



AIDE-MEMOIRE

for National Health Programmes

Blood transfusion is an essential part of patient care. When used correctly, it saves lives and improves health. However, blood transfusion carries a potential risk of acute or delayed complications and transfusion-transmitted infections and should be prescribed only to treat conditions associated with significant morbidity or mortality that cannot be prevented or managed effectively by other means.

Blood is a scarce human resource and ensuring its safety and clinical effectiveness requires investment – both human and financial.

The national blood transfusion service (BTS) is responsible for ensuring the provision of an adequate supply of safe blood for all patients requiring transfusion. The national health programme should develop policies and strategies to reduce the need for transfusion, minimize unnecessary transfusions and ensure the safe and appropriate use of blood and blood products. These strategies should include:

- Prevention, early diagnosis and effective treatment of conditions that could result in the need for transfusion
- Use of good surgical and anaesthetic techniques, pharmaceuticals and medical devices to reduce blood loss
- Availability and use of simple alternatives for volume replacement, including intravenous replacement fluids (crystalloids and colloids)
- Appropriate prescribing of blood and blood products in accordance with national guidelines
- Safe pre-transfusion procedures
- Safe administration of blood and blood products.

The national blood programme and clinical users of blood and blood products should work together to implement these policies and strategies.

Words of advice

- Secure government commitment and support for the development and implementation of a policy to promote the safe, appropriate use of blood
- Ensure a safe and adequate supply of blood and blood products
- Ensure the availability and use of simple alternatives to transfusion
- Establish a national committee on the clinical use of blood
- Develop national guidelines on the clinical use of blood
- Involve professional bodies and patient associations in the establishment of systems to ensure the safe and appropriate use of blood
- Provide training for all clinicians, nurses, BTS/hospital blood bank staff and other personnel involved in the transfusion process
- Establish transfusion committees in each hospital in which transfusion takes place
- Establish a system to monitor and evaluate blood usage
- Establish a national haemovigilance system to monitor, report and investigate adverse events associated with transfusion



Checklist

Prerequisites

- Well organized, nationally coordinated blood transfusion service
- National blood policy and plan incorporating the clinical use of blood
- National committee on the clinical use of blood
- Quality system for the BTS, hospital blood banks and clinical departments
- Adequate resources

National guidelines

- Clinical and laboratory indications for the use of blood, blood products and alternatives to transfusion
- Information about available blood products and alternatives to transfusion
- Standard blood request form
- Guidance on the development of blood ordering schedule and standard operating procedures at hospital level

Education and training

- Training of clinicians, nurses and BTS/hospital blood bank staff in:
 - Undergraduate and postgraduate programmes
 - In-service training
 - Continuing medical education

Hospital transfusion committees

- Effective implementation of national guidelines
- Training of hospital staff
- Hospital blood ordering schedule
- Hospital standard operating procedures
- Monitoring and evaluation at hospital level

Monitoring and evaluation

- Safety and adequacy of available blood and blood products and alternatives to transfusion
- Traceability of blood and blood products
- Compliance with national transfusion guidelines
- Patterns of blood usage and clinical transfusion practice
- Adverse events related to transfusion

Key elements

Requirements for the appropriate clinical use of blood

The national blood programme has the responsibility to ensure that blood and blood products provided for clinical use are safe, adequate to meet demand, clinically effective and produced consistently to appropriate standards.

While responsibility for the decision to transfuse ultimately rests with individual clinicians, consistently effective clinical transfusion practice cannot be achieved unless the following are in place:

- A well organized, nationally coordinated blood transfusion service

to ensure the availability of, and access to, safe blood and blood products

- National blood policy and plan incorporating the clinical use of blood, with appropriate supportive regulations
- National committee on the clinical use of blood within the national blood programme
- Availability of intravenous replacement fluids, and medical devices and pharmaceuticals to reduce blood loss

- Quality system for the BTS, hospital blood banks and all clinical departments involved in transfusion, including:

- Standard operating procedures
- Documentation of requests for blood, blood sampling, the administration of blood and monitoring the transfused patient
- Systems to monitor adverse events and errors related to transfusion
- Clinical audit.

National clinical guidelines

Transfusion guidelines should represent a consensus by clinical specialists, the BTS, pharmacists and professional bodies on the most effective treatments for specific conditions. They should be practical, comprehensive and relevant to local conditions. They should include:

- Clinical and laboratory indications for the use of blood, blood products and alternatives to transfusion
- Information on available blood products and alternatives to transfusion: dosage, storage conditions, risk of transfusion-transmissible infection, means of administration, contraindications and precautions
- Standard blood request form to provide full information about the patient and the need for transfusion
- Blood ordering schedule, as a guide to the number of units of blood and blood products that should normally be requested for each type of operation, with guidance on its adaptation by each hospital
- Instructions for the development of standard operating procedures at hospital level.

The national committee on the clinical use of blood should work to ensure the effective implementation of the guidelines.

Education and training

The effective implementation of the national policy and guidelines requires education and training in clinical blood use and safe clinical transfusion procedures for clinicians, nurses, BTS/ blood bank staff and other personnel involved in transfusion, including:

- Undergraduate and postgraduate programmes in:
 - Medical schools and teaching hospitals
 - Medical laboratory technology training institutions
 - Schools of nursing
 - Paramedical schools
- In-service training for:
 - Clinicians
 - Nurses
 - Blood transfusion service and hospital blood bank staff
- Continuing medical education:
 - Hospital clinical meetings
 - Seminars and conferences
 - Medical publications.

Hospital transfusion committees

A transfusion committee should be established in each hospital to implement the national policy and guidelines and monitor the use of blood and blood products at the local level. The committee should have authority within the hospital structure to determine hospital policy in relation to transfusion and resolve any identified problems.

The main functions of a hospital transfusion committee include:

- Developing systems for the implementation of the national guidelines within the hospital
- Liaison with the BTS to ensure the availability of required blood and blood products at all times
- Liaison with the relevant department to ensure a reliable supply of intravenous replacement fluids and other alternatives to transfusion at all times
- Developing a hospital blood ordering schedule

- Developing hospital standard operating procedures for all steps in the transfusion process
- Training all hospital staff involved in transfusion
- Monitoring the usage of blood and blood products within the hospital
- Monitoring and investigation of severe adverse effects or errors associated with transfusion, taking any corrective and preventive action required and reporting through the haemovigilance system to the national committee on the clinical use of blood.

Monitoring and evaluation

At national level, responsibility for monitoring and evaluation should be shared by the BTS, the national committee on the clinical use of blood and the department responsible for the supply of intravenous replacement fluids and other alternatives to transfusion.

The monitoring system should cover:

- The safety, adequacy and reliability of the supply of blood, blood products and alternatives to transfusion
- The traceability of all blood and blood products, from blood collection to transfusion
- Compliance with the national guidelines on transfusion and the impact on prescribing practice
- Differences in blood usage within hospitals and between similar hospitals at regional, provincial and district level
- Haemovigilance – the monitoring, reporting and investigation of all adverse events related to transfusion.