Audit Report on Blood Transfusion Safety in the Maldives

2025

Quality Assurance and Regulations Division

Ministry of Health

Contents

Document control

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1. Introduction

Blood transfusion is a critical clinical intervention that can be lifesaving when used appropriately and safely. However, it carries inherent risks, including transfusion reactions, transmission of infections, and complications arising from improper administration or documentation. Similarly, blood banking practices also plays a major role in safety of the blood unit transfused to the patient. Ensuring the safety and effectiveness of blood transfusions is therefore a key priority in maintaining high standards of patient care and minimizing preventable harm.

This audit was conducted to evaluate current blood banking and transfusion practices within health facilities across the country against established national and institutional guidelines. The primary focus of the audit was to assess compliance with safety protocols throughout the transfusion process, ranging from the initial request and laboratory testing, donor selection to administration, monitoring, and post-transfusion documentation.

By identifying areas of good practice and those requiring improvement, this audit aims to evaluate blood banking, transfusion safety, and quality improvement initiatives within health facilities. The findings will contribute to ongoing efforts to optimize patient outcomes and uphold the highest standards of clinical governance.

2. Participation

Out of the health facilities shared this audit, only 15 health facilities participated in this audit. Table 1 shows percentage of participation from health facilities. Apart from this Maldivian Blood Services participated in this audit.

Table 1: Participation

Ha. Atoll	✓	F. Atoll	✓
Hdh. Atoll	✓	Dh. Atoll	×
Sh. Atoll	✓	Th. Atoll	✓
N. Atoll	✓	L. Atoll	✓
R. Atoll	✓	Ga. Atoll	✓
B. Atoll	✓	Gdh. Atoll	✓
Lh. Atoll	×	Gn. Atoll	×
Aa. Atoll	✓	AEH	✓
Adh. Atoll	✓	ADK	✓
V. Atoll	×	MBS	✓
M. Atoll	×	HMH	✓
IGMH	✓		

3. Audit Objectives

- To assess the availability and application of donor selection and deferral criteria, and evaluate compliance with established institutional guidelines.
- To monitor blood banking practices, including collection, storage, and the preparation of blood components.
- To evaluate blood transfusion practices within healthcare facilities, focusing on patient assessment, management of transfusion reactions, and documentation standards.
- To identify gaps and opportunities for improvement and staff training.

4. Methodology

An audit tool was developed based on the national guideline for the management of transfusion-dependent thalassaemia in the Maldives, the national blood policy, and international best practices. This tool was disseminated to all Atoll and regional hospitals. Audit tool used for this audit is attached in annex 1.

An online orientation session was conducted for patient safety focal points at the main health facility on every atoll, providing guidance on how to accurately complete all sections of the audit tool. Following the session, the tool was officially shared with the facilities, and a two-week deadline was given for submission of the completed audit forms to Quality Assurance and Regulations Division (QARD)

5. Audit Criteria & Standards

Criterion	Standards/benchmark
Blood donor selection and deferral criteria	- Management of transfusion dependent thalassaemia in the Maldives - National blood policy - National clinical use of blood - NABH accreditation criteria.
Blood donor screening and donation session	
Storage and stock management	
Blood compatibility, cross matching and component preparation	
Blood transfusion	
Management of adverse transfusion reactions	
Quality control and quality assurance	
Donor recruitment and education	

6. Audit findings

The audit findings are categorized into six key subsections, each reflecting a specific area assessed during the audit. These findings are based on benchmarking against national guidelines and international best practice standards as mentioned in section 5 of this report.

Chapter 6 of Act No. 29/2025 Health Services Act, mandates Maldivian Blood Services (MBS) as the main institution operated under the Ministry, within the national health care system, to provide blood transfusion services, collect and store blood, and conduct various blood-related tests and research. With this regard MBS published national blood policy in 2018, which outlines standards for quality management system for recruitment, collection, processing and Transfusion Transmitted Infection (TTI) testing, storage, compatibility testing, transport and administration of blood in well-equipped premises.

7. Analysis

7.1 Blood donor selection and deferral

This section of the audit aims to investigate availability of donor selection and deferral criteria, the donor eligibility criteria being used at the facility, mandatory informed consent, documentation of donor selection and deferrals, and notification of deferrals to higher authority when required. Among the questions in this section, analysis was focused on identifying the donor eligibility criteria that is being used at facility level. And the result showed significant variations in donor eligibility criteria being used at different health facilities as shown in box 1. The findings are alarming and requires immediate corrective action from all relevant authorities.

Box 1: Current donor eligibility criteria used in different health facilities

Donor eligibility criteria being used by different health facilities

- Age
- Age between 18-60
- Weight >50kg
- Temperature
- Pulse
- Blood Pressure
- Age above 18 years
- Hb. >12.5mg/dl
- Hb level >13mg.dl
- Hb above 11mg/dl
- Donors should be free from Transfusion Transmitted Infections
- Blood donation interval should be at least 3 months
- Physical appearance
- Donor should have good health
- Not donated blood for the past 12 weeks
- No history of taking anticoagulants

In international best practice 3 main eligibility criteria re being used widely as shown in box 2. Additionally, the current practice from Central Blood Bank (CBB) is also aligned with international best practice. According to international standards, a donor's Hb level should be above 12.5 g/dL to be considered eligible for blood donation.

Box 2

The 3 donor eligibility criteria

1. Age above 18 years
2. Haemoglobin (Hb) above 12.5mg/dl
3. Weight above 45kg.

7.2 Donor screening and blood donation session

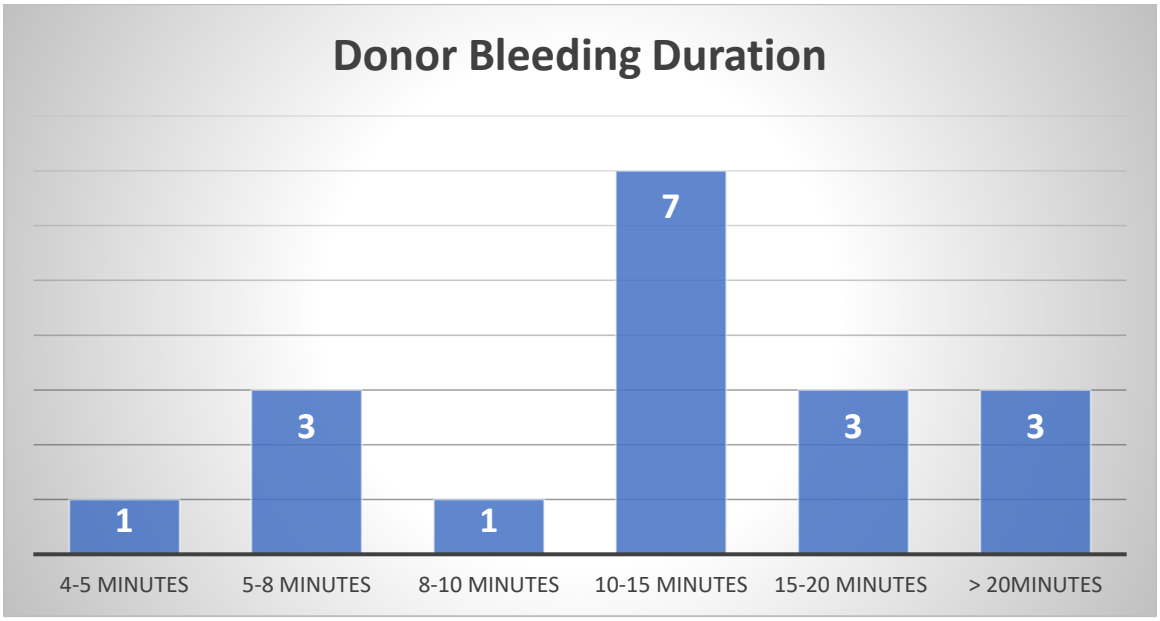
In this section of the audit assessed Transfusion Transmitted Infection (TTI) screening I blood donation and the due process upon a positive result, duration of donor sessions, use of automated or manual method for blood mixing, calibration of blood mixers, duration of storage of blood collection bags after opening aluminum foil, donor assessments before blood donation, details of short blood and the volume of blood collection in each type of blood is being assessed.

However, the analysis focused on the critical 6 main areas of this section and they are duration of donor bleeding, method of blood mixing and calibration, donor assessments prior to donation, duration of blood bag storage, volume of blood collection and blood stock management.

7.2.1 Duration of donor bleeding (donor session)

Donor session in this audit is referred to the duration it takes for donor bleeding starting from time of venipuncture to end of blood collection. The duration of blood donation session is not being identified in the national blood policy. On this issue, International Red Cross and red Crescent Societies define duration of donor session as 8-10 minutes. However, it is evident that the current practice widely being used across health facilities are not aligned with international best practice and the results are summarized in figure 1.

Figure 1: Time differences on donor session



The result showed that 7 of the health facilities stick to the time duration of 10-15 minutes of donor bleeding while some facilities reported a duration of 15-20 minutes and another 3 health facilities reported more than 20 minutes of donor session. International best practice says the donor bleeding session should not exceed 15 minutes as a prolonged period exceeding 15 minutes could indicate a problem with the flow or an issue with the collection process. Similarly, a very quick collection might indicate arterial puncture which is not desired. Therefore, the issues in duration of blood collection needs urgent corrective intervention.

7.2.2 Method of blood mixing and Calibration of blood mixers

In today's practice, automated blood collection monitors are being widely used in blood banks for blood collection. According to NABH (2016) annual maintenance should be undertaken preferably for all equipment with the suppliers, including preventive maintenance and calibration. However, frequency of performance checking is required in each day of use. Records should be maintained for all the equipment with the labels identifying the equipment, calibration status and due date of calibration.

However, this audit revealed that manual method is being widely used across health facilities, and in the institutions where automated systems are being used, calibration of the blood mixers is not being carried out. The blood mixer calibration has not been conducted in most health facilities, primarily due to a lack of staff awareness regarding its importance. The absence of calibrated blood collection monitors is attributed to insufficient staff knowledge about the necessity and recommended frequency of calibration of blood collection monitors being used in their facilities. This necessitates immediate corrective action.

7.2.3 Donor assessments

There are set of examinations that need to be carried out on a prospective donor before commencing blood donation. The following are set of examinations recommended by NABH (2016)

1. Donor should appear to be in good health.
2. Age of the donors should be between the age of 18 and 65 years.
3. Haemoglobin or packed Cell Volume (Haematocrit): The hemoglobin should be not less than 12.0 gm/dl or the packed cell volume (Haematocrit) should be not less than 36%.
4. Weight Blood collection from donors weighing 45-55 Kg should be 350 ml blood and from those weighing 55 Kg and above should be 450 ml.
5. Blood Pressure The systolic blood pressure should be between 100 and 160 mm of mercury and the diastolic pressure should be between 60-90 mm of mercury.
6. Temperature should not exceed 37.50C/ 99.5oF Pulse should be between 60 to 100 beats per minute and regular.
7. Donor skin the skin at the venipuncture site should be free of any skin lesion. Scar indicative of addiction to narcotics or infection as well as marks of repeat venipuncture.
8. Examination of respiratory system, cardiovascular system and abdomen should be carried out if necessary.

Above mentioned are the set examinations that need to be performed on blood donors before the donation sessions. However, this audit has revealed a lack of standardized procedures for donor assessment before blood collection. Significant discrepancies were observed across health facilities, with some facilities conducting comprehensive assessments, while others limit evaluations to basic

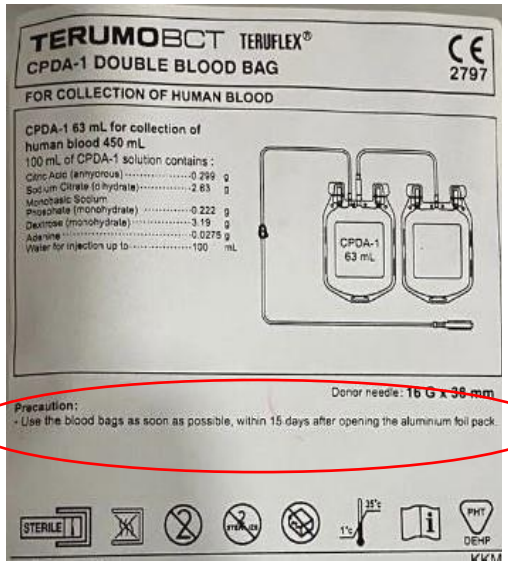
vital signs. This inconsistency highlights the urgent need for intervention and standardization by the relevant authorities.

7.2.4 Blood collection bag storage

Blood collection bags should be used within 15 days of opening their aluminum foil pack to maintain their sterility and prevent bacterial contamination. This is because once the foil is opened, the bag is no longer sealed, and there's a risk of the environment introducing microorganisms. The 15-day limit helps ensure the integrity of the blood for transfusion and patient safety.

This audit revealed significant variations in the storage duration of blood collection bags across different health facilities, as shown in Table 2. The storage period ranged from 2 days to 1 month. Discarding collection bags after only 2 days of opening aluminum foil or original bag may results in unnecessary wastage, while extended storage beyond the recommended period increases the risk of contamination. In some cases, the storage duration exceeded the limits advised by manufacturers, as illustrated in Figure 2. This situation requires prompt corrective measures to ensure compliance with best practices.

Figure 2: Duration of storage recommended by manufacturer once aluminum foil is opened



Use the blood bag as soon as possible, within 15 days after opening the aluminum foil pack

"Manufacturer recommendation"

Table 2: Duration of blood bag storage practices in health facilities.

Health Facility	Time of blood bag storage after aluminium foil is open
Ha. Atoll	No data provided
Hdh. Atoll	15 days
Sh. Atoll	Unrelated answer
N. Atoll	Maximum 2 days
R. Atoll	Unrelated answer
B. Atoll	1 month
Aa. Atoll	1 month
Adh. Atoll	Unrelated answer
F. Atoll	7 days
Th. Atoll	Until all bags are occupied
L. Atoll	15 days
Ga. Atoll	Use immediately
Gdh. Atoll	15 days
AEH	15 Days
HMH	15 days
ADK	Till blood bag expiry
MBS	15 Days

7.2.5 Volume of blood collection

Volume of blood collected should be proportionate to the volume of anti-coagulant, with ±10% variation and should not exceed 10 ml/kg body weight limited to a volume of 500 ml. Units of blood where volume collected is out of the permitted limits should not be used for transfusion. No attempt should be made to collect blood from such donor during the same session. (NABH, 2016). The current practice of volume of blood collection are summarized in table 3.

Table 3: Current practice on volume of blood collection

Current practice	No of health facility
350- 380ml 450-495ml	1
+/- 10% for each type of bag volume	4
50+ or – for each blood bag	2
Same volume	6
350ml bag – 460ml of blood collection 450ml bag -565ml of blood collection	1
250ml bag -170ml of blood collection 350ml bag -270ml of blood collection 450ml bag -350ml of blood collection	3

The figures in the table are alarming and necessitates immediate corrective action in facilities with high or low volume collections. According to international best practices and WHO guidelines, blood collection should match the bag's intended volume within a specified tolerance, typically ±10% of the stated bag volume. This ensures the safety of both the donor (preventing excessive blood loss) and the quality of the blood product (ensuring optimal anticoagulant-to-blood ratio). The below box (box 3) are findings from table 3 with comparison with international best practice.

Box 3: Analysis of current volume of volume of blood collection

Current Practice	No. of Health Facilities	Analysis Compared to Best Practice	Remarks
350–380ml 450–495ml	1	Within the ±10% range	Recommended
±10% for each type of bag volume	4	Matches best practice exactly	Recommended
±50ml for each bag	2	Slightly looser tolerance, but still acceptable	Acceptable
Same volume (no strict tolerance indicated)	6	Acceptable if actual collection aligns closely with bag volume,	Acceptable
350ml bag – 460ml collected; 450ml bag – 565ml collected	1	Overcollection (+30% to +25%)—exceeds recommended limits, poses donor safety risk and quality concerns	HIGH VOLUME Not acceptable
250ml bag – 170ml collected; 350ml bag – 270ml collected; 450ml bag – 350ml collected	3	Under collection (around –30% to –20%)—may lead to improper anticoagulant ratio, risking clotting or dilution	LOW VOLUME Not acceptable

7.3 Blood storage and stock management

In this area, the number of blood units discarded and the reasons for wastage were assessed. Several key reasons for discarding blood were identified. However, it is important to note that many health facilities did not report the number of units discarded. Among those that did, only limited details were provided regarding the reasons for wastage. The main reason for wastage was short blood. "Short blood" typically refers to insufficient volume of blood in a collection bag, often due to problems during phlebotomy, such as a vein collapsing. This necessitates staff training on donor bleeding and care of donor during blood collection. In the main tertiary level hospital 94 blood units were discarded due to short blood. From CBB 16 units were discarded due to similar reasons.

7.4 Blood compatibility, cross match and component preparation

In this domain the following are assessed.

1. Availability of standard operating procedure,
2. Types of components used
3. Method of component preparation
4. And types of components transfused within last 6 months.

Among the 4 main areas method of component preparation was the main area analyzed. As shown in figure 3, it is evident that 77% of health facilities use manual method of component preparation. There are advantages and disadvantages of manual method and centrifugation for component preparation. Centrifuges separate components based on density with precision (e.g., plasma, buffy coat, red cells). Manual methods often result in cross-contamination between layers. Automated centrifuge systems often meet regulatory standards required in medical and lab environments (e.g., blood banks, clinical trials). Manual methods may not always meet such stringent guidelines. Therefore, this may require consideration form relevant authorities.

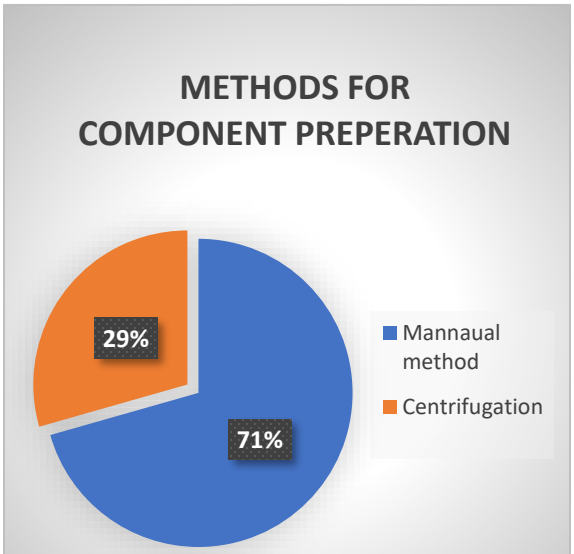


Figure 3: Method of component preparation

Manual method	Centrifugation
- *Manual methods often result in cross-contamination between layers.* - *Manual methods may not always meet such stringent guidelines*	- *Automated centrifuge systems often meet regulatory standards required in medical and lab environments (e.g., blood banks, clinical trials).*

7.5 Blood transfusion

Blood transfusions are generally safe, but there's a risk of complications if the wrong blood type is administered. A proper identification system before blood transfusion is vital to ensure the right blood is given to the right patient, preventing potentially fatal transfusion errors. This involves verifying the patient's identity and checking the blood product label against the patient's medical record and order. A robust identification system helps ensure that the blood product is compatible with the patient's blood type, reducing the risk of a transfusion reaction. Misidentification of the

patient or the blood product can lead to errors, such as administering the wrong blood type or the wrong amount of blood.

This audit focused on identifying general examination of the patient, use of patients' identifiers before commencing blood transfusion, identifiers used to identify blood unit, application of triple check system for blood transfusion, who initiates blood transfusion. However, as mentioned earlier, due to its cruciality of strict patient identification system in blood transfusion, main focus of analysis was on current practice of patient identification, and current practice of blood unit identification system before removing blood unit form the refrigerator. The findings are detailed under two subheadings.

7.5.1 Patient identifiers

The patient identifiers currently in use are presented in the below box below. The findings highlight the absence of a standardized patient identification system across health facilities. For instance, one facility uses a memo number as a patient identifier, which creates confusion when multiple memos exist for the same patient. Additionally, while some facilities use only two identifiers, others use four or five, further emphasizing the inconsistency.

Current "patient identifiers" used

- ID card and memo no
- Name, NID, hospital no, address
- Patient ID, type and name of donor and cross match form
- Name and bed no
- Name, age hospital no
- Patient Name, Hospital number, ID card number, Donor or Pint number
- Name, Address, Hospital number, ward, ID card number, memo number

According to accreditation standards, there shall be a written protocol for administration of blood and blood components. The blood bank/ blood centre shall evolve a protocol for correct patient identification using two/three

independent identifiers. These independent patient identifiers could be standardized and implemented universally across all health facilities.

It is vital to look into international best practices on patient ad blood unit identifications systems being widely used across the globe. In this regard, NABH (2016) provides details of how the patient and unit identification must be followed in health facilities as in box 4.

Box 4

"A numeric and/or alphanumeric system shall be used, that will make it possible to trace any unit of blood or component from source to final destination and recheck records applying to the specific unit. The numeric and/or alphanumeric identification on label shall be provided by the collecting facility to each unit of blood/ its components. This number shall be documented for traceability. Any advanced technology for identification such as barcode system is preferable. No identification of the donor shall be written on the label. In case of transfer of blood unit to blood storage centre, original label with the same identification shall be retained".

7.5.2 Blood unit identifiers

The audit showed significant differences in identifiers being used across health facilities for identifying blood unit before removing from the blood bank refrigerator. Details in table 4 are the identifiers being used as blood unit identification.

The table highlights significant variability in how blood units are identified across different atolls. Each facility uses a different combination of identifiers some use donor related information, others rely on patient data, and many combine various details inconsistently. Facilities relying solely on names (e.g., Ga., Adh., F. Atolls) risk duplication and confusion, especially with common names or errors in spelling. Some identifiers, like "memo number" or "cross-match slip number," are ambiguous without a centralized system or contextual clarity.

Table 4: Blood unit identifiers in use

Ha. Atoll	Donor details, cross match no and DD no
Hdh. Atoll	X-match sheet bag tag and group
Sh. Atoll	Patient name, blood group, TTI, date of donation, date of expiry, type of component and unit No.
N. Atoll	Donor No. donor name patient name
R. Atoll	Donor no, donor name, x-match slip no and blood bag number
B. Atoll	Comparing donor cross match slip
Aa. Atoll	No data provided
Adh. Atoll	Name address and blood grouping
F. Atoll	Name of patient, Name of the donor, Blood group, Amount, TTIs screening report, Serial no
Th. Atoll	Donor number
L. Atoll	Patient name, Donor name, amount in the bag, blood group, Donor number
Ga. Atoll	Patient name and donor name
Gdh. Atoll	Name, unit non. Blood group and Rh typing, cross match number, hospital number screening test
AEH	Cross checking with unit and patient details
HMH	unique number given to donor or pint (Donor number (DD))
ADK	Blood bag number, Donor number
MBS	Donor No, date of donation, blood group

The reasons why patient and unit identification are vital

Traceability: Ensures each blood unit can be tracked from donor to recipient, improving safety and accountability.

Interoperability: Facilitates coordination and blood transfers between facilities, especially critical in emergencies.

Patient Safety: Reduces risks of transfusion errors due to mislabelling or ambiguous identifiers.

7.6 Management of adverse transfusion reactions

The key areas assessed under this domain included the availability of drugs, equipment, and consumables necessary for managing transfusion reactions; the presence of protocols and guidelines; staff training on blood transfusion practices; reporting of transfusion reactions to relevant authorities; and the review of transfusion reactions at the facility level. However, the primary focus of the analysis was on the availability of essential drugs and consumables, staff training, and the presence of review mechanisms for transfusion reactions within facilities. The results indicated that all facilities reported having the necessary drugs, consumables, and equipment for managing transfusion reactions. However, as shown in Figure 4, staff training on blood transfusion and the management of transfusion reactions had not been conducted in six facilities, with only one facility reporting that its staff had received the necessary training.

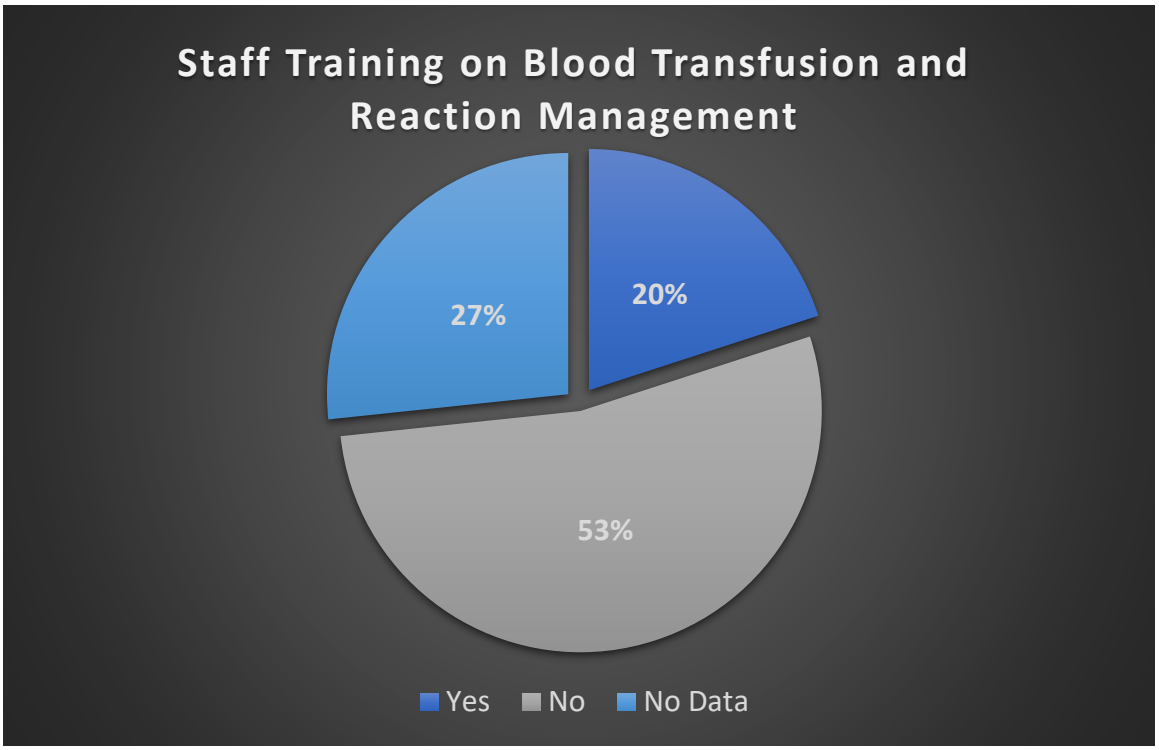


Figure 4: Staff training on blood transfusion and reaction management

7.7 Quality assurance and quality control

Regular monitoring of blood transfusion activities and competency assessments are the two areas assessed in this domain. The audit showed that there is no mechanism of staff competency assessments, except for annual staff appraisal by civil service commission. This requires corrective action from all relevant authorities.

7.8 Donor recruitment

In all health facilities blood donation depends on directed donors. Most of the facilities maintain a register of blood donors. Many health facilities depend on directed donations and contacts donors from the register if required. This necessitates urgent interventions from hospital administration to recruit voluntary non-remunerated blood donations.

8. Recommendations

1. Blood donor selection and deferral:

   - Develop and execute strategies to effectively implement the donor selection and deferral criteria established by the Central Blood Bank across all health facilities.
   - Formulate and roll out a national action plan to adopt a standardized donor form in all health facilities to enhance consistency and uniformity.

2. Donor screening and blood donation sessions

   - Enforce Standard operating procedures (SOPs), mandating collection within ±10% of the bag's volume.
   - Strengthen staff training and routine audits to ensure compliance.

3. Storage and stock management

   - Implement robust procedures on stock management.

4. Blood compatibility, cross-matching and component preparation

   - Formulate action plan on rolling out automated centrifugation system across main health facilities in the periphery.

5. Blood transfusion

   - Develop a comprehensive plan to harmonize blood transfusion practices nationwide, ensuring alignment with the standards set out in national guidelines.

6. Enhance Patient Identification Protocols

   - Strengthen patient identification procedures and establish a national standard for patient identification to ensure safety, accuracy, and traceability.

7. Quality control and quality assurance

   - Establish a mechanism for implementation of clinical reviews on blood banking and blood transfusion.

8. Donor recruitment and retention

   - Execute robust strategies to increase voluntary non-remunerated blood donation with frequent blood drives.

9. References

MBS. (2018). National blood policy. Ministry of Health.

MBS. (2022). Management of transfusion dependent thalassaemia in the Maldives.

MBS. (2022). National guideline on clinical use of blood.

NABH. (2016). Accreditation standards on blood banks/ blood centres and transfusion services.

American red cross. (2025). Blood donation process. Retrieved from https://www.redcrossblood.org/donate-blood/blood-donation-process/donation-process-overview.html

Annex 1: Audit tool

	Questions	Yes (✓)	No (✓)	N/A (✓)	Remarks	Rationale / Resources
SECTION 1: BLOOD DONOR SELECTION AND DEFERRAL						
1	Do you have a donor selection and deferral criteria?					
2	List down donor eligibility criteria at the health facility 1. 2. 3.					Provide document
3	Is informed consent obtained/form filled by donors?					Provide a sample document
4	Do you maintain donor selection and deferral records?					Provide document
5	Do you notify deferred cases to higher authorities? When required					
SECTION 2: DONOR SCREENING AND BLOOD DONATION SESSION						
1	Screening of donated blood for Transfusion Transmitted Infections (TTIs) - HIV - Hepatitis B & C - Syphilis - Others (specify)					
2	Explain the process if a blood unit found to be TTI positive. How do you treat					Provide details
3	Who carries out donor sessions?					
4	How long does it take to complete blood donation session? From venipuncture until end.					
5	Do you use manual mixing or automated blood mixers?					

	Questions	Yes (✓)	No (✓)	N/A (✓)	Remarks	Rationale / Resources
6	How often do you carry out calibration of blood mixers?					
7	How long do you keep blood bags once the protective cover is opened?					
8	Could you please specify donor assessment details before commencing blood donation session: 1. ..... 2.					
9	Was any training provided for the staff on donor bleeding? If yes, when was the training provided?					
10	Details of short blood. Please the following detials: 1. No. of short bloods in the past 6 months 2. Reasons for short blood					
11	Please specify the volume of blood drawn for each type of blood bag: 1. 250 ml blood bag 2. 350 ml blood bag 3. 450 ml blood bag					
SECTION 3: STORAGE AND STOCK MANAGEMENT						
1	Do you have blood bank refrigerator? If no, where do you store blood?					
2	How often do you monitor temperature of the blood bank refrigerator?					Provide records of temperature sheets of last 2 weeks
3	Do you have expiry date management and first in first out policy/guideline/protocol?					

	Questions	Yes (✓)	No (✓)	N/A (✓)	Remarks	Rationale / Resources
4	Do you have a record of blood usage, waste and expiry of units collected?					Provide evidence
5	Do you have a system for tracking blood unit from donation to transfusion?					Provide documented evidence
	Could you please provide details of blood discarded in the past 1 year. Specify reasons for blood discard: 1. Short blood 2. TTI positive 3. Presence of blood clots 4. Colour change 5. Others (specify)					
SECTION 4: BLOOD COMPATIBILITY, CROSS-MATCHING AND COMPONENT PREPARATION						
1	Do you have a standard operating procedure and/or protocol for cross-matching and compatibility testing?					Provide document
2	What are the types of blood components used in your facility?					
3	How are the components prepared? 1. Manual preparation (kept overnight) 2. Centrifugation					
4	Please specify types of blood transfused in the past 6 months: 1. Whole blood 2. Packed Red Cell 3. Other Components					
SECTION 5: BLOOD TRANSFUSION						

	Questions	Yes (✓)	No (✓)	N/A (✓)	Remarks	Rationale / Resources
1	Do you carry out a general/physical assessment before commencing blood transfusion on a patient?				Please provide documented evidence (keep patient details confidential)	Chapter 2 of the Management of transfusion dependent thalassaemias in the Maldives provides details of blood transfusion procedure to be followed
2	What are the patient identifiers used at your health facility?					Provide details
3	What are the identifiers used to identify the blood unit before removing from blood bank refrigerators?					Provide details
4	Do you use triple check system before initiating blood transfusion? 1. First check: before removing blood unit from refrigerator 2. Second check: in the ward/patient care area (cross check with unit and patient details) 3. Third check: at patients' bed side (validate patient details from the patient)					
5	Who initiates blood transfusion?					
6	What are the transfusion details documented on patient's medical records.					Provide details
SECTION 4: MANAGEMENT OF ADVERSE TRANSFUSION REACTIONS						
1	Do you have drugs and consumables required to manage adverse transfusion reactions?					
2	Are protocols/guideline for recognizing and managing transfusion reactions available?					Provide documents
3	Is staff training regularly conducted on identification and management of transfusion reactions?					List of participants and evidence of training conducted
4	Do you document and report transfusion reactions to relevant authorities if required?					Provide evidence
5	Do you review adverse transfusion reactions at your facility level?					

	Questions	Yes (✓)	No (✓)	N/A (✓)	Remarks	Rationale / Resources
SECTION 6: QUALITY CONTROL AND QUALITY ASSURANCE						
1	Does your facility have a regular monitoring system for blood transfusion activities?					Provide details
2	What is the frequency competency assessment of staff involved in the process of blood transfusion?					
3	Do you have an internal and external audit for blood transfusion practices? How does the corrective measures are communicated to relevant staff/management?					
SECTION 7: DONOR RECRUITMENT AND EDUCATION						
1	Provision of information to donors about the donation process and post donation care.					Provide details
2	How does your facility recruit blood donation?					Provide details