



Sanjeevani Multipurpose Foundation's

Dr. Deepak Patil Ayurvedic Medical College & Research Center

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Date: 29/11/2024

Academic Visit of Second BAMS Students of the Department of Rognidan Evam Vikriti Vigyan Dr. Deepak Patil Ayurvedic Medical College and Research Centre, Borpadale

1. Visit Details:

Organizers: Department of Rognidan Evam Vikriti Vigyan, Dr. Deepak Patil Ayurvedic Medical College and Research Centre, Borpadale

Location: Vaibhavalakshmi Blood Centre, Kolhapur

Date: Thursday, 29th November 2024

Time: 03:00 AM to 4:00 PM

Faculty Name: Dr. Parag Kulkarni, Associate Professor & Head

2. Introduction:

The Department of Rognidan Evam Vikriti Vigyan organized this academic visit for Second BAMS students to Vaibhavalakshmi Blood Centre, Kolhapur. The visit provided insights into the operations of a modern blood bank and its importance in healthcare delivery. Understanding the protocols and technologies used in blood banking helps students align their theoretical knowledge with practical applications.

3. Aims and Objectives:

- To understand the workflow and standard operating procedures (SOPs) of a blood bank.
- To study the role of blood banks in healthcare and emergency services.
- To learn about the various departments of a blood bank and their interconnectivity.
- To gain hands-on exposure to blood collection, testing, processing, storage, and quality assurance.
- To understand the significance of biomedical waste management and record-keeping in maintaining ethical and legal standards.

4. Proceedings of the Visit:

The visit was well-structured and divided into multiple sessions, each focusing on specific departments of the blood bank. The students were guided through the facility by experienced staff who explained the functions and protocols of each section

4.1 Reception and Registration Area:

Function: Initial entry point for donors.

Observation: Students observed how donors are welcomed, counseled, and registered.

Key Points:



Donor identity verification and medical history collection.

Pre-donation counseling to educate donors about the process and ensure voluntary, informed consent.

Use of software for managing donor data and generating unique donor IDs.

Importance of donor eligibility criteria like age, weight, and medical fitness.

4.2 Cross-Matching and Compatibility Testing Area:

Function: Ensures blood compatibility between donor and recipient.

Observation: Staff demonstrated cross-matching techniques and explained their importance in preventing transfusion reactions.

Key Points:

Blood grouping and Rh typing (ABO compatibility).

Direct and indirect Coombs test to detect antibodies in the donor or recipient blood.

SOPs for handling and labeling blood samples to avoid mix-ups.

4.3 Blood Donation Area:

Function: Safe and hygienic collection of donor blood.

Observation: Students witnessed the entire donation process, from vein puncture to blood collection.

Key Points:

Sterile equipment, including single-use needles and collection bags, was used.

Importance of monitoring donor vitals before and during the procedure.

Comfortable seating and post-donation refreshments provided to ensure donor well-being.

Importance of emergency care readiness in case of donor discomfort.

4.4 Processing Area:

Function: Prepares blood components for medical use.

Observation: Blood collected was processed using advanced centrifugation techniques.

Key Points:

Separation of whole blood into components like red cells, plasma, platelets, and cryoprecipitate.

Use of refrigerated centrifuges to maintain the viability of blood components.

Labeling and storage of individual components for targeted medical applications.

4.5 Storage Area:

Function: Maintains blood components under optimal conditions.

Observation: The students toured storage facilities equipped with advanced refrigeration units.

Key Points:

Blood storage units maintained at 1–6°C for red cells and -30°C for plasma.

Platelets stored on agitators at room temperature (22°C) to prevent clotting.

Stringent temperature monitoring and alarm systems to prevent spoilage.

4.6 Testing and Quality Control Lab:

Function: Ensures safety and efficacy of donated blood.



Observation: Students observed the screening of blood samples for infectious diseases and quality parameters.

Key Points:

Testing for HIV, Hepatitis B and C, syphilis, malaria, and other transfusion-transmitted infections (TTIs).

Role of enzyme-linked immunosorbent assay (ELISA) and nucleic acid testing (NAT) in ensuring safety.

Quality control protocols for reagents and equipment calibration.

4.7 Refrigeration Area:

Function: Maintains long-term storage of blood and plasma.

Observation: Walk-in refrigerators and freezers were demonstrated, with discussions on temperature control and backup systems.

Key Points:

Compliance with National Blood Transfusion Council (NBTC) and WHO guidelines.

Monitoring of expiry dates and FIFO (First-In-First-Out) inventory management system.

4.8 Biomedical Waste Management Area:

Function: Safe disposal of biomedical waste generated during blood bank operations.

Observation: Students were educated on waste segregation, treatment, and disposal methods.

Key Points:

Color-coded bins for sharps, biological waste, and chemical waste.

Autoclaving and incineration techniques for waste treatment.

Compliance with the Biomedical Waste Management Rules, 2016.

4.9 Record-Keeping and Documentation:

Function: Ensures legal and clinical accountability.

Observation: Students learned about the digital and manual record-keeping systems used to manage donor and blood inventory data.

Key Points:

Maintenance of donor details, blood test results, and blood stock levels.

Role of traceability in identifying blood recipients during adverse reactions.

Legal requirements for maintaining records for a specified period.

5. Key Takeaways:

Blood bank operations involve meticulous planning and adherence to strict protocols to ensure safety and efficiency.

Each department plays a vital role in the seamless functioning of the facility.

Practical exposure reinforced students' theoretical knowledge of diagnostic procedures.

The visit emphasized the importance of ethical practices, quality control, and patient safety in healthcare.



6. Conclusion:

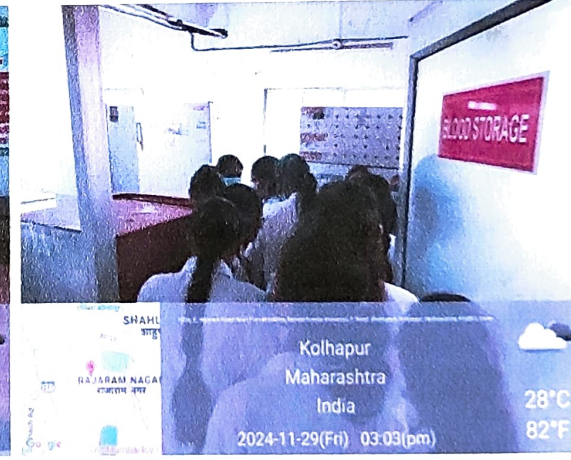
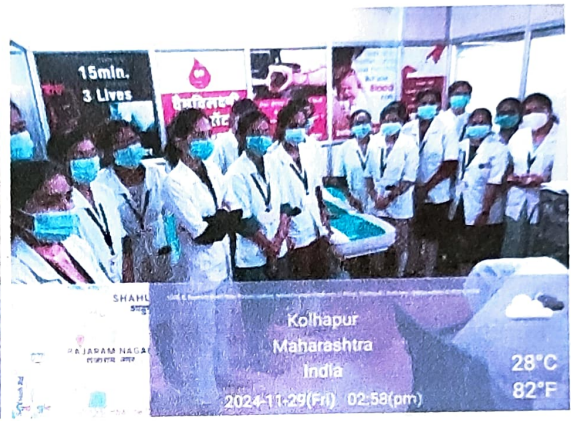
The academic visit to Vaibhavalakshmi Blood Centre was a highly educational experience for the students. It provided them with a detailed understanding of blood bank operations and their critical role in healthcare. The faculty and staff ensured a comprehensive and interactive session, making the visit both informative and engaging.

Prepared by:

Department of Rognidan Evam Vikriti Vigyan

Dr. Deepak Patil Ayurvedic Medical College and Research Centre, Borpale

Photographs of the visit



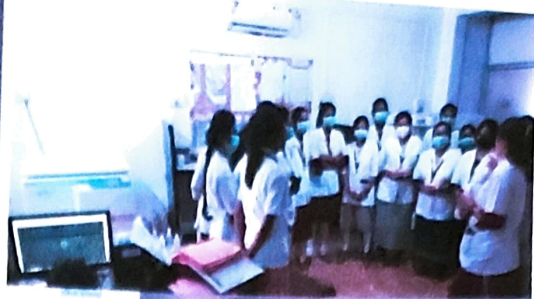


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(Signature)
Principal

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