Hematos software from patient access

At 1st go to patient access then select product request then new order then type the MCH code 2007 then search if the patient data exist on system otherwise type paient name .MRN ,DOB then save the data and join it with file number of the patient then select external examination for blood group ,Rh ,Ab screening then select suitable blood product according to blood group and expiry according to patient diagnosis ,after completion of X MATCH , you have to type result of it in hematos system then you make allocation and issue of components when the nurse come to receive blood from blood bank

4.2.1 Blood and blood products will be issued to physicians and nurses/ departmental technician who have presented proper identification to blood bank technician/ specialist.

4.2.2 Blood bank technician/ specialist checks the cross match register and blood transfusion request and gets the component unit from the storage machine.

4.2.3 The unit should be inspected for (by the person issuing the blood and the person to whom the blood was issued):

4.2.3.1 Expiry (or collection) date.

4.2.3.2 The integrity of the bag - check for leaks.

4.2.3.3 Evidence of unusual discoloration (segments appearing lighter or darker in color than the primary bag contents, purple color to the red cells or cloudiness), gross lipaemia.

4.2.3.4 The presence of large clots, white particulate matter in the blood bag.

4.2.3.5 Grossly visible aggregates in platelet concentrate.

4.2.4 Transfusion Recipient/ Blood bag Identification: For each unit of blood or component, both the person issuing the blood and the person to whom the blood was issued must confirm that the identifying information on the "blood & blood products request & release form", the cross match register and blood bag are all in agreement and must include:

4.2.4.1 Two independent patient identifiers, one of which is usually the patient's name and the other is file number (ID).

4.2.4.2 The recipient's ABO group and Rh type.

4.2.4.3 Donor's ABO group and, if required, Rh type. The donor's ABO/Rh must be identical with the recipient's, or compatible.

4.2.4.4 The blood component unit number.

4.2.4.5 The interpretation of cross match tests (if performed).

4.2.4.6 Type, quantity and expiration (or collection) date of the blood component.

4.2.4.7 Transfusion transmitted disease (TTD) negative result label.

4.2.4.8 Technician signature must appear on the "BLOOD & BLOOD PRODUCTS REQUEST & RELEASE FORM" issued with the unit of blood component.

4.2.4.9 The date and time of issue.

4.2.4.10 Special transfusion requirements (e.g. leukocyte-filtered, washed, or antigen negative component).

4.2.4.11 Blood product for transfusion label: is attached to the bag to be transfused indicating: The intended recipient's two independent identifiers, Bag number, Interpretation of compatibility tests, if performed, Quantity of the product and TTD negative result

4.2.5 If all checks are correct, the unit may be issued.

4.2.6 Any and all discrepancies must be resolved before issue.

4.2.7 The person issuing the blood, the person to whom the blood was issued, and the destination of the unit must be identified. Both the person issuing the blood and the person to whom the blood was issued must sign in the "blood & blood products request & release form" and Issue of cross matched blood form. In addition, the person to whom the blood was issued must sign in the cross match register.

4.2.8 The person to whom the blood was issued must get a paper of "blood & blood products request & release form" and place the unit in a protective container to contain any spillage if the bag breaks.

4.2.9 The person issuing the blood attaches the 'issue of cross matched blood' form to the copy of the "blood & blood products request & release form" and keeps all documents in their specified files.

4.3 **Delay in starting transfusion:**

4.3.1 The unit should be returned to the blood bank (by nurse or departmental technician) for proper storage.

4.3.2 The time, that RBCs unit can be out of the controlled storage environment before it is considered unsuitable for reissue, is usually 30 minutes.

4.3.3 If a refrigerated component rises above 10 ºC, the unit must be infused within 4 hours of the time it was issued from the blood bank, or it must be discarded. Blood bags should be returned to the blood bank for disposal with the time of return documented. OVR is made by supervisor of blood bank technicians.

4.3.4 Components should never be stored or held in a patient care unit unless there is a controlled, monitored environment for components.

4.3.5 The transfusion of FFP and platelet concentrate should commence as soon as possible to preserve the maximum activity of platelets or coagulation factors.

4.4 **Return of blood components and reissue:**

4.4.1 The blood bank may receive back into the blood component inventory those units that meet acceptance specifications. These conditions include the following:

4.4.1.1 The primary container has not been entered.

4.4.1.2 The appropriate temperature has been maintained and the component has been returned within a prescribed time frame from issue.

4.4.1.3 at least one sealed segment remains integrally attached to the container of RBCs.

4.4.1.4 Visual inspection of the component.

4.4.2 Platelets returned to the blood bank greater than 30 minutes from issue may be placed back into

inventory following a visual inspection of the component. The platelet bag can be held in front of a light source and gently squeezed to check the "swirling" appearance of the platelets. If "swirling" is evident and/or there is no visible clumping of the platelets, they may be returned into inventory. The platelet component should be agitated for at least 10 minutes before reissue.

4.4.3 The cause of returning should be written on the Issue of cross matched blood form (00061) by the clinician to be accepted by blood bank.

4.4.4 Documentation of all acceptable or unacceptable conditions must be carried out by blood bank technician or specialist who receives the returned unit. Use "Returned blood component units form".

4.4.5 Depending on the criterion not met, the component discarded in a biohazard container. If the component is accepted, it may be returned to the general blood inventory and reissued.

4.5 **Blood release in an emergency:**

4.5.1 Refer to the "the emergency release of incompletely tested blood and blood components" policy (LB-MPP-238).

4.6 **Released nonconforming blood and blood components:**

4.6.1 Blood and blood components, that are determined after release not to conform to specified requirements, shall be evaluated to determine the effect of the non-conformance on the quality of the product.

4.6.2 Corrective action taken.

4.6.3 Immediately call the ward, treating doctor or the hospital about the case and the non-conformance.

4.6.4 Try for retrieval of the unit.

4.6.5 If transfusion was started, transfusion must be stopped and the bag is returned to blood bank.

4.6.6 OVR shall be written.

4.6.7 Maintain records of the nature of non-conformances and subsequent actions.

4.7 **Release of blood and blood components for transfusion to outside facilities:**

4.7.1 Refer to "Receiving/Sending Blood Products From/To Outside Facilities" chapter (LB-IPP-203).

4.8 **Cancellation:**

4.8.1 If antibody screen of the patient is negative with no history of significant antibody, any x-matched blood not used after 24 hours should be regarded as cancelled.

4.8.2 If antibody screen of the patient is positive, any x-matched blood not used after 48 hours from sample withdrawal should be regarded as cancelled unless the blood bank is contacted to re-crossmatch the blood.

4.8.3 In emergency situations, already x-matched blood can be re-cross matched for another patient in greater need. Blood bank technician will inform the ward about cancellation.

5. MATERIALS AND EQUIPMENT:

5.1 **Forms and Records:**

5.1.1 Cross match register

5.1.2 Blood & Blood Products Request & Release Form

5.1.3 Issue of cross matched blood form

5.1.4 Blood product for transfusion label

5.1.5 Returned blood component units form and file

5.1.6 Hematos software system.

6. RESPONSIBILITIES:

6.1 Blood bank supervisor (or his deputy) is responsible for releasing and acceptance of blood/blood components to/from outside facility.

6.2 It is the responsibility of the blood bank staff member to visibly check that the information on the transfusion request matches information on the blood product label and recheck the negativity of unit serological tests before release or receiving .

6.3 The staff receiving the blood product has to follow the related policy and procedure.

6.4 The treating physician has to follow the related policy and procedure.

7. APPENDICES:

7.1 Issue of cross matched blood form
7.2 Blood product for transfusion label
7.3 Returned blood component units form

8. REFERENCES:

8.1 The Unified Practical Procedure Manual For Blood Banks In The Arab Countries, 1434-2013.
8.2 The Standard Policy For Blood Banks In The Kingdom Of Saudi Arabia, 1st edition, 1435-2014.
8.3 National Standards For Clinical laboratories and Blood Banks, 1st edition, 2015.
8.4 AABB Technical manual, 18th edition, 2014.
8.5 AABB Standards for Blood Banks and Transfusion Services, 30th edition, 2016.
8.6 Mollison's Blood Transfusion in Clinical Medicine; 12th edition, 2014.
8.7 Good Manufacturing Practice for Blood Establishments, Version 2.0, May 2019, Saudi FDA.

9. APPROVALS:

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