

Blood-Bank Management System

(A Complete Integrated Software
Solution for Blood-Bank Management)

iBBMS

IEB Solutions
By



IEB Solution's Blood Bank Management System (iBBMS) is a Web-based application that is designed to store, process, retrieve and analyze information concerned with the administrative and inventory management within a blood bank.

This system aims at maintaining all the information pertaining to blood donors, different blood groups available in each blood bank and helps them manage in a better way.

iBBMS provide transparency in this field, make the process of organizing blood donation camps, obtaining blood from a blood bank hassle-free and corruption-free and make the system of blood bank management effective.

Need of Blood Bank Management System

Blood Bank donation system can collect blood from many donators in short from various sources and distribute that blood to needy people who require blood.

The iBBMS has been created with a purpose of replacing all of paperwork done at the Blood Bank. All aspects of blood banking, be it donor record management, component management, cross-matching, blood / components issue, billing and inventory, loan based issue/receipts and returns of material with other entities, all is completely managed by the software. The system boasts in variety and number of reports made available for analysis, legal documentation and insight.

The Major Features Include:

❖ Blood Camp Management and Reporting

- Provides recording of details of camp beginning from camp request, camp planning, finalization of camp site, allocation of staff, details of facilities available in the camp venue.

- Assigning of donor to a particular camp and generate camp organizer report.
- Automated report generation of camp details for submission to the Government

❖ Donor Management

- Intuitive and intelligent donor form for capturing details like Donor Questionnaire, Medical Examination, Blood Collection Details and Serology Report.
- The system allows automatic component data generation based on the component selected in the blood donor form.
- The system allows bulk update for serology for blood units. Serology result for many donors can be updated at once.
- The system allows for either component creation before serology test or vice versa. Based on the serology test, the components created are updated automatically.
- The system allows bar-coded blood bag number entry.
- All Reports provides filtering over many factors like Blood Group, gender, area, blood camp, date of donation, donor type, etc.
- The system provides easy link for easy edit or adding details for various sections of the donor form.
- During form filling, the system notifies the user how much percentage of donor data has been updated.
- The donor form is highly configurable and can be easily modified to include additional data required by various blood banking institutions.

❖ Donor-test results management and adverse reaction data management

- Provides filterable selections for donor selections.
- The reports are highly configurable and can be configured to display data as per institution requirements.

❖ Search based on Component ID, Donor Registration ID, Donor Blood Bag Number and Donor Name

- The results displayed in search are highly configurable.
- The search functionality also allows for site-wide search. It means a user can search for any data available in the system.
- Custom links can be added in the search results to allow easier navigation and accessibility.

❖ Blood Components Management

- Automatic generation of components form donor form.
- Based on the date of collection, the system automatically derives the date of expiry and disallows issue of component if unit has expired.
- Until the serology test is done, the system marks the status of the component as test awaited. And only after serology test is done, the component is marked for Ready for Issue.
- The Available components list is available and the system automatically generates the list of components that are ready for issue to be available.
- The status of the component can be modified to Reserved or Issued to state is it has been reserved for a patient or already issued.
- The system automatically generates the component label required for printing when issuing the component.

- Various reports related to components are available. Ex: Master Register.
- The system allows multiple cross-matches to be done for a component and store cross-match details of all. At the same time, it does not allow a cross match to be done for an issued/rejected component unit.
- The system does not allow a unit to be issued to patients if cross-match fails for the component.

❖ Patient Management System

- Captures patient personal information as well as the hospital where blood is required.
- The system allows for reserving a unit for 24 hours for a patient.
- The blood component issued, the payment made as well as link to the final bill is available when the patient page is opened.
- The data allows reports like: Issue Register, Reserved Units and Patient Inventory List.
- The system allows for capturing transfusion reaction data.

❖ Blood Issue and Billing

- Ability to provide adjustments in the final payment receipt for concession for blood unit.
- The system prevents blood issue if cross-match is not done or fails.
- Final bill gets generated only if only the payment has been accounted for.
- Final bill gets generated only component selected has been serology tested and is ready for issue.
- Auto-generated final receipt.
- Auto-generated Cross-matching report.

❖ Managing Practical Solutions For Blood Bank Management

- The system allows components to be created before serology and vice-versa. The system takes care to automatically update the components when serology is done.
- Automatic creation of components from the donor form as well as manual component creation.
- Bulk update of serology for multiple donors at once.
- Bulk issue of components for various centres.
- Checks in place to ensure that a component for which cross-match is not done does not get issued.
- Automated deferral for a donor is medical evaluation for a donor fails.
- Based on serology details, components are auto marked as discard when serology fails and the system does not allow them to be issued.
- The system prevents final bill generation for patients if the payment has not been accounted for.
- The system provides configurable cost for patients from Govt and Private Centres.
- The system allows discounts to be given for patients as well as free issue to patients.
- Final Bill, Component Label, Cross Match Report - Auto Generated as per institution requirements.
- Government Issue Reports.
- Reports for Legal Compliance.
- Sub Groups available for Blood Groups in donor form.
- Reports - All variety of reports are provided in the exact requirement as requested.

❖ Other Features:

- Inventory Management System.
- Fine-tuned permission management for access to software for various roles like doctor, nurse, technician, receptionist, coordinator etc.
- Blood Bank Staff Management System.
- Loan Based Material Management System.
- **Reports:** Adverse Reaction Report, Master Register, Government Issue Register, Daily Remittance, Donor Register, Blood Bag Reports and so on. We have covered all the reports possible from a blood bank point of view.
- All Reports are MS-Excel downloadable

BENEFITS

✓ Readymade, out-of-the-box solution	✓ Manage Donor, Patient, Hospital & Organization related information
✓ Quick implementation	✓ One-time master data entry
✓ Support Level Agreement	✓ Cost-Center concept
✓ Documented & recorded training	✓ Manage multiple institutions
✓ Reduce the time spent by teaching staff on administrative tasks and help them increase the time spend on core-competencies	

Modules available in IEBS-EDU

A. Administration

- a. Users
- b. Rules & Regulations
- c. Modify / Delete wrong bills
- d. Masters
- e. Records

B. Operations

- a. Requests
- b. Account
- c. Inwards
- d. Donor
- e. Donation Camp Activities
- f. Serology
- g. T. T. I.
- h. Component
- i. Quality
- j. Stores
- k. Loan
- l. History
- m. Utilities
- n. Reports

Module wise Features

A. Requests

✓ Final Billing	✓ Blood Component Request
✓ Cash Voucher	✓ Ticket Management: <ul style="list-style-type: none"> ○ Ticket Generation ○ Ticket Reallocation ○ Ticket Close
✓ Diseases Registration	
✓ Guest / Visitor Information	

B. Account

✓ Account Master	✓ Patient Payments
✓ Hospital Registration	✓ Vendor Payments
✓ Patient Credit – Payment	✓ Vendor Advance
✓ Hospital Credit – Creation	✓ Bill Refunds
✓ Hospital Credit – Payment	✓ Export Data

C. Inwards

✓ Purchase Receipt - Inwards	✓ Loan Receipt – Inwards
✓ Camp Material – Inwards	✓ Loan Return – Inwards

D. Donor

✓ Donor Camp Registration	✓ Camp-Deferred Donor Registration
✓ In-house Donor Registration	✓ Donor Bag Details
✓ Donor Adverse Reaction	✓ Donor – I.A.T/D.A.T.

E. Blood Donation Camp Activities

✓ Organization Registration	✓ Request for Blood Donation Camp
✓ Blood Donation Camp Registration	✓ Donation Camp Site Inspection
✓ Duty Schedule for Donation Camp	✓ Material Issue for the Camp
✓ Donation Camp Starting Details	✓ Donor Details and Registration
✓ Donation Camp Expenses	✓ Donation Camp Closing Detail
✓ Material Inward – Unused Camp Material	✓ Bags Inward collected from Donation Camp
✓ Material Damage Entry from Donation Camp	

F. Serology

✓ Patient BG and Ab Screening	✓ Donor BG
✓ Bag Allocation	✓ Bag Issue
✓ Manual Bag Issue	✓ Returns from Issue
✓ Adverse Reaction	✓ I. A. T. / D. A. T.
✓ Phenotype Details	✓ Patient Sample Rejection

G. T. T. I. (Transfusion Transmissible Infections)

✓ ELISA Sample Arrangement	✓ ELISA Results
✓ ELISA Validation	✓ VDRL & MP Validation
✓ N.A.T. Validation	✓ Blood Test
✓ Get Machine Records	✓ Blood Test – Semi / Auto
✓ EQAS / BQAS Inward	✓ Quarantine Stock
✓ Reagent Open	✓ Reagent Close
✓ Kit Master	

H. Component

✓ Component Process	✓ Component Separation
✓ Component Discard	✓ Blood Component-Bag Disposal

I. Quality Checking

✓ Component QC	✓ Reagent Daily QC
✓ Pooled Cells Preparation & QC	✓ Component Discard
✓ Calibration & Maintenance of Blood-Bank Equipment	

J. Stores

✓ Item Type	✓ Item Master
✓ Vendor Master	✓ Stores Master
✓ Material Indents	✓ Material Issue
✓ Goods Receipt	✓ Goods Discard
✓ Goods Transfer	✓ Goods Return

K. Loan

✓ Loan Bank Master	✓ Loan Request
✓ Loan Outward	✓ Loan Inward
✓ Send for Fractionation	✓ Allotment of Fractionation

L. History

✓ Component Bag History	✓ Donor History
✓ Patient History	✓ Stock History

M. Utilities

✓ User Profile	✓ Change Password
✓ Update Old Stock	✓ Pending Tasks
✓ Dashboard	✓ B.T.O Sign
✓ N.A.B.H.	✓ Trainings

N. System Administration

✓ User and Role Management	✓ Database Backup and Restore
✓ System Errors Tracking	✓ Import & Export Data
✓ Internal Audits	✓ Dashboard, Email, SMS Configuration

O. Donors' Portal

✓ View personal data	✓ View donations History
✓ Online Component request	✓ View donation certificate
✓ News and announcements from admin's desk	✓ Next eligible donation date
✓ Future Camp Schedule	✓ Social Activities by blood-bank

P. Financial Accounting

✓ Day Book	✓ Tax settings
✓ Cashbook	✓ Reports on receivables and payables
✓ Payment and Receipt	✓ Tax Deduction at Source

Q. Reports

✓ S.B.T.C. Reports	✓ Blood Bag Collection Report
✓ Components Preparation	✓ Components Discard
✓ Component Issue Reports	✓ M.D.A.C.S. Reports
✓ Component Vs. BG Issue (Hospital)	✓ Request to Issue Analysis
✓ Inward to Stock Analysis	✓ Daily Sales Register
✓ Component Sales Register	✓ Product Sales Register
✓ Thalassemia Issue Reports	✓ Daily Issue Reports
✓ Loan Receipt Reports	✓ Loan Issue Reports
✓ G.S.K. Ready	✓ Tickets Reports

R. Inventory Management (Add On)

✓ Inventory Item master	✓ Inventory use
✓ Multiple-stores Management	✓ Physical Count
✓ Gate Entry	✓ Inventory Valuation Reports
✓ Material receipt panel for easy receipt entry	✓ Minimum & maximum stock level management
✓ Quality checking	✓ ABC Analysis
✓ Material Issue	✓ Reports on various transactions

S. <u>Staff Management and Payroll (Add-On)</u>	
✓ Staff records	✓ SMS function for announcements and alerts
✓ Staff History	✓ All Employee formats such as: <ul style="list-style-type: none"> ○ Appointment Letters ○ Notices ○ Relieving Letters ○ Experience ○ Certificates ○ Offer Letters
✓ Employee Groups / Grades Salary Structure	
✓ Employee Attendance (also through fingerprint and RFID cards)	
✓ Automatic salary generation as per rules set during implementation	
✓ Employee digital file with scanned documents	✓ Extendable to institution-specific formats
✓ Manual amendment, if required (auditable and with permission only)	
<u>Other Features (In Staff Management)</u>	
✓ Salary Statements	✓ External & Internal Communication
✓ Leave management	✓ Document Management System
✓ Inbuilt workflow system for approvals of document	✓ Recruitment (online application) integrated with website
✓ Employee reimbursement for charges	✓ Easy workflow settings on events

Deployment, Implementation and Support Schedule (Time-line)

Our draft implementation schedule is given below:

Work Stage	Deliverables	Duration
Project clarification	Contract	-
Project specification	Project Plan, Functional & Technical specification	3 week
	Content plan	
System rollout and Integration	Information Architecture	3 weeks
	System Customization	
	System Deployment	
Testing	Testing and Quality Assurance	1 week

Knowledge Transfer	System Training	2 week
Maintenance	Routine system maintenance	

Please Contact us for further details



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