

# Animal Blood Transfusion – Science & Technology

**NEWS: The Department of Animal Husbandry & Dairying (DAHD), Ministry of Fisheries, Animal Husbandry & Dairying, has released India's first-ever National Guidelines and Standard Operating Procedures (SOPs) for Animal Blood Transfusion and Blood Banks.**

## Need for the Guidelines

### Critical Role of Blood Transfusion in Veterinary Medicine

Blood transfusion is globally acknowledged as a life-saving medical intervention for animals, similar to humans. It plays a vital role in managing trauma cases, severe anaemia, surgical blood loss, infectious diseases, and coagulation disorders, where timely intervention can make the difference between life and death.

### Absence of Structured Framework in India

Until now, India lacked a nationally structured framework for veterinary transfusion medicine. Most transfusions were conducted in an ad hoc manner without standardized protocols on donor selection, blood typing, or storage, leading to inconsistent and potentially unsafe practices.

### Need for Donor Screening and Safety Standards

In the absence of systematic donor screening and compatibility testing, animals faced risks of transfusion-related reactions, infections, and ineffective outcomes. Hence, there was a pressing need for uniform ethical, scientific, and biosafety-compliant guidelines.

## Key Highlights of the Guidelines & SOPs

### State-Regulated Veterinary Blood Banks

Establishment of state-regulated veterinary blood banks with biosafety-compliant infrastructure ensures safe collection, testing, storage, and distribution of animal blood and its components.

### Mandatory Blood Typing and Cross-Matching

To prevent incompatibility reactions, the guidelines mandate blood typing and donor-recipient cross-matching before transfusion, ensuring safer outcomes.

### Donor Eligibility Norms

Strict eligibility norms are prescribed, including age, weight, health status, vaccination history, and disease screening. Only animals that are healthy, disease-free, and properly vaccinated will be eligible as blood donors.

### Voluntary, Non-Remunerated Donations

The guidelines promote voluntary, non-remunerated animal blood donations. Donor owners must provide informed consent, and a Donor Rights Charter safeguards ethical treatment and prevents exploitation of donor animals.

### One Health Integration

The guidelines integrate the One Health approach by emphasizing vigilance against zoonotic disease risks (infections that can spread between animals and humans) in transfusion practices.

### Standardized SOPs and Checklists

Uniform standard operating procedures (SOPs), forms, and checklists are introduced for every stage, including donor registration, transfusion monitoring, and reporting of adverse reactions, ensuring accountability and traceability.

### National Veterinary Blood Bank Network (N-VBBN)

A digital National Veterinary Blood Bank Network will maintain real-time registries and inventories, supported by an emergency helpline, enabling rapid access to blood supplies during critical cases.

### Training and Education Modules

Veterinary transfusion medicine is being institutionalized through training modules in BVSc & AH undergraduate programs, postgraduate courses, and Continuing Veterinary Education (CVE), ensuring future veterinarians are well-equipped.

## **Future-Ready Innovations**

The framework envisions mobile blood collection units for outreach in rural areas, cryopreservation techniques for rare blood types, digital donor–recipient matching apps, and advanced transfusion research, making the system adaptable and forward-looking.

Significance of the Guidelines

### **Bridging a Critical Healthcare Gap**

These guidelines fill a long-standing void in India's veterinary healthcare system by introducing structured, ethical, and scientific transfusion protocols, thereby modernizing clinical veterinary practices.

### **Strengthening Animal Welfare**

By ensuring safe and reliable access to blood transfusion, the framework supports treatment for trauma, surgical procedures, severe infections, and anaemia, directly enhancing animal welfare and survival outcomes.

### **Supporting Livelihoods and Food Security**

With 537 million livestock and 125 million companion animals, veterinary healthcare directly affects rural livelihoods and food security. Since livestock contribute 5.5% of India's GDP and 30% of agricultural GDP, safe transfusion protocols strengthen both economic and nutritional security.

### **Alignment with Global Best Practices**

The guidelines bring India closer to international veterinary healthcare standards, ensuring that emergency care, biosafety, and transfusion ethics match global benchmarks.

### **Dynamic and Evidence-Based Framework**

The framework is designed to be advisory, non-statutory, and flexible, evolving with scientific evidence, technological innovations, and stakeholder feedback, making it adaptable to future challenges.

### **Milestone for Veterinary Medicine in India**

This initiative marks a historic milestone in Indian veterinary healthcare. By institutionalizing animal blood transfusion, it strengthens clinical care, animal rights, and public confidence in veterinary health systems, advancing India's standing in global veterinary medicine.

Source: <https://www.thehindu.com/news/national/centre-issues-new-guidelines-for-transfusion-of-animal-blood/article69980565.ece>

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