

Civil Hospital Gurgaon	Standard Operating Procedure No 19	Document No CH/GGN/BB/13
	BLOOD BANK	Date of Issue: 01-01-2016

SOP 17 BLOOD BANK

1. Purpose:

To ensure the availability of safe blood unit with facility for compatibility testing, storage and issue of blood in an aseptic environment on 24*7 basis through trained professionals.

2. Scope:

To store and issue collected blood to patient, organizing blood donation camp, counseling for blood donation and testing of blood for HBsAg, HIV, VDRL and MP.

3. Overall Responsibility: Blood Bank In-Charge/Pathologist.

4. Procedure:

Sr. No	Activity/ Description	Responsibility	Ref. Doc. / Record
4.1	Collection of Blood The blood is collected only by a licensed blood bank by: ☐ Organizing blood donation camps. ☐ Through Replacement Blood donation camps shall be organized to augment blood stocks. Donor, organizer / medical social worker of the blood bank shall contact offices, institutions, industries, social and religious organizations, colleges and schools to collect need based volume of blood from targeted group of donors located at a particular venue at regular intervals. Record shall be maintained for such camps indicating details of the blood collected, donor details etc	Blood bank I/C	Blood donor record
4.2.1	Donor Selection Blood shall be accepted only from voluntary, non remunerated, low risk, safe and healthy donors.	Physician	
4.2.2	Collection of Blood from Donors	Physician and	

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	Blood shall be drawn from the donor by a qualified physician or under supervision by trained assistant. Each bag is duly identified with date, Donor's details. The blood so received from the donor shall be kept in temporary cold storage/container or properly labelled in untested blood area.	blood bank assistant	
4.2.3	Testing of Donated Blood The blood received from the donor shall be verified for: ☐ Determination of ABO group. ☐ Determination of Rh type ☐ Infectious diseases tests (HIV, hepatitis, Malaria, Chicken pox etc.) Record shall be maintained for the name of the donor along with the results. The blood group & Rh are indicated on the bag along with registration number given in blood bank register at which the details of the donor & blood sample are recorded.	Technician	Blood bank record
4.2.4	Preparation of Blood Components The sterility of all components shall be maintained during processing by the use of aseptic methods and sterile disposable bags with anticoagulation solutions.		
4.2.5	Labelling A system is in place to ensure that all storage areas are labelled and blood is shifted to final container only when all mandatory testing is completed as per requirements. Blood group O – Blue Blood group A - Yellow Blood group B – Pink Blood group AB – White		
4.2.6	Storage and Expiry of Blood and Its Components		

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	A designated area shall be used for storage of untested tested and expired blood. The area shall be properly labeled and the access to such areas shall be controlled. Adequate alternate storage facility with written display of instructions to maintain the blood and components at a particular temperature conditions. In the event of failure of power UPS shall be provided in the area of preservation. The storage equipment are so placed that the temperature alarm (beyond the prescribed limits) is audible to the blood bank personnel to ensure immediate corrective action.		
4.2.7	Disposal of Blood After blood collection, sample remaining in the tubing is collected in test tubes for infectious disease screening and cross match. The needles containing portion of the tube cut down and disposed into sharp disposal containers. Units deemed unsuitable for transfusion, those not transfused and those designated for disposal for any reason, shall be disposed of by an appropriate method in accordance with all applicable regulations and requirements. All such components/bloods shall be disposed off as per Bio Medical Waste (Management & Handling) rule.		Bio-Medical Waste (Management & Handling) Rules
4.2.8	Transportation of Blood and Its Components Transportation may be needed from the place of collection to the blood bank. Whole blood, red cell concentrate, should be transported in a manner that will maintain a temperature of $10^{\circ}\text{C} \pm 2^{\circ}\text{C}$. Platelet/ granulocyte concentrate stored and		

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	transported at $22C \pm 2C$. Blood Components required to be stored frozen shall be transported in a manner that their frozen status is maintained.		
4.3.1	Blood Requisition: During critical situation where doctor decides that the patient is at great risk and requires transfusion, blood requisition forms is completed by the nurse in-charge, after notification of the doctor and sends it to the blood bank. The information is recorded on the blood bank register.	nurse in-charge	Blood Requisition form Blood Bank register
4.3.2	Sample collection: The blood group & Rh of the patient are tested through sample collected by the blood bank technician either in blood bank or in inpatient department based on the patient's condition. Sample collection & cross matching is done in a hygienic environment.	Blood bank Technician	
4.3.3	Identification of sample: Sample drawn from the patient is identified by putting a label mentioning name, age & registration no. of patient on the sample collection tube.		
4.3.4	Previous records Previous record of ABO and Rh type of patient shall not used for cross matching; a cross matching report must be generated and name of person performing test and generating report must be recorded.		
4.3.5	Surgeries: Cross-match procedure is done before surgery so that the blood would be quickly available if needed.		
4.4	Other blood components:		

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	If there is an order for a blood component that Blood Bank does not have on hand and will have to prepare the same, the physician is notified as to the status or time frame in preparing that component.		
4.5	Discrepancy of Blood type: In case of any discrepancy noticed in the blood group type, the following step must be followed: If in testing a patient's blood, it is found that the type does not match what is on record in the blood-bank; all the appropriate people must be notified, specially the physician concerned, so that appropriate measures can be taken to prevent effect on the patient.		
4.6	Issue of Blood After successful testing of blood sample and cross matching, blood is issued to the indenter. The details are entered in blood bank register		Blood Bank Register
4.7	Blood Transfusion Reactions: If after transfusion any transfusion reaction is noticed in patient it should be immediately reported to blood bank by nurse I/C and case should be investigated by blood bank	Nurse I/C blood bank physician	
4.7.1	Investigations in a Case of Transfusion Reaction The occurrence of a transfusion reaction should be immediately reported to the blood bank. The reporting authority should send: (1) A post transfusion blood sample, (2) A post transfusion urine sample, (3) A pre transfusion blood sample, if available, (4) Blood bag along with tubing.	Nurse I/C	

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4.7.2	To overcome transfusion reactions the blood bank should have: • The patient's original cross match specimen, which is normally preserved for at least 48 hours after dispatching the blood or its products. • The donor's pilot tubing/bottle, this should also be preserved for 48 hours. • The entire laboratory and blood bank records. • The blood should take immediate steps to establish the cause of the transfusion reaction. • Proper records must be maintained and the results should be communicated to the concerned department.	Blood bank I/C	
4.8	License of Blood Bank The copy of license for storage of blood is available with the Blood bank In-charge and shall be renewed periodically.	Medical Officer- Blood Bank	Copy of Blood Bank License

5. Records -

S.No	Record Name	Record No.	Retention Period
1	Blood bank Register		
2	Blood collection Record		
3	Blood testing record		

6. Process Efficiency Criteria -

Sr No.	Activity	Process Efficiency Criteria	Benchmark/Standard/Target
1	Licensure	Availability and timely renewal of Blood bank license	
2	Service	No. of Patients referred due non	

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	Provision	availability of blood unit	
3	Service Provision	No. of units issued without replacement	
4	Screening	No. of Units discarded during the screening procedure	
5	Collection	Proportion of blood collected through voluntary collection in camps.	
6	Storage	No. of Blood units expired	
7	Issue	Turn Around Time for Blood issue	

7.0 References Documents

- Standards for Blood Banks & Blood Transfusion Services- NACO
- Voluntary Blood Donation – An operational guidelines- NACO
- Guidelines for setting up the blood storage unit – NACO
- Bio-Medical Waste (Management & Handling) Rules

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