HIS IMPLEMENTATION PHASE II IN BLOOD BANK

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Introduction

- Healthcare is a very important part of our society and it is imperative for healthcare providers to do their jobs in an efficient and effective manner.
- The employees have to manage and integrate clinical, financial and operational information that grows with the practice. A hospital information system (HIS) is essentially a computer system that can manage all the information to allow health care providers to do their jobs effectively.
- Hospital information systems include the integration of all clinical, financial and administrative applications. Modern HIS includes many applications addressing the needs of various departments in a hospital.

Objectives

- To study functionality of Blood Bank.
- To implement Hospital Information System & computerize process of Blood Bank.

Methodology

- **Location**- Blood Bank , Paras Hospital Gurgaon
- **Duration**- 9th Feb – 9th April 2015
- **Type of study**- Descriptive Study
- **Data tool** - Hospital Information Software employed in blood bank, having input of the data related to patients coming from OPD, IPD, and Emergency & Accident.
- **INCLUSION CRITERIA:** Implementation of Phase 2 HIS in a particular department i.e .Blood Bank in Paras Hospital, Gurgaon.
- **EXCLUSION CRITERIA:** Implementation of HIS in other departments of Paras Hospital like Blood Bank, CSSD, Linen and Laundry, EMR, Complaint Management

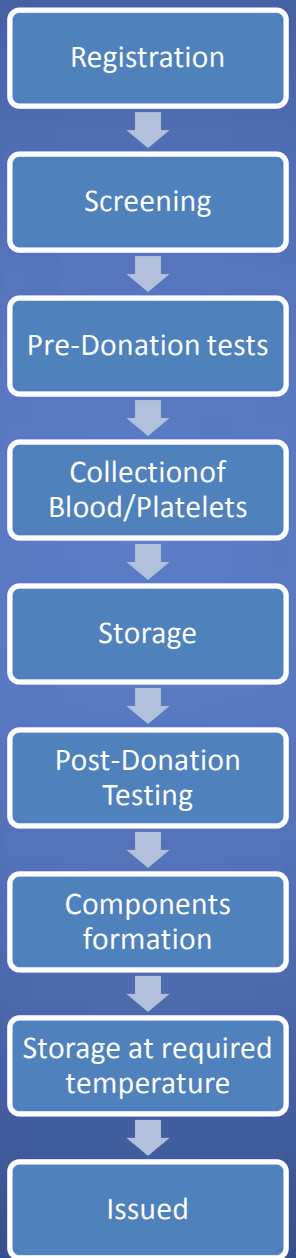
- HIS implementation Phase 1 was already completed in Front Desk, IPD, billing, pharmacy, Laboratory, Radiology, ward management, etc. , as the work load and data entries were excess in these departments .
- HIS Implementation Phase 2 for Blood bank, OT, CSSD, Linen and Laundry, MRD ,EHR was going on.
- They had tied up with external agency for the software. The software provided basic functionalities and our task was to track the process in departments and refine the system according to the needs of the department and to train their staff to use the system efficiently.

HIS in Blood Bank

In blood bank HIS implementation the software extended a helping hand while recording-

- Donor registration
- Reports
- Tracking registered patients
- Patient Details
- Issue of blood
- Blood store

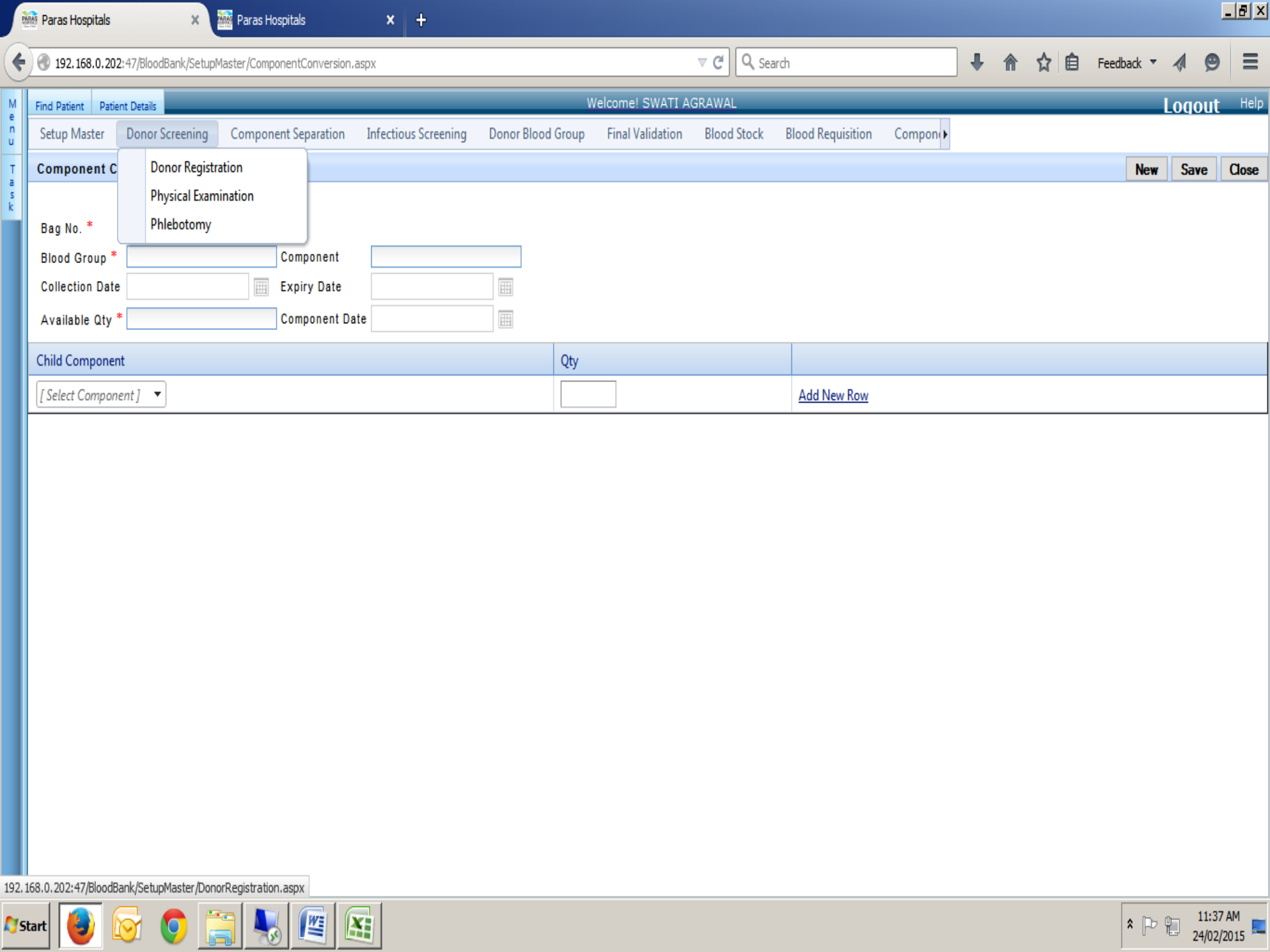
Process flow of Blood Bank-



Records Maintained-

- Issue Register
- Master Register
- NAT and ECI Test Report File
- ECI Control Report File
- ECI Test Report File
- NAT Report File
- Donor Record Register
- Donor Blood Grouping Register
- Patient Blood Grouping Register
- Component Register
- Blood Donor Form File
- Blood Donor Defer Form File
- Apheresis Donor Form File

- Apheresis Donor Defer Form File
- Lab. Blood Grouping Register
- Blood Requisition Form File
- Donor Feedback Register
- Daily QC- Quality Control
- Blood Bank Dispatch Register
- Unit received from other Blood Bank Register
- Rapid card Register
- Stock Register of Antisera
- Blood Bag Disposal Register
- Thalassemia Record Register
- Antisera opening Register


Paras Hospitals
Paras Hospitals
192.168.0.202:47/BloodBank/SetupMaster/ComponentConversion.aspx
Search
Feedback
Find Patient
Patient Details
Welcome! SWATI AGRAWAL
Logout
Help
Menu
Task
Setup Master
Donor Screening
Component Separation
Infectious Screening
Donor Blood Group
Final Validation
Blood Stock
Blood Requisition
Donor Registration
Physical Examination
Phlebotomy
Component C
New
Save
Close
Bag No. *
Blood Group *
Component
Collection Date
Expiry Date
Available Qty *
Component Date
Child Component
Qty
[Select Component]
Add New Row
192.168.0.202:47/BloodBank/SetupMaster/DonorRegistration.aspx
Start
11:37 AM
24/02/2015

Paras Hospitals | Paras Hospitals

192.168.0.202:47/BloodBank/SetupMaster/DonorRegistration.aspx

Search | Feedback

Menu | Task

Find Patient | Patient Details

Welcome! SWATI AGRAWAL | Logout | Help

Setup Master | Donor Screening | Component Separation | Infectious Screening | Donor Blood Group | Final Validation | Blood Stock | Blood Requisition | Compon

Donor Registration

Donon Reg. No. | New | Save | Close

Manual Donor Registration No * | Donation Date * 24/02/2015 | Old Donor Reg Number

Donation Type* [Select] | Donor Type* [Select] | Procedure Type [Select]

Upload | Remove

First Name * [Select]
Middle Name
Last Name
Gender * [Select]
DOB
Age(Y-M-D) *
Guardian [Sele]
Height(Cms.)
Weight(Kg.)
Blood Group [Select]
For Whom Donate(IP No)
Age
Blood Group
Wish to Donate Again
Want to become a Voluantry Donor
Diagnosis

Address 1 *
Address 2
Address 3
Country * INDIA
State * HARYANA
City* GURGAON
Area [Select]
Zip
Education
UHID
Ward
Refer By
Last Donation Date
Remarks

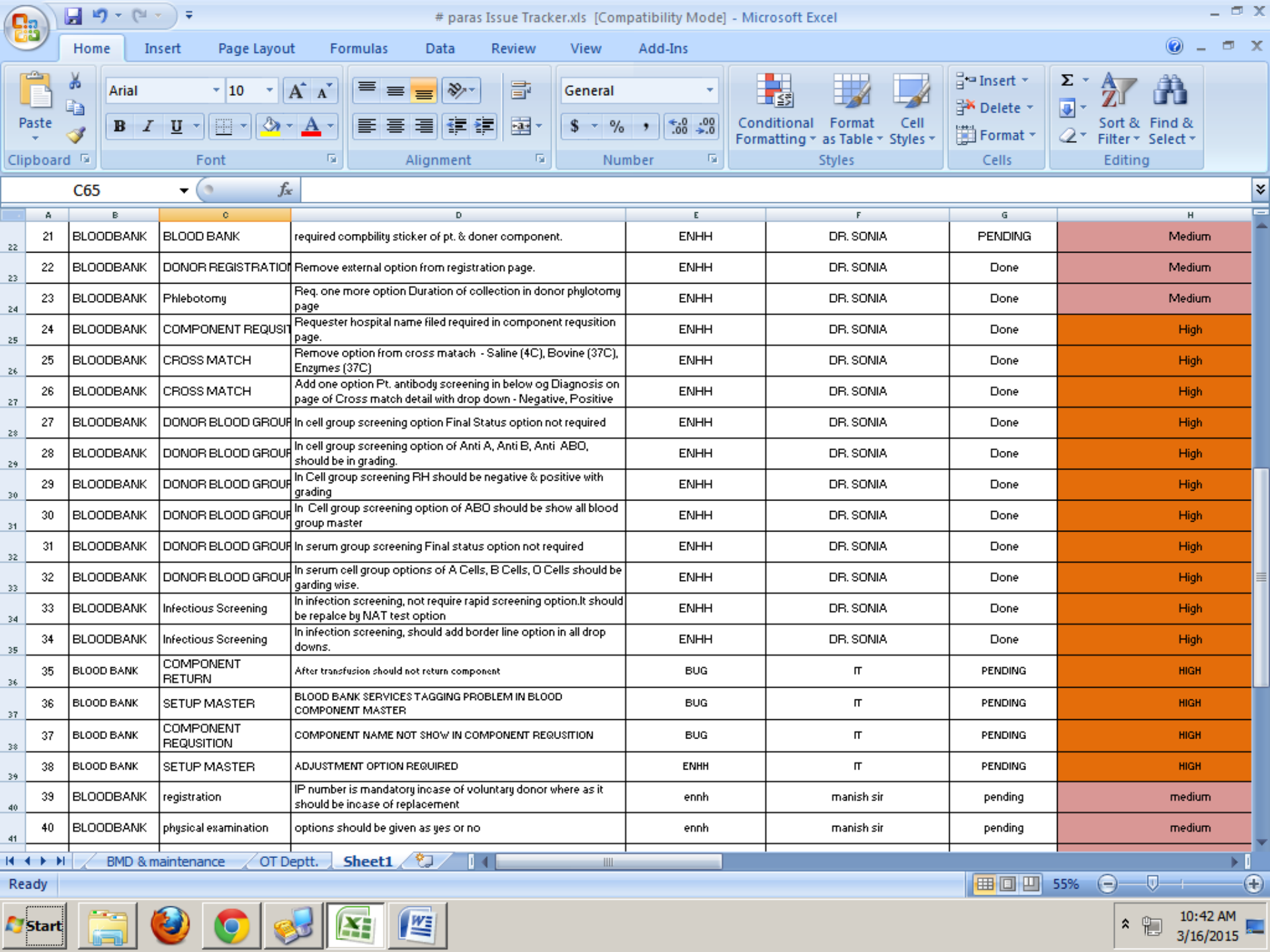
Emr. Phone No
Home #
Office No
Mobile # *
Fax
Email
Marital Status [Select]
Religion HINDU
Nationality Indian
Occupation [Select]
Name
Bed No
Relationship with Patient [Select]

javascript:__doPostBack('ctl00$ContentPlaceHolder1$RadPanelBar3$i0$lnkBtnDonationTypeMaster','')

Start | 10:32 AM 24/02/2015

Issue tracker-

- Issue tracker shows various problems which are being encountered by the staff of the department while using the software & our main role was to understand those problems first & afterwards to interact with the software agency to rectify those problems for the smooth functioning of the software.
- Issue Tracker was sent to external agency and issue were discussed telephonically and through system sharing online, changes were made by them.
- The staff was trained simultaneously to handle all data entries on time and maintain proper records on the system. User Manual for the system were made , so that system can be made user friendly.



paras Issue Tracker.xls [Compatibility Mode] - Microsoft Excel

Home | Insert | Page Layout | Formulas | Data | Review | View | Add-Ins

Paste | Clipboard | Arial | 10 | Font | Alignment | General | Number | Conditional Formatting | Format as Table | Cell Styles | Styles | Insert | Delete | Format | Cells | Sort & Filter | Find & Select | Editing

C65

	A	B	C	D	E	F	G	H
22	21	BLOODBANK	BLOOD BANK	required compbility sticker of pt. & doner component.	ENHH	DR. SONIA	PENDING	Medium
23	22	BLOODBANK	DONOR REGISTRATIOI	Remove external option from registration page.	ENHH	DR. SONIA	Done	Medium
24	23	BLOODBANK	Phlebotomy	Req. one more option Duration of collection in donor phylotomy page	ENHH	DR. SONIA	Done	Medium
25	24	BLOODBANK	COMPONENT REQUSI	Requester hospital name filed required in component requsition page.	ENHH	DR. SONIA	Done	High
26	25	BLOODBANK	CROSS MATCH	Remove option from cross matach - Saline (4C), Bovine (37C), Enzymes (37C)	ENHH	DR. SONIA	Done	High
27	26	BLOODBANK	CROSS MATCH	Add one option Pt. antibody screening in below og Diagnosis on page of Cross match detail with drop down - Negative, Positive	ENHH	DR. SONIA	Done	High
28	27	BLOODBANK	DONOR BLOOD GROUI	In cell group screening option Final Status option not required	ENHH	DR. SONIA	Done	High
29	28	BLOODBANK	DONOR BLOOD GROUI	In cell group screening option of Anti A, Anti B, Anti ABO, should be in grading.	ENHH	DR. SONIA	Done	High
30	29	BLOODBANK	DONOR BLOOD GROUI	In Cell group screening RH should be negative & positive with grading	ENHH	DR. SONIA	Done	High
31	30	BLOODBANK	DONOR BLOOD GROUI	In Cell group screening option of ABO should be show all blood group master	ENHH	DR. SONIA	Done	High
32	31	BLOODBANK	DONOR BLOOD GROUI	In serum group screening Final status option not required	ENHH	DR. SONIA	Done	High
33	32	BLOODBANK	DONOR BLOOD GROUI	In serum cell group options of A Cells, B Cells, O Cells should be garding wise.	ENHH	DR. SONIA	Done	High
34	33	BLOODBANK	Infectious Screening	In infection screening, not require rapid screening option.It should be repalce by NAT test option	ENHH	DR. SONIA	Done	High
35	34	BLOODBANK	Infectious Screening	In infection screening, should add border line option in all drop downs.	ENHH	DR. SONIA	Done	High
36	35	BLOOD BANK	COMPONENT RETURN	After transfusion should not return component	BUG	IT	PENDING	HIGH
37	36	BLOOD BANK	SETUP MASTER	BLOOD BANK SERVICES TAGGING PROBLEM IN BLOOD COMPONENT MASTER	BUG	IT	PENDING	HIGH
38	37	BLOOD BANK	COMPONENT REQUSITION	COMPONENT NAME NOT SHOW IN COMPONENT REQUSITION	BUG	IT	PENDING	HIGH
39	38	BLOOD BANK	SETUP MASTER	ADJUSTMENT OPTION REQUIRED	ENHH	IT	PENDING	HIGH
40	39	BLOODBANK	registration	IP number is mandatory incase of voluntary donor where as it should be incase of replacement	ennh	manish sir	pending	medium
41	40	BLOODBANK	physical examination	options should be given as yes or no	ennh	manish sir	pending	medium

BMD & maintenance | OT Deptt. | Sheet1

Ready | 55%

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Key Findings-

- Lack of coordination among IT department & Blood bank.
- Training regarding the use of software was not given properly by the software agency.
- Only one computer system was there in blood bank without power backup which instead of fastening the process of data entry was actually hampering it.
- Lack of well trained staff to use computers.
- Few steps in HIS were different from that of their routine process which again creates problem to use the software.

Recommendations-

- HIS successful implementation requires two way approach i.e. both financial investment and management and changing software according to process flow, making software efficient and user-friendly.
- Basic software should be designed after asking the requirement of blood bank department to reduce the discrepancies.
- System errors and failures in between need to be given priority and it should be solved on emergency basis , without delay.
- Supervision – Entries of the patient data made should be reviewed on regular basis and correct training is to be provided to new staff employed in the department.

- Regular report generation – Reports should be generated monthly or weekly basis to evaluate and check efficiency of system.
- User manual should be provided before hand by the software agency for the convenience of staff.

Result-

- All details regarding patients and hospital were computerized
- The staff was able to record and retrieve data in less time
- Data analysis of the records made easy
- The issues raised by department were sorted and all the changes were made
- The system was made user friendly and staff was trained to use system efficiently
- Various report can now be generated easily

Conclusion-

- The hospital required HIS Phase 2 implementation in departments like- Blood bank, OT, CSSD, Linen and Laundry, MRD ,,EHR , Equipment maintenance, Housekeeping departments. . For this external agency provided basis set-up for software. Due to the discrepancies in software and pattern of record maintenance in the department, changes were made. Department raised issues while recording the data related to patient and report generation, and the changes to be made were recorded in Issue Tracker. The changes were made and implemented and staff was trained and was supplied with User Manual to make system User-friendly. Hence the data entry system helped to make workflow easy , effective and efficient.

Thank you