



Ministry of Health and Family Welfare,
Government of India



Blood Transfusion Services, Directorate General of Health Services
Ministry of Health and Family Welfare, Government of India

BLOOD FOR LIFE

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THEME OF THE ISSUE :
THE EXTERNAL QUALITY ASSESSMENT SCHEME
(EQAS) PROGRAMME IN INDIA

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पुण्य सलिला श्रीवास्तव, भा.प्र.से.
सचिव

PUNYA SALILA SRIVASTAVA, IAS
Secretary



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अमृत महोत्सव

भारत सरकार
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स्वास्थ्य एवं परिवार कल्याण मंत्रालय

Government of India
Department of Health and Family Welfare
Ministry of Health and Family Welfare



MESSAGE

With great enthusiasm, I present the third Edition (Volume 2 - Issue 1) of "Blood – for Life" the quarterly newsletter and initiative to promote Voluntary Blood Donation in India. The Ministry of Health and Family Welfare remains steadfast in its commitment to the health and well-being of all citizens. Voluntary blood donation is one of the most effective ways to save lives and ensure the continued functioning of our healthcare system. Blood is crucial for various medical treatments, including surgeries, chronic illness management and emergency care. However, there is an ongoing need for more voluntary blood donors to meet the demand of the country. Government of India has been working diligently through its Blood Transfusion Services to enhance the availability of safe and non-remunerated blood. Our efforts include strengthening the blood infrastructure of the National Blood Transfusion Council (NBTC) and State Blood Transfusion Council (SBTCs), ensuring efficient blood collection and enhancing safety protocol for both donors and recipients.

Through this Newsletter, I appreciate the commitment of our remarkable blood donors. The commitment and compassion of donors has been adding valuable years to human life. The willingness of donors to donate blood, often without knowing who will receive the gift, exemplifies the true spirit of altruism. The aim of this Newsletter is to create and raise awareness about the importance of voluntary blood donation and to highlight various initiatives such as Blood Donation Drives, Public Education Campaign and Donor recognition Programs that encourage more people to contribute.

I urge all stakeholders of society - individuals, organizations and communities to actively support this noble cause. By donating blood, you directly contribute to saving lives and fostering a healthier, more compassionate society.

Let's make voluntary blood donation a movement that reflects the true spirit of compassion and solidarity of India.

Dated 17th March, 2025

Punya Salila
(Punya Salila Srivastava)

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NATIONAL LEVEL ACTIVITIES

NATIONAL CONCLAVE ON BLOOD CENTRE PRACTICES AND TRANSFUSION MEDICINE, KOCHI, KERALA, 5TH & 6TH FEBRUARY, 2025

The National Conclave on Blood Centre Practices and Transfusion Medicine was held on February 5th and 6th, 2025, in Kochi, Kerala. The program was inaugurated by Dr. Vijaya Vijay Motghare, Additional Director General of Health Services, MoHFW, GoI.

Several distinguished officials and experts attended the event, including Dr. Krishan Kumar, Director, NBTC, Dte.GHS, MoHFW, GoI; Dr. Megha Pravin Khobragade and Dr. Manas Pratim Roy, Assistant Director Generals, Dte.GHS, MoHFW, GoI; Dr. R. K. Choudhary, Former Professor and Head, Transfusion Medicine, SGPGI, Lucknow; Dr. Joy Mammen, Professor of Transfusion Medicine, CMC, Vellore; Dr. Abhishek Gowda, Additional Professor and Head of Transfusion Medicine, JIPMER, Puducherry; Dr. Sreelatha R, Project Director,

KSACS; and Mrs. Sinu Kadakampally and Mr. Anish, Assistant Directors, KSBTC.

The launch of the National Voluntary Blood Donation Guideline was done during the program. During the event, one Medical Officer, Blood Bank Technician, and Counsellor from each state and union territory were recognized for their outstanding contributions to the field.

Various discussions covered key topics such as challenges and the way forward for BTS, advancing research policies, best practices in voluntary blood donation, roles and responsibilities of Blood Centre Staff, effective management of emergencies in BTS, transfusion management protocols (SOPs) during emergencies and recent advances in Transfusion Medicine from an Indian perspec-

tive. Panel discussions focused on building a resilient framework for Voluntary Blood Donor retention across the country.

Best practices from five regions (North, South, East, West, and Central) were highlighted. The discussion covered innovations in counseling, IEC (Information, Education, and Communication), automation of Blood Centre systems, NAT (Nucleic Acid Testing), phasing out whole blood donations, Rare Blood Donor Registries, RFID technology to ensure safer blood transfusions, mechanisms for improving regional testing centers for Immunohematology cases, online NOC applications, rational use of blood etc. The event reinforced the commitment to achieving 100% voluntary blood donation while enhancing the safety and efficiency of India's BTS network.





EXPANSION OF THE EXTERNAL QUALITY ASSESSMENT SCHEME (EQAS) PROGRAMME IN INDIA

Introduction

The External Quality Assessment Scheme (EQAS) plays an integral role in ensuring the safety, accuracy, and reliability of Blood Transfusion Services in India. By providing external evaluation of laboratory testing processes through structured programmes, EQAS enhances the quality of results and identifies gaps for corrective and preventive actions.

The Government of India, led by the Directorate General of Health Services (Dte.GHS), Ministry of Health and Family Welfare, has committed to expanding the National EQAS Programme across all states and Union Territories. This initiative is aimed at strengthening blood transfusion services, fostering uniform quality standards, and ensuring the safety of blood and blood products for transfusion.

Aim

To establish a National External Quality Assessment Programme to systematically evaluate and enhance the performance of blood testing laboratories across the country, ensuring the availability of safe and compatible blood for transfusion.

Objectives

- 1. Nationwide Implementation:** Expand the National EQAS programme across all licensed blood centres in India.
- 2. Performance Assessment:** Regularly monitor and evaluate blood centres' performance to ensure adherence to national and international standards.
- 3. Error Identification and Resolution:** Detect errors in

laboratory processes and implement corrective and preventive actions to improve service delivery.

- 4. Capacity Development:** Provide training, workshops, and operational support to blood centre personnel for sustained quality improvements.
- 5. Harmonization:** Standardize blood testing protocols and practices across all centres to ensure consistent and reliable results.

Scope

- 1. Comprehensive Quality Assurance:** Covers transfusion-transmissible infections (TTI), immunohematology (IH), and other critical areas of blood testing.
- 2. Education and Awareness:** Educate blood centre staff about quality assurance principles and the benefits of EQAS.
- 3. Continuous Quality Improvement:** Encourage blood centres to adopt best practices and monitor performance improvement over time.
- 4. Support for Accreditation:** Facilitate compliance with national standards and accreditation requirements.
- 5. Resource Utilization:** Provide valuable data for optimizing resource allocation and enhancing public trust in blood transfusion services.

Expansion Framework

The expansion of the EQAS pro-

gramme is built on the following framework:

1. Hub-and-Spoke Model

Dte.GHS will serve as the National Coordinating Centre (NCC). 11 identified proficiency testing providers will act as hubs, supporting participant blood centres in their regions.

2. Pilot Phase

A pilot cycle involving 12 proficiency testing providers will focus on testing critical areas, such as TTIs and Immunohematology, to validate processes and gather insights for scaling up.

3. Operational Guidelines

Comprehensive guidelines have been prepared to standardize processes and ensure quality across participating blood centres.

4. Stakeholder Engagement:

Collaboration with State Blood Transfusion Councils (SBTCs), training institutions, and knowledge partners, including the WHO.

5. Monitoring and Feedback:

Regular evaluations and feedback loops will enable continuous quality improvement and compliance.

Conclusion

The expansion of the EQAS programme in India is a landmark initiative aimed at achieving the goal of "Safe Blood Transfusion" as envisaged in the National Blood Policy. By enhancing the quality management systems and ensuring nationwide participation, the programme will strengthen the country's blood transfusion services and build public confidence in the safety and reliability of its healthcare infrastructure.

NATIONAL LEVEL ACTIVITIES

NATIONAL WORKSHOP ON OPERATIONALIZING EXTERNAL QUALITY ASSESSMENT PROGRAMME FOR BLOOD CENTRES – PROMOTING PATIENT SAFETY AND ACCESS TO SAFE BLOOD TRANSFUSION SERVICES IN INDIA, VELLORE, TAMIL NADU, 16TH & 17TH JANUARY, 2025

A two-day National Workshop on Operationalizing the External Quality Assessment Programme for Blood Centres in promoting Patient Safety and Access to Safe Blood Transfusion Services in India was jointly organized by the Blood Transfusion Services Division, Directorate General of Health Services (Dte. GHS), Ministry of Health & Family Welfare, Government of India, in collaboration with the WHO India Country Office and Department of Transfusion Medicine, CMC-Vellore on 16-17 January, 2025, Vellore, Tamil Nadu.

This workshop Focused on strategies to enhance patient safety, ensure access to safe blood transfusion services, and operationalize the expanded EQAS programme effectively. It served as a platform for capacity building, stakeholder engagement, and knowledge exchange to strengthen quality assurance in blood transfusion services nationwide.

Dr. Krishan Kumar, Director, NBTC, Dr. Megha Khobragade, ADG, Dte. GHS, Dr. Madhur Gupta, Technical Officer at WHO India, Dr. Dolly Daniel, Head of Transfu-

sion Medicine at CMC Vellore and Dr. Vikram Mathews, Director of CMC Vellore were present for the program. The workshop brought together representatives from 36 states and UTs, along with national experts and policymakers, to advance the operationalization of the National EQA Programme. The event also marked the release of the Operational Guidelines for National External Quality Assessment Programme for Blood Centres in India, a comprehensive resource for ensuring effective participation in EQAS.



NATIONAL LEVEL ACTIVITIES

ANNUAL ACTION PLAN MEETING OF BLOOD TRANSFUSION SERVICES, INDORE, MADHYA PRADESH, 7TH & 8TH JANUARY, 2025

Annual Action Plan meeting of Blood Transfusion Services, MoHFW was conducted on 7th and 8th of January 2025 at Indore. The program was organised by BTS in collaboration with Madhya Pradesh SBTC. All the states/UTs participated in the program and discussed various plans for the upcoming year.



HEROES OF LIFE

MADHYA PRADESH

Mrs. Rupali Singhai has been working in Shahdol, Madhya Pradesh, a tribal-dominated district, for the past 10 years to improve the health of patients suffering from Sickle Cell Anemia and Thalassemia.

To raise awareness about genetic blood disorders, she has conducted 114 sessions in schools and colleges, encouraging premarital testing to prevent affected births and guiding many families toward early pregnancy screening. She has assisted low - income families in accessing government aid and medical consultations and has helped them enroll for UDID cards, securing monthly financial assistance for 339 children and obtaining bus fare concessions for 123 children. In collaboration with the Disha Welfare Association, she organized 115 blood donation drives, collecting over 4,000 units of blood. She has actively encouraged blood donation, breaking myths associated with the practice. To date, she has personally donated blood 34 times, 30 whole blood donations and 4 Single Donor Platelet donations.

She has worked with over 45 gynecologists to make HPLC testing (a key diagnostic tool) mandatory for the early detection and prevention of Thalassemia and Sickle Cell Anemia, aiming to reduce the burden of these disorders. Additionally, she has coordinated splenectomy surgeries for children with enlarged spleens by facilitating government aid and liaising with surgeons.

Through her efforts, she has not only brought significant improvements to the management of genetic disorders but has also empowered marginalized families with knowledge, resources, and hope for a better future. For her dedication and selfless service in the fight against Sickle Cell Anemia and Thalassemia, Mrs. Rupali Singhai has been honored with the title “Mother of Thalassemia Children.”



HEROES OF LIFE

ANDHRA PRADESH

Shri P.B. David is an auto driver from Srikakulam District, Andhra Pradesh. His dedication to voluntary blood donation has saved many lives and made a significant impact on the community. For over a decade, he has organized 96 blood donation camps, facilitating over 12,000 voluntary blood donations. He has personally donated blood 18 times and conducted 70 healthcare awareness campaigns.

Beyond promoting voluntary blood donation, he has led campaigns on HIV/AIDS, tuberculosis, leprosy, anemia, thyroid disorders, and the National Immunization Program, engaging both youth and the general public. These efforts reflect his determination, selfless

vision, and holistic approach to public health.

In addition to distributing IEC materials, he has participated in numerous radio and online TV shows. He has also involved diverse groups, including auto drivers, nurses, social workers, and students, in his awareness sessions. His passion, hard work, and unwavering commitment have contributed to a significant rise in voluntary blood donations in Srikakulam District.

Shri P.B. David serves as an inspiration, demonstrating how a single individual can ignite change and positively impact society. His journey is a testament to the power of small actions, creating a ripple effect toward a healthier and more compassionate world.



RED BLOOD CELL TRANSFUSION AND ITS RATIONAL USE

As with all medical interventions, the risks and benefits of blood transfusion must be weighed carefully. A physician should always keep in mind that RBC transfusion is an independent predictor of death, multi-organ dysfunction and acute respiratory distress syndrome on account of its numerous potential adverse effects, called transfusion reactions.

Red Blood Cells (RBCs) are transfused to increase oxygen-carrying capacity in patients with anemia in whom physiologic compensatory mechanisms are inadequate to maintain normal tissue oxygenation.

There are myriad causes of anemia. In patients with chronic stable anemia, RBC transfusion is often unnecessary. For example, in a patient with well-compensated anemia from iron deficiency, replacing iron is the appropriate maneuver to correct the anemia. On the other hand, RBC transfusion may be life saving in individuals with anemia where physiologic compensatory mechanisms

are inadequate to maintain tissue oxygenation, such as in individuals with trauma-induced hemorrhage.

Signs and symptoms of anemia that should prompt consideration of RBC transfusion include hemodynamic instability, chest pain of cardiac origin, dyspnea, and tachycardia at rest.

In non-bleeding patients, the hemoglobin concentration is used to help guide RBC transfusion decisions because of the following reasons:-

- I. 98% of blood oxygen is hemoglobin bound.
- II. The hemoglobin is easy to measure.
- III. And no better physiologic measurements to support RBC transfusion are currently available.

Current RBC transfusion thresholds (i.e. hemoglobin concentrations used for RBC transfusion) are lower



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than those used previously, which are 7 g/dl for all critically ill patients and 8 g/dl with unstable cardiac conditions.

The Physician is the sole decision maker as to whether a patient will receive blood / blood components or not and his/her decision should be guided by the following criteria:-

1. Is the transfusion really needed?

2. Is the patient actively bleeding? like PPH, RTA, GI bleeding, stab injury etc.?
3. Is the patient symptomatic enough for lack of tissue oxygenation?
4. Is the patient critically ill?
5. Does the patient have unstable cardiac conditions, like MI, unstable angina etc.?
6. Are you sure that the pt. cannot be treated with alternatives to blood transfusion? Like Iron- oral/parenteral, vitamins, corticosteroids, Erythropoietin etc.?
7. What is the appropriate component to be prescribed for the patient?

Two hemoglobin disorders, Thalassemia and Sickle Cell Disease, are among the most commonly inherited syndromes. The Thalassemia syndromes involve the reduced production of α and β globin as a result of

gene mutations. β -Thalassemia Major is characterized by severe anemia secondary to ineffective erythropoiesis, and extramedullary hematopoiesis. Individuals with Thalassemia Major often begin a regular RBC transfusion program in childhood if there is poor growth or evidence of extramedullary hematopoiesis resulting in bony abnormalities, and/or if the hemoglobin level is less than 7 to 9 gm/dl.

RBC transfusion is aimed to treat anemia and reduce the risk of morbidity from extramedullary hematopoiesis. RBCs are provided every 2 to 4 weeks to maintain a pre-transfusion hemoglobin at least at 7g/dl for E-Beta thalassemia and at least at 9 g/dl for Beta-thalassemia major. Alloimmunization, which is reported to occur in 20% to 30% of patients with thalassemia, can be reduced by selecting RBCs matched for C, c, E, e and K antigens, in addition to the usual matching for ABO and RhD in patients who do not have allo-antibodies.

RBC transfusions are typically matched for ABO as well as RhD blood group antigens. In bleeding emergencies, there may not be sufficient time to complete standard pre-transfusion testing. Uncross-matched group O RBC units are used in situations where RBCs must be transfused immediately, before any patient testing is completed.

Occasionally, for bleeding emergencies, patients with known red cell allo-antibodies may need RBC transfusion before antigen-negative units can be identified and crossmatched. Close communication between the primary service (eg, the emergency or operating doctors) and transfusion medicine physician is important in such cases.

Clinicians may have concerns about transfusing units that are not proven to be “fully compatible.” Transfusing units that may be, or are known to be incompatible can be done in cases of Autoimmune Hemolytic anemias and very occasionally in exsanguination or inevitable, life-threatening severe anemia

In conclusion it may be stated that blood and components should be used judiciously after careful consideration about the risk of transfusion. The cornerstone for any transfusion is that the transfusion has to be given to the Right Patient with Right Blood in Right Time and Right Place.

ABO Matching Table

Recipient ABO Type	ABO-Compatible RBC Units	ABO-Compatible Plasma or Platelet units
O	O	A, B, O, AB
A	A, O	A, AB
B	B, O	B, AB
AB	A, B, O, AB	AB

INDIAN RED CROSS SOCIETY

Introduction

The Indian Red Cross Society (IRCS) is a vital humanitarian organization in India, dedicated to providing relief during disasters and emergencies, promoting health, and caring for vulnerable individuals and communities.

IRCS operates with a nationwide network of over 1,200 branches, ensuring its reach across the country, and serves as a proud member of the International Red Cross and Red Crescent Movement.

Established in 1920, IRCS has a rich legacy of service, guided by the seven Fundamental Principles of the Movement: neutrality, impartiality, independence, humanity, voluntary service, unity, and universality. Henry Dunant was a Swiss humanitarian, businessman, social activist, and co-founder of the Red Cross. His humanitarian efforts won him the first Nobel Peace Prize in 1901.

Governance

The Hon'ble President of India is the President, and the Hon'ble Union Health Minister is the Chairman of IRCS. Governance and supervision are managed by the National Managing Body, which consists of 19 members, including the Chairman. Six members, along with the Chairman, are nominated by the President, while the remaining 12 are elected through an electoral college.

Services

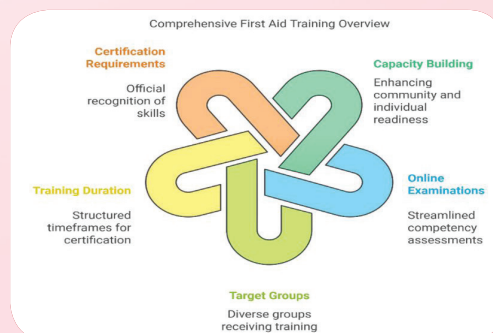
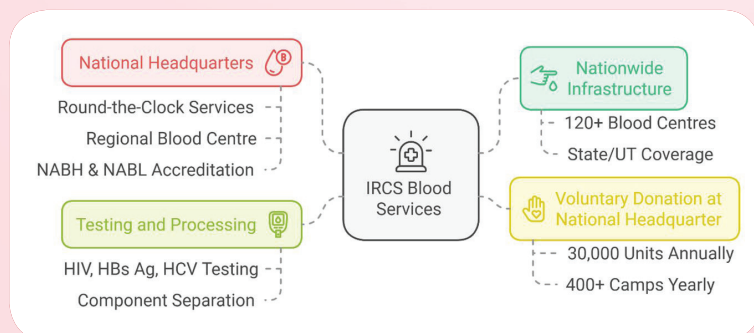
The key services include providing emergency aid, restoring family links, promoting health and well-being, and advocating for humanitarian principles. The IRCS is known for its swift response to natural disasters and armed conflicts, providing essential items like food, water, shelter, and medical care.



The Indian Red Cross Society also plays a vital role in connecting families separated by conflict or migration, offering support and hope to those seeking reunification. It offers first aid training to empower individuals to respond to emergencies and runs a range of youth programs aimed at empowering young people to become active citizens and humanitarian leaders.

Additionally, the Indian Red Cross Society educates communities about health issues and disease prevention and supports disease control efforts and vaccination campaigns. The Indian Red Cross Society's Family News Services unit carries out various activities like tracing services and Red Cross Message (RCM) collection and exchange with the help of trained FNS volunteers both within and outside the country.

IRCS collaborates with governments, NGOs, and other organizations to address complex humanitarian challenges, such as climate change and forced migration.



Blood Transfusion Services

The Indian Red Cross Society plays a crucial role in collecting and distributing blood products to hospitals and health-care facilities. It organizes blood drives, screens donors, and ensures the safety and quality of blood donations. The IRCS emphasizes the importance of voluntary blood donation and promotes awareness about its vital

role in saving lives.



IRCS has a robust blood processing and testing infrastructure, with over 120 blood centers across 15 States/UTs and multiple blood storage centers nationwide. IRCS continues to invest in modernizing its blood processing and testing facilities to ensure the safety and quality of blood and blood products.

The IRCS (NHQ) Blood Centre is fully equipped to collect blood

at its premises and also has mobile teams that frequently organize Blood Donation Camps. After collection, the blood is tested for HIV I & II, HBV, HCV, Syphilis, and Malaria. Blood grouping with ABO and Rh D reagents and Antibodies Testing (three-cell panel) is conducted using fully automated advanced technology.

The Indian Red Cross Society also has the facility for component separation, providing different components of blood, such as fresh Frozen Plasma, Platelet-Rich Plasma, Platelet Concentrate, Packed Red

Cells, Cryoprecipitate, and Apheresis Platelets.

Summary

The Indian Red Cross Society (IRCS) is a cornerstone of humanitarian aid in India, providing essential services and programs that address the needs of vulnerable communities and individuals. From disaster relief and blood services to health programs and youth engagement, IRCS stands as a vital force in promoting peace, well-being, and resilience across the nation, exemplifying the spirit of humanity and compassion.



DONOR'S PERSPECTIVE: A CHOICE TO SAVE

I walked into the room today,
A little unsure, a little afraid.
But then I thought of those in need,
Whose lives depend on this small deed.

It's just a pinch, a tiny prick,
And with that, the blood starts to drip.
A simple act, a moment brief,
That fills another's world with relief.

I give because I have enough,
And someone out there's fighting tough.
My veins hold life, and so I share,
With hope, with love, with every care.

It's not a loss, but gain, you see,
For giving is what strengthens me.
A gift so pure, so full of grace,
A choice to save, a life to embrace.



Dr. Sunita Devi
Joint Director,
BTS/ PSBTC

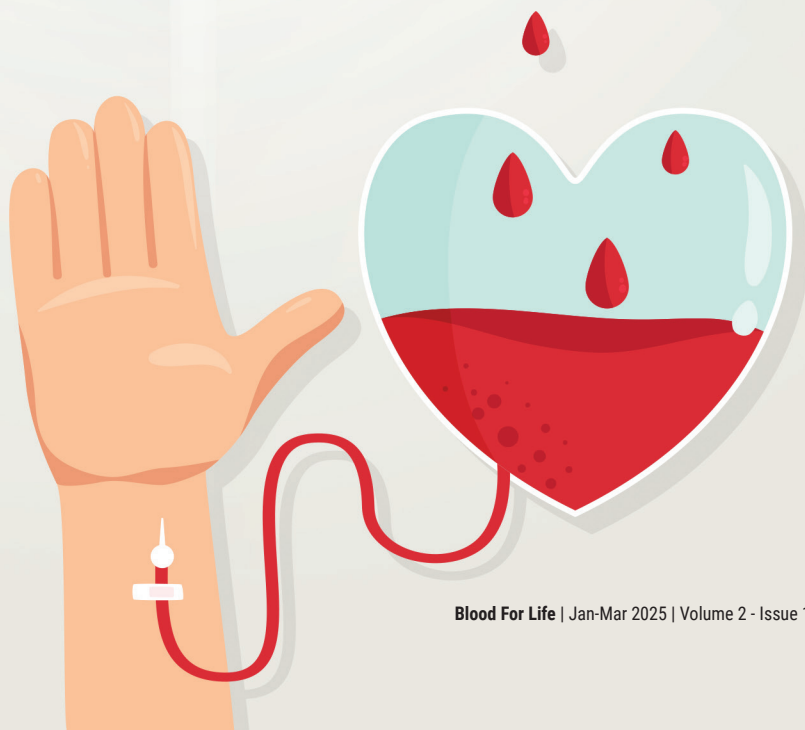
PATIENT PERSPECTIVE: THE GIFT I RECEIVED

I lay there once, my strength was low,
Unsure of where my life would go.
A bag of blood, a stranger's gift,
Gave me the chance my heart had missed.

I never saw their face or name,
But their kindness lit a flame.
Through that gift, my hope revived,
Because of them, I'm still alive.

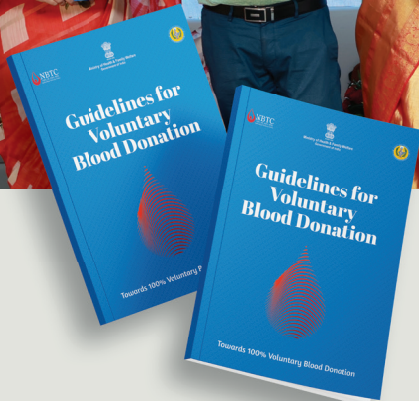
To the one who gave without a word,
Your silent act of love was heard.
You didn't know the life you saved,
But through your blood, I was braved.

Now, as I breathe with gratitude,
I think of you and feel renewed.
A part of you flows in my veins,
Your gift of life, my greatest gain.





Release of National Voluntary Blood Donation Guidelines




Ministry of Health and Family Welfare,
Government of India

 **NBTC**
राष्ट्रीय रक्त संवर्धन परिषद्
National Blood Transfusion Council

Blood Transfusion Services, Directorate General of Health Services
Ministry of Health and Family Welfare, Government of India

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