

Revolutionising The Blood Bank Management: Enhancing Efficiency and Accessibility through Technology

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Abstract: *Good management of blood banks is essential for blood and blood component availability, safety, and timely distribution to the patients requiring it. This study addresses the development of a very modern Blood Bank Management System (BBMS) meant to help streamline the processes of donor registration, blood collections, storage, storage tracking, and distribution. The recommended system offers full synergy at centralized databases, automated compatibility matching, and real-time operation monitoring to enhance effectiveness and save on wastage. AI and IoT technologies can forecast demand and better handle supply chains with minimal shortages. The study states that proper data security management, compliance with regulatory guidelines, and integration with other healthcare institutions remain essential to ensure a smooth blood transfusion process. The design of a computerized BBMS, on the other hand, holds viable consequences for the retention of donors, smooth emergency responses, and patient care enhancement, which together may save many lives.*

Keywords: Blood, Donors, supplies, connections, patient, health

