AKHIL SYSTEMS PVT. LTD.

# MIRACLE

## FUNCTIONAL SPECIFICATIONS

YOUR HEALTHCARE IT PARTNER

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## ABOUT THE COMPANY

Akhil Systems Pvt. Ltd. (ASPL) is the leading provider of innovative health information systems and services that transform the administrative and clinical operations of healthcare organizations of all sizes.

We are India's one of the pioneer Hospital Information System (HIS) company with around 23+ years of experience in the single domain of healthcare. Specialized in delivering management information systems for Hospitals, Medical Colleges, Clinics, Diagnostic Centers and Pharmacy Chains, we have more than 200 happy clients across the world.

## ABOUT THE PRODUCT

MIRACLE© HIS is an upshot of 20+ years of hard work, determination and dedication towards the perfect healthcare IT solution. From creating a paperless environment to providing interoperability within each department of the hospital, MIRACLE© has been reducing human efforts and saving the time of the users around the globe. MIRACLE is one ready to use product and it comes with unlimited customizations.

Get ready for the unbeatable MIRACLE solution for your institute/facility.

ASPL

# Preface

The hospital information system has become an integral part of health care. It is linked to the health informatics that focuses mainly on the administrative functioning of hospitals and clinics/nursing homes. It has different implementations and is an integrated and comprehensive information system designed to deliver every administrative operation in the healthcare industry.

Hospital information systems in recent years have been converted into digitized systems involving computers, while the traditional file cabinets and paper works are taking a backstage. A computerized health information system is made up of steps such as data input, processing, outputs, and boundary. The computer system receives the health data, which then get processed to finally produce the specified outputs, and there are predefined boundaries to influence the outputs.

The aspect of processing involves monitoring as well as memory functions. The digitized health informatics system is associated with the idea of a wide range of aspects.

**Akhil Systems Pvt. Ltd.** has spent over 20+ years to design, develop and architect the HIS which is used by more than 200 hospitals across the globe. The company has dedicatedly spent time to improvise the application over the course of two decades. Miracle© is a copyrighted product of Akhil Systems Pvt. Ltd. available in standard and customized versions.

Company generally provides three variants of the HIS depending up on the size and departments of the hospital. The variants provided are Miracle© Ready (standard product available for small hospitals with limited customizations), Miracle© Premium (most widely used application with moderate customization) and Miracle© Enterprise (exclusively developed for world class hospitals with unlimited customization).

The application has received monumental amount of appreciations, awards accolades for the uncompromised quality, performance and security. Quality of the application has stunned the professionals and they are undeniably recommending the HIS.

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# 1. Registration

Maintaining record of all the patients is a troublesome and time-consuming task. These days any hospital cannot depend on paper to maintain name record and hence, it requires an electronic solution to reduce the effort. Miracle HIS provide an easy way out for maintaining and managing name records of the all the patients. Registering patient name along with other personal information helps in organizing a manageable database. This database is easily accessible and could later be used by the provider, front desk, administrator or any authorized personnel. Hospital could use this data for analytic purpose as well. Miracle HIS is packed with multiple modules and most of these modules are interconnected. Registering patients using Miracle HIS is simple and allows user to omit human errors. Any correction or modification in the patient's record is one-minute task. User may need to enter remarks every time they make any changes. Miracle HIS also provide an option to add notes in the registration module.

**Patient Registration** – The patients visiting in the hospital are categorized into two types:

1. General Patients
2. External patients

**Following options will be present on the Patient Registration form:**

| Sr. No. | Options | Description |
|---|---|---|
| 1. | Registration Number | It's a unique id number generated for each patient after registration. |
| 2. | Attach Document | To attach any patient record available |
| 3. | Upload Image | To upload the image of the patient available and it can be integrated to webcam. |
| Demographic Details | | |
| 4. | Name | For entering name of the patient various boxes are provided which includes Salutation, First Name, Middle Name, Last name |
| 5. | Gender | To mention gender of the patient |
| 6. | Date of Birth | To enter birth date of patient |
| 7. | Age | It mentions age of the patient in Year – Month - Days. |
| 8. | Address | For entering address various text boxes and dropdowns are provided which includes Address, Address line 1, Country, State, City, Area and Zip code |
| 9. | Contact | For contact information boxes are provided which includes home number, mobile number, and e-mail address. |
| 10. | Nationality | To mention nationality of the patient |
| 11. | Marital Status | To mention marital status of the patient |
| 12. | Mandatory Fields | Setup to be provided to mark mandatory field as per each facility in admin module, as for each facility the mandatory fields may vary. |

| | | |
|---|---|---|
| 13 | Merged Registration | Provision is there to merge any duplicate Registration No in to any other Registration No and to block any of the Registration No. |
| 14 | New Born Reg. | Provision is there to capture Mother Registration No which helps pick up demographic details automatically |
| *Emergency Contact* | | |
| 15 | Next of Kin | Details of the person provided- name, relationship to patient, address, phone number, email address. |
| *Payer Info* | | |
| 16 | Direct patient | It will include options for Private patient/Cash patient. |
| 17 | Company | It will include that patient which belongs to some company tariff. |
| 18 | Insurance | It will include that patient which comes under the Insurance company. Provision to add Insurance Details like Insurance Details like TPA, Insurance/Payer, Card, Sponsor, Member Id, Policy No, Valid from, Valid up to, Copay on Net or Gross, Credit limit, OP Pharmacy Copay (%), Copay max limit, Provision is also available to define Deductible and Copay % for service categories for OP. It will allow multiple Insurance Details to be tagged. |
| *Referral Info* | | |
| 19 | Provider | To mention the referral doctor name |
| 20 | Referral Type | To mention type of referral like by self , friends, doctor etc. |
| 21 | Lead Source | Source of referral |
| 22 | Referred by | To mention referral hospital |
| 23 | Status | To mention status of patient Active or Inactive |
| *Other Info* | | |
| 24 | Identity type | To mention type of the identity available for patient like passport etc. |
| 25 | Religion | To fill religion of the patient |
| 26 | Diagnostic only | To mention if patient has come for diagnostic service only |
| 27 | VIP | To mention if patient is a VIP along with a VIP note |

# 2. Appointment

Time is the most precious entity that humans have been gifted by nature. Utilizing it judiciously is challenging. To maintain a smooth flow of work and work environment we assign time window to each patient where he/she could interact with the doctor or go through the treatment procedure. Managing large number of appointments and keeping a record of doctor's availability is intricate task. Miracle HIS has made this process easy for the operators. Using 'Appointment' module of Miracle HIS, operator could easy maintain a database of doctors, their time schedule, patient's arrival details and other necessary details of the patient. Through this module operator can make an appointment for patients with their respective doctor. Appointments could be booked over telephone, over hospital's website and online portals. A patient could simply walk-in for an appointment too. This module saves a lot of time and avoids all the time related conflicts. Operator can also keep a check on all the confirmed and unconfirmed appointments. Operator can easily manage all the unpaid appointment schedules.

**Functionality of Appointment Module**

- **New Appointment:** Through this option user is able to make a new appointment for patient. Operator can book an appointment for a registered or an unregistered patient.
- **Add Break/Block:** Through this option user break/block time slot for particular Provider/Doctor. (Break and block option are explained in upcoming sections.)
- **Paste:** Through this option user paste the appointment slot of the patient from one provider to another provider.
- **Print Appointment:** If patient desire to get the appointment slip then user have to click over the 'print appointment' then appointment slip will be generated. Printed slip will contain name of the patient, name of the doctor and the time window.
- **Copy:** If patient want an appointment for other specialization then user 'copy' the patient information and then paste the information on those doctor time slot.
- **Edit:** User can edit the appointment information of patient he/she click on edit then appointment form screen will be displayed.
- **Payment:** For making the consultation billing user clicks on the payment the OPD billing screen will be displayed.
- **Cancel:** User can cancel the appointment by just clicking on the 'Cancel' option
  (NOTE – Cancel the appointment before receiving the payment.)
- **Check In & Confirm:** In registered patient check in & confirm status is auto updated.
- **Patient Details:** Show the all information of patient user clicks on 'Patient details' option then main registration screen will be displayed. On this form user edit the information of patient.

# 3. Billing

Generating good revenue is a key process that leads to making of a successful business. Collecting money from the clients and keeping a record of each transaction is an intricate task. It involves a great deal of patience and good maths. One must be very careful before charging their clients (patients in this case). One wrong transaction could disgrace the reputation of the institution. Generating manual bills is a time consuming task. One could possibly make errors in calculation or in writing the names of the medical services provided. One could make errors in calculating taxes manually. No matter whatever the reason is, one wrong bill would ultimately lead to patient's dissatisfaction. This module is used to perform the monetary events in the hospital, including Outpatient and Inpatient billing.

**Following functionalities are available in the Billing module:**

| S. No | Option | Description |
|---|---|---|
| 1 | **Billing Main Screen (Patient Lists)** | This option is responsible for listing all the patients of OP and IP with the All Registration, Discharge But not bill, Discharge & MLC filtering criteria, giving complete details of the patient registration, encounter status and the IP if any. |
| 2 | **Patient History** | In this option the users are able to track all the bills details of the patient from one single location, including all other details like user name, company name etc. Operator could simply select a patient from the list to go through the patient's billing history. |
| 3 | **Master Activity List** | This form is used for various settlements of the IP and the OP billing, and other important transactions including the credit note, debit note, TDS, bill settlement, refund and others**.** |
| | | Operator could select a patient here and perform the following task in this Form.<br>1. Bill Settlement – Receive pending payment from the patient<br>2. Bill Settlement Refund – Refund overcharged/advance payment<br>3. Credit note (if any)<br>4. TDS<br>5. Bill cancellation.<br>6. Re Printing of the bill.<br>7. Details of the outstanding amount, company wise.<br>8. Upload files related to Patient Insurance Submission, Resubmission and others. |
| 4 | **Create Op Visit** | From this option users are allowed to create the new visit related to selected patient, and users can also view the closed visit of op for the same patient. |
| 5 | **OP Billing** | From the OP billing the user can do the following tasks.<br><br>1. Consultation Billing<br>2. Investigation Billing<br>3. Surgery Billing<br>4. Advance Settlement |

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| | | 5. Copayment<br>6. Company change event<br>7. Insurance details<br>8. Deductible Adjustment<br>9. Approval Code Entry<br>10. Discount<br>11. Check the previous visit history.<br>12. Payment with multiple mode. |
| 6 | **IP Billing** | In this functionality the users are able to make IP billing of the admitted patient and also able to perform other events which are needed for IP billing like charge slip entry, advance collection, cancellation of the services, advance adjustment and others. |
| | | These are the following tasks which can be performed by the users in the IP billing form.<br>1. Charge Slip Entry<br>2. Cancellation of the Charge Slip Entry<br>3. Advance Collection<br>4. Change billing category<br>5. Change Payer<br>6. Room Rent Manuals / auto<br>7. Inclusion and Exclusion in the packages<br>8. Co-Payment<br>9. Supplementary Bill Services<br>10. Change Billing Currency<br>11. Service Activity<br>12. Discharge Slip<br>13. Audit Bill<br>14. Bill prepare<br>15. Discharge<br>16. Bill save<br>17. Discount Provision<br>18. Add High risk & Emergency charges on surgery<br>19. Single & Multiple Incision concept for Surgery<br>20. Provision for Mark Main & sub Surgery. |
| 7 | **Refund** | In this form user can make the refund of the amount against the advance amount and also against the OP, Services bill and against the settlement.<br>In case of the Settlement when any settlement is cancel from the Master Activity List then the amount which is come under the Payable by the Patient is comes here for making the refund to the patient. Specific user wise & Approval level wise concept is also available. |
| 8 | **Advance Collection** | This option allows users to take the advance payment from the patient in OP, IP and allows taking the advance against company. For settle the company bills. |

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| 9 | **Invoice Write Off** | Used to write-off one or more than one bills of the patient. This situation arises when a patient denies making his/her due payment after generation of an invoice. |
| 10 | **Re-Admission** | This form allows users to re admitted the patient directly in to the old bed or new bed which is vacant. |
| 11 | **Discount Approval** | This option is used to provide discount on OP/IP patient's bills. Operator could choose to approve or reject any patient's discount request |
| 12 | **OT Clearance** | This form is used when a patient exits from the operation theatre. Once patient receives OT clearance after all the formalities, he/she may exit. |
| 13 | **Intimation** | Intimation form is used to get clearance from all departments/stations of the facility like pharmacy etc. Patient needs to pay his dues to one or more departments he/she haven't paid already. Patient will get 'settlement' only after receiving no dues from all the stations. |
| 14 | **Credit Approval** | It contains a list of the patients who have requested for credit from the hospital. Authorized personnel may or may not approve their request. Operator needs to enter the remark to approve or reject the request. |
| 15 | **Package Service Rendering** | This option is useful for the patients who make an advance payment and book a package of medical checkup. This window allows user to render the services in multiple visit. |
| 16 | **Sent To Dispatch** | This page is used to send prepared invoices/bills/claims to dispatch department which later sends a claim to the insurance company of the patient. |
| 17 | **Receipt Tagging To IP** | This option use for tag advance receipt with IP no. |
| 18 | **Change Advance Type** | This option will let the user convert any deposit done by the patient from OP to IP |

## 4. ATD – Admission, Transfer & Discharge

Used in health care, an ADT system is usually the foundation for other types of health care information systems because it holds valuable patient information such as a medical record number, age, name, and contact information. Using the ADT system, patient information can be shared, when appropriate, with other health care facilities and systems. ADT systems can also be used as an alert system upon a patient's admission. This can be helpful if a patient has had a history of an infectious disease or heart ailments. For example, when admitted, the ADT system may alert the admitting staff that the patient needs to be in an isolation room or on a cardiac floor. This Module enables advance Booking of Beds, Surgery & other Facilities in a hospital. The system maintains status of occupied & vacant beds.

**Following options will be present on the Patient ATD form:**

| S. No | Option | Description |
|---|---|---|
| 1 | **Bed Status** | The Option maintains status of Occupied, vacant, Housekeeping, Retain, Blocked, Under Repair & Discharge but Still On Bed status of Beds. Users can Transfer Bed, Doctor and Retails Bed also by selecting bed. Users have Search criteria on bed category, Bed Status, Patient Details. |
| 2 | **Admission** | This Options enables to admit normal of MLC patient by Registration no or Booking in hospital. User can also print Admission |
| 3 | **Discharge Approval** | In this form patient listed here who's marked for discharge, sent for billing done from the ward as well pharmacy clearance has been done from the pharmacy.<br><br>**Bed Released: -** This option is used to release the bed which is in housekeeping. After releasing the bed the status of the bed will be vacant |
| 4 | **Transfer Requisition** | Nurses send the bed transfer requisition from the ward. This transfer requisition is done by the transfer requisition form. |
| 5 | **Admission Request** | This is used for the admission booking. After saving the booking a booking no generated on behalf of booking no admission process has been done. |
| 6 | **Change Bed Status** | By Using this option user can. |
| 7 | **Counseling Details** | This is Used to calculate Estimated amount manually or by selecting services for Patients for Registered as well as Unregistered. |

## 5. EMR

An EMR (Electronic Medical Record) is a digital version of a paper chart in a clinician's office. It contains the medical and treatment history of the patients. An EMR allows a clinician to track data over time, easily identify which patients are due for preventative screenings, check how patients are doing on certain parameters such as blood pressure readings or vaccines and monitor and improve overall quality of care within the practice. An EMR is said to make the process of patient record-keeping easier, more accurate and comprehensive and more efficient. Doctors use specialized software, which allows them to enter information electronically and makes and patient's complete history available immediately. Physicians can use a desktop, laptop or electronic clipboard to navigate through patient's charts and record notes.

**Following options will be present on the Doctors EMR:**

| S. No | Option | Description |
|---|---|---|
| 1 | **Doctor login** | • Doctor login with their username and password. It will open Doctor Dashboard screen. They can see the appointment details in providers (doctor) dashboard. |
| 2 | **Doctor Dashboard** | • Through doctor dashboard doctor can filter their appointments (OP/IP/ER) by date range or various other options like specialization and provider. By default, it will show the today appointments and visit. It will show all the detailed list of patient appointment. |
| 3 | **Patient Dashboard** | • Once doctor select any patient in doctor dashboard it will open patient dashboard. Through Patient Dashboard doctor can view previous visit detail of the patient, like (To whom he visit, Diagnosis, Problem, Case Sheet, OP Summery, Discharge Summery finalized , Past Clinical Notes) vital sign and Vital Parameter graph, latest Medication given, Allergy, Recent Lab and Radiology Investigation and their status. It also includes option to view the graph of four selected investigation by doctors. Doctors can set their four lab investigation Graph as Default. |
| 4 | **EMR** | When doctors click on EMR it will open Single Screen EMR. Where Doctors Enter complete patient clinical detail. Like Chief Complaints Allergy , Vitals Sign, History, Examination, Order and Procedure , Prescription , Diagnosis , Patient Notes Specialization |
| 5 | **Single Screen EMR** | • This single screen EMR is Expandable and Collapsible also it is configurable doctors and specialization wise |
| | | • If doctors write anything in the field of single screen EMR and unable to save or system close ,computer shutdown, browser close , by mistake doctor exit or close the program data will never lost. When doctors will open the program the type data will be intact so doctors able to save it without losing their data like (History, Examination, and Chief Complaints etc.) |

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| | | • Any field in the Single Screen EMR we can make as Mandatory so doctors cannot skip that field |
| | | • History, Examination, Clinical Examination and Other Notes can be entered by using Template. These Templates can be designed Specialty wise and department wise. Like Cardiology, Neonate, Ophthalmology. It is configurable for OP/IP and Both as well as for nurses and doctors |
| | | • These Template can be created by using Clinical Template Master |
| | | • Doctors can write History by free text as well as by using template specialization wise also if doctors want to see last visit history of the patient there is Link Button given **Last Visit History** by clicking on this button it will bring the last history entered by doctors |
| 6 | **Referral OP/IP** | • Referral module is also available in which from OPD/IPD referrals sent to other Departments and Specialties the doctor can view the referred cases in their dashboard. Doctor can send the comment regarding observation to the doctor who had referred the patient, so that flow of information occurs from both sides.<br>• If nurse enter the Vital Sign and Allergy doctor can able to see from his Single Screen EMR also any kind of clinical examination template entered by nurse. |
| 7 | **Immunization** | Immunization also can be done by nurse. She/he can also see what vaccine is pending for the patient by Color Legend Easily |
| 8 | **Early warning Score** | • Nurse also entered the Early warning Score from the Vital Screen |
| 9 | **Attachment** | • All patients MRD files are scanned and uploaded to the patient Reg. no the doctor has provision to view all the previous file details and also any other document scanned and uploaded. |
| 10 | **Discharge Summery** | • Doctors can write discharge summery in word format |
| 11 | **Verbal / Telephonic Order Approval** | • If any telephonic and verbal order required approval so doctors can approved it from his dashboard |
| | | • If RMO's giving any order and procedure on behalf of admitting doctors there is option given to mark as Verbal / Telephonic so Read back Remark is required and should be confirm by Admitting doctor |
| 12 | **Diagnostic History** | • Result viewing option which show lab results in tabular as well as in graphical manner. |

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| | | • If same investigation or medicine has been ordered by any doctor, then the system having the option to prompt an alert message. |
| | | • Doctor's dashboard shows a list of patients schedule for a day and when a visit entry is created, the doctor can enter the clinical entries. |
| | | List of the entire appointment schedule for a doctor is shown with details that the Visit entry has been created or not. Doctor will be able to select and proceed with the entries. Doctors have provision to enter patient complaints, diagnosis, investigation orders, pharmacy prescription and treatment planning |
| | | • Once the Pathologist certifies the report, provision for the advising doctor to review the result and certify it also. Till the report is not certified the report is not to be dispatched. |
| | | • Provision in Report to see the change in the vital values |
| | | • Provision to Mark all values as normal by minimum of clicks |
| 13 | **Outside Lab Result** | • Doctors able to enter the outside lab result in EMR in case of OP patient |
| 14 | **Problem** | Doctor/Nurses can select the problem through search or using custom or favorite option as per patient complaint. Also problem details can be filled up like location, side, onset, duration etc. Provision to mention chronic problem is also available |
| 15 | **Vitals** | Doctor/Nurses can fill-up the vitals of the patient and see the vital charts of the patient as well. It will also automatically calculate BMI and BSA and vital charts can be prepared |
| 16 | **Diagnosis** | Doctor can select the diagnosis through search or using custom or favorite option. They can see past diagnosis and past patient diagnosis. Also they will be able to see diagnosis ICD 10 codes and doctor can be able to mention chronic diagnosis as well. |
| 17 | **Lab/Radiology Order** | Doctor can select the lab/radiology order through search or using custom or favorite option. This order will be reflected in LIS module after billing of the respective order. After release of result patient can get the report in person/via mail/via courier etc. |
| 18 | **Medication Order** | Doctor can fill-up the medication through search or favorite option as per diagnosis. Drug database (Like CIMS, Lexi etc.) for drugs is used. They also get warning for drug to drug and drug to allergy reaction. Also the order reflected in pharmacy module |
| 19 | **Allergy** | Doctor/Nurses can fill-up the allergy through search or using other or favorite option. In this doctor can fill up drug allergy and other allergies like food, dust etc. |
| 20 | **Notes** | Doctor can select forms as per their specialization. By default, the form opened as per the specialization of respective doctor. It has |

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|---|---|---|
| | | templates for various specialization like Pediatrics, Gynecology, Orthopedics etc. |
| 21 | **Patient History** | Doctor can view patient past medical records |
| 22 | **Physical Examination** | Through this option doctor can enter details of the physical condition of patient at the time of visit. |
| 23 | **OP Summery** | It will generate the prescription after filling all the details by doctor/nurses and they can take a print out and give it to patients. |
| 24 | **Provider Dashboard** | Doctor can view the details of the registered patient with confirmed appointment, past encounters, admitted patient, pending tasks, unassigned patient notes and lab/radiology test results on real time basis. The OPD queue/interface will be according to respective consulting rooms so that medical officers can log in to see any of the patients on the queue according to consulting room |
| 25 | **Template Master (Clinical Examination)** | Through template master we can create Templates for various specializations. It can create template for Cardiology, Neurology, Pediatric, Gynecology, Obstetrics, Physiotherapy, Dermatology etc. |

## 6. LIS – Laboratory Information System

This module provides multi-site, multi-facility specimen/sample tracking and lab support, accurate, up-to-the-minute patient data and charge information. Automatic generation of collection lists, labels and worksheets, instant comparison and statistical analysis of test results, on-line patient inquiries, reports, and summaries, integrated inventory management and maintenance scheduling for laboratory instruments/equipment, Lab Register Maintenance, Equipment's Interface for capturing of result etc.

**Following options will be present in the LIS Module:**

| S. No | Option | Description |
|---|---|---|
| 1 | **Sample Status** | To see the complete status of the sample like (Lab no, ACK, Result Entered, Finalized, etc.) |
| 2 | **Sample Collection** | All laboratory test samples are collected at the Phlebotomy department. The Phlebotomist is required to acknowledge the collected sample. The system will assign a unique lab number to the sample for identification in laboratory. Option is also available for printing of label and sample sheet for result entry. |
| 3 | **Sample Dispatch** | After collecting the sample Phlebotomist dispatch the sample to lab |
| 4 | **Sample De-Collection** | Option is given to De-Collect the sample for any reason after collection |
| 5 | **Dispatch Cancel** | To cancel the Dispatch of the sample |
| 6 | **Department Acknowledgement** | Once the Sample is collected by the phlebotomist, it is being sent to the concerned department for result processing. Each department is required to acknowledge the sample. Once the sample is acknowledged the test cannot be cancelled. |
| 7 | **Un-Acknowledgement** | To un-acknowledge the sample |
| 8 | **Result Entry** | This option provides provision for entry of results. The result parameters supported are numeric, text and profile with option for remark for each test. The result can be entered by UHID, Lab No. |
| 9 | **Provisional Report** | Provisional report can also be released. |
| 10 | **Result Finalization** | This process is for final approval of test result for printing and viewing in wards. If any test is printed before finalization it is printed with a header as provisional test result. |
| 11 | **Cancel Finalization** | TO cancel the Finalized result only authorized person can cancel. |
| 12 | **LIS Dashboard** | It will show the real-time status of every event in Laboratory site wise |
| 13 | **Turn Around Time(TAT)** | This option will shows the turnaround time for Laboratory events. |
| 14 | **Lab Devices Result** | To view the results fetched directly from Lab devices |
| 15 | **Result Printing** | Through this option finalized or provisional lab reports can be printed |

| | | |
|---|---|---|
| 16 | **Lab History** | In this user can view laboratory history of the patient |
| 17 | **Sample Delivery** | From the centralized unit sample deliver to Lab |
| 18 | **Diagnostic History** | Option is given to view the lab history of the patient |
| 19 | **Audit Result** | Provision is given to Audit the result if there is any change |
| 20 | **Daily Investigation Report** | Provision is given to see all the investigation of the lab by different criteria like service name, department, status etc. date wise |
| 21 | **Dispatch Report** | From dispatch report we can authorized other facility to print the test result which is performed in other facility. |
| 22 | **Lab Report** | User can print the different kind of lab report like Normal, Abnormal, Critical value result etc. With different criteria |

# 7. RIS – Radiology Information System

A Radiology Information System (RIS) is a software suite for managing medical imagery and associated data. RIS in HIS is especially useful for managing radiological records and associated data in a multiple locations and is often used in conjunction with a picture archiving and communication system to manage work flow and billing. RIS can track a patient's entire workflow within the radiology department. Images and reports can be added to and retrieved from electronic medical records (EMRs) and viewed by authorized persons.

**Following options will be present in RIS Module:**

| S. No | Option | Description |
|---|---|---|
| 1 | **Patient Status** | From this option user can see the sample Detail status of Radiology investigation |
| 2 | **Department Acknowledgement** | Each department is required to acknowledge the test. Once the test is acknowledged the test cannot be cancelled. |
| 3 | **Sample Un-Acknowledge** | Provision is given to Un-Acknowledge the sample |
| 4 | **Result Entry** | The option provides provision for entry of results. The result parameters supported text. |
| 5 | **Provisional Report** | Provisional report can also be released. |
| 6 | **Result Finalization** | This process is for final approval of test result for printing and viewing in wards. If any test is printed before finalization it is printed with a header as provisional test result. |
| 7 | **RIS Dashboard** | It will show the real-time status of every event in Radiology site wise |
| 8 | **Turn Around Time** | This option will shows the turnaround time for Radiology events. |
| 9 | **Result Printing** | Through this option finalized or provisional radiology reports can be printed |
| 10 | **RIS Report** | User can Print the Different status of result by different criteria. |
| 11 | **Resource Appointment** | This is an optional option to schedule the investigation on machine and provide timing slots for patient investigation which can be viewed by radiologist. |
| 12 | **Daily Investigation Report** | Option is given to print the daily investigation on different criteria |
| 13 | **Result Attachment** | The outsource result can be attached from this option |

## 8. Ward Management

Hospitals consist of departments, traditionally called wards, especially when they have beds for inpatients, when they are sometimes also called inpatient wards. Hospitals may have acute services such as an emergency department or specialist trauma center, burn unit, surgery, or urgent care. These may then be backed up by more specialist units. In addition, there is the department of nursing, often headed by a chief nursing officer or director of nursing. This department is responsible for the administration of professional nursing practice, research, and policy for the hospital. Nursing permeates every part of a hospital. Many units or wards have both a nursing and a medical director that serve as administrators for their respective disciplines within that specialty.

**Following functionalities are available in the Ward Module:**

| S. No | Option | Description |
|---|---|---|
| 1 | **Acknowledge Patient** | Nurse will first acknowledge patient from ward. Before acknowledge she cannot do anything |
| 2 | **Allergy** | Nurse can update the patient Allergy |
| 3 | **Case Sheet** | Nurse can view the full case sheet of the patient |
| 4 | **Clinical Details** | This option is given to Enter the Patient clinical Template use by nurse to capture clinical data like (Nursing Assessment, Pain score etc ) |
| 5 | **Ward Details** | This option is used to display all the patient with their bed status and the other details which is associated with that patient like the results, Drug Order, Service Order and many more and these option directly inter related with the other modules like the LIS, RIS, Pharmacy, billing and others. |
| 6 | **Drug Order** | For making the drugs order from the desire Store |
| 7 | **Drug Return** | That is used for making the return of the drugs which was previously received by the ward. |
| 8 | **Service Order** | For making the services, investigation order from the Lab and the radiology department. |
| 9 | **Doctor Visit** | For adding the doctor visit in the IP bill. |
| 10 | **Bed Transfer Req.** | For making the Bed transfer requisition to the billing users and any other department which is authorized. |
| 11 | **Referral Slip** | For Referral the patient from one doctor to others. |
| 12 | **View Document** | For view the attached document related the patient. |
| 13 | **Patient Dashboard** | For making the entry of the vitals, Notes, Diagnosis and the others clinical related entry for the Nurses. |
| 14 | **Change Encounter** | For making the 2 major events i.e. Sent for Billing and Mark for Discharge |
| 15 | **Diet Requisition** | For making the Diet Requisition of the Patient to the Diet Department. |
| 16 | **Results View** | To view the results of the Lab and the Radiology this is finalized by the Doctors. |

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| 17 | **Discharge Approval** | This option allows users to make the Discharge approval which send by the lower authority as well as also the user can make the bed released which was in housekeeping or not in use |
| 18 | **IPD Return by Ward** | This option display users the details of the return which was done by the Ward users as the order of the Doctor which prescribed those medicines. |
| 19 | **OT Booking List** | Provision to See the details of the different OT booked slots associated with the patient details. |
| 20 | **Resource Scheduling** | This option is used for see the Resource (Machine) Scheduled for the specific date. |
| 21 | **Discharge Summary** | This option allows users to view and prepare the patient's discharge summary of admitted and discharged patients also in word format |
| 22 | **Blood Bank Options (If hospital uses blood bank module only)** | There are options provided for blood bank module for Blood Acknowledge, Blood requisition, Blood component return, Blood Transfusion details |
| 23 | **Print Consent Form** | Option is given to print the consent form of the patient |
| 24 | **Nursing Dashboard** | Option is given for nurse to monitor the patient Lab, Radiology, Blood Requisition, Non Drug Order, Stop Medication, and Billing Status of the patient. Also Pending Template which is marked as mandatory |
| 25 | **Department Consumption** | Option is given to enter the department consumption |
| 26 | **Drug Administration** | Option is given to Administered Drug to patient prescribed by doctor from their CPOE |
| 27 | **Housekeeping request** | Provision is given to make a housekeeping request from ward of any particular bed. |
| 28 | **Early warning score** | Nurse can enter early warning score of patient |
| 29 | **Patient location** | Option is given to see the patient location like (patient in ward, OT, Scanning room etc.) What is the current location of the patient |
| 30 | **Progress Notes** | Provision for nurses to see the doctors progress notes |
| 31 | **Non Drug Order** | Provision for nurses to see doctors non drug order and Acknowledge the order |
| 32 | **ICCA Viewer** | ICU integrated monitor captured data can been seen here |
| 33 | **Service Activity** | Option is given to see the detailed of service as well as their status |

# 9. Inventory

A hospital warehouse is a department in a hospital where medical supplies are stored. Such supplies include intravenous (IV) solutions and tubing, first aid products (band aids, wound dressings, gauze, etc.), protective equipment (gloves, gowns, masks, etc.), personal care products/toiletries (wash basins, bedpans, diapers, shampoo, deodorant, toothpaste, toothbrushes, patient belonging bags, drinking cups, etc.), feeding tubes, Foley catheters, respiratory supplies and orthopedic supplies (crutches, arm slings, splints, etc.). Items in the warehouse may be distributed to various departments within the hospital (such as the emergency room, operating room, intensive-care unit, etc.), through a centralized requisition system which determines what supplies are needed and the amount to each department. For any modern day hospital it is next to impossible to keep a record of all the supplies on paper, hence, Inventory module comes in use.

Inventory module covers the functions of Purchase, Stock & Issue of Drug items, Stock Accounting, Inventory Control functions. The Stock Valuation is based on First-in-First-Out system. Inventory module keeps a record of all the purchase orders, availability and the cost of all the previously ordered items. A user can make an order directly to a vendor or make a request to his senior for his approval first. Inventory module allows only authorized personnel to make an order or place any request. Inventory module maintains a dashboard for a quick preview at all the necessary in and out of supplies.

**Following functionalities are available in the Inventory Module:**

| S. No | Option | Description |
|---|---|---|
| 1 | **Change Store** | A user must choose from all the available stores in a facility. |
| 2 | **Purchase** | This module deals with the transactions and order requests placed by an operator. In some cases operator needs authorization from concerned personnel. Purchase tab allows you multiple functionalities like:<br>• Purchase Order<br>• Good Receipt Number (GRN)<br>• Po From Requisition<br>• Supplier Return<br>• Quotation Entry<br>• Work Order<br>• GRN Credit/Debit Approval<br>• Opening Bal/Adj. |
| 3 | **Purchase Order** | This option is used to generate a purchase order or PO. This is required to place an order or a request for goods that are required by an individual, a provider or a department. |
| 4 | **Good Receipt Number (GRN)** | This is used to make the GRN of the item with PO or Without PO. Post the GRN and can be cancelled the GRN before posting.<br>Click on to the purchase option into the menu bar an option list of forms will be displayed. |

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| 5 | **PO From Requisition** | This option is used for generate PO against PO request |
| 6 | **Supplier Return** | This form will allow a user to return the equities back to the supplier. |
| 7 | **Quotation Entry** | This form is used to enter the final rate of the equity purchased. One can always modify or verify the cost of the product. This form allows a user to enter a new product to the existing item list. |
| 8 | **Work Order** | This form provides user a functionality to request or order any service or a product for maintenance or repair or even replacement. |
| 9 | **GRN Credit/Debit Approval** | This form is used to approve or disapprove the GRN credit and debit requests. Only authorized personnel could do the needful. This page contains a list of all the pending requests to be approved for the credit. User needs to select the request(s); enter the remarks and hit on 'Approve Selected' button. |
| 10 | **Opening Bal/Adj.** | This form is used to maintain a balance of all the used or damaged products or items. This form is also used when a user needs to purchase or Transfer any item from any local market on urgent basis. |
| 11 | **Issue And Receipt** | *This tab is used for issuing the items based on the requests of the departments*.<br>• Department Issue<br>• Dept. Issue From Requisition<br>• Department Return<br>• Receipts From Store<br>• Department Consumption |
| 12 | **Department Issue** | This form is used when a user wants to issue an item or a product for a department. |
| 13 | **Dept. Issue From Requisition** | This form is used to issue item to department on their request. |
| 14 | **Department Return** | This form is used to return a product or an item back to a store. |
| 15 | **Receipts From Store** | This form is used for acknowladgment of department issues. |
| 16 | **Department Consumption** | This form is used to adjust the quantity of the items that were tampered or unusable or were used by the members of that particular department. |
| 17 | **Patient Issue/Return** | This tab deals with all the requests and returns generated by IP/OP/ER/Wards of the facility. All these departments can raise a request to issue medicines or any other item. |

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| | | This tab deals with last-minute returns of the item from these departments.<br><br>• IPD Issue<br>• IPD Return<br>• Emergency Order<br>• Emergency Return<br>• OP Sale<br>• OP Return<br>• OP Return Direct<br>• Bill Settlement<br>• OP Return Approvals<br>• OP Return Approval Ack.<br>• OP Return New<br>• Approved Ward Request |
| 18 | **Requisition And Approval** | This form use for generate purchase requests and department request by any department or ward or any store. This tab allows you to set ROL (Reorder Level) limit for any particular item. User can check the status of their requests as well.<br>User can check the status of their requests as well. ROL is a smart feature of an HIS that helps a user in providing quantity of any item to be ordered. ROL calculate the usage from the recent consumption rate. ROL pulls the data from a date range or number of days set in the system.<br><br>• PO Requisition – ROL<br>• PO Requisition<br>• PO Requisition status<br>• Dept. Requisition - ROL<br>• Dept. Requisition<br>• Dept. Requisition status |
| 19 | **Utility** | This tab is used to keep a track of all the available items in the stock. One can simply have a quick look at all the available, unavailable and substitute items.<br><br>• Substitute Items<br>• Item wise Stock<br>• Modify Batch Details<br>• Item Reorder level<br>• IP Issue Dispatch<br>• Discharge Intimation |
| 20 | **Consignment Details** | Consignment is a type of product that is rarely used by any hospital but still hospitals keep a stock of these items as they might come in use during emergencies. Most of the |

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| | | hospitals order consignment stock from the suppliers but hospitals do not pay any amount to the suppliers until they use the product. This way hospital saves a lot of money or in other language, avoid money blockage. This sub-module deals with the consignment receiving, returning and raising PO/GRN/IP issue<br>• Consignment receiving<br>• Raise PO/GRN<br>• Consignment Return |
| 21 | **Intimation** | Intimation is used for updating the patient status from 'send for billing' to 'pharmacy clearance' and 'insurance clearance'. |
| 22 | **Dashboard** | Dashboard is used for listing all the open transactions and expiring items in a single window. |
| 23 | **Reorder Stock** | This tab is used as a master setup platform to predefine the date values or attributes (either 'Consumption Day Wise' or date range) for all the departments in a facility. These date values or attributes are used in the 'Department Requisition – ROL' tab under 'Requisition and Approval' menu. These values help the system in calculating the ROL quantity. |
| 24 | **Po Approval Dashboard** | This dashboard reflects the unapproved or pending purchase order requests. System will reflect requests which can be approved by the particular user based on his/her log-in credentials. User can select any purchase order from the list and go through the purchase order items. User can approve or reject the request depending upon the requirement. |
| 25 | **Stock Verification** | As the name suggests, this tab is used to verify the physical available quantity of the items present in the stock versus the quantity of the items reflected in the database of the system. User must follow simple steps to verify the quantity. |

# 10. MRD – Medical Records Department

The terms medical record, health record, and medical chart are used somewhat interchangeably to describe the systematic documentation of a single patient's medical history and care across time within one particular health care provider's jurisdiction. The maintenance of complete and accurate medical records is a requirement of health care providers and is generally enforced as a licensing or certification prerequisite. The terms are used for both the physical folder that exists for each individual patient and for the body of information found therein. These medical reports are maintained and managed by a department within a hospital facility called Medical Report Department or simply MRD. This department is responsible for the record maintenance.

**Following functionalities are available in the MRD Module:**

| S. No | Option | Description |
|---|---|---|
| 1 | **File Status** | This form is responsible for reflecting all the file requests received from ward of the hospital facility. User can view all the requests here. |
| 2 | **File Request** | This tab is used to request a file manually from MRD department. This tab comes handy in scenarios when MRD has not received a file after patient has discharged |
| 3 | **File Issue** | This tab is used to directly issue a file manually from MRD. |
| 4 | **File Return** | This tab is used to receive a file from the ward back to MRD. |
| 5 | **Document View** | Used to view all the attached documents of a particular patient. |
| 6 | **Attach Document** | This tab is used to attach any document to a patient's portal. |
| 7 | **Diagnosis Entry** | This tab is used to provide diagnostic details of any patient. |
| 8 | **Patient Discharge Details** | This tab is used to view and modify discharge details of any patient. |
| 9 | **Reports** | This tab is used to view various reports. User must choose a type of report he/she wants to generate.<br>• Disease Statics<br>• Diagnose Disease Month wise<br>• Diagnose Disease<br>• Form – P Report<br>• ICD10 Master<br>• Disease wise statistics<br>• Death Report<br>• Birth Report<br>• Missing ICD/CPT Code<br>• OP Visit Summary |
| 10 | **ICD Flag Tagging** | This tab is used to tag any ICD code with any ICD flag. |
| 11 | **File Request Return** | This option is used by MRD to view all the files that are returned to MRD. |
| 12 | **File Return Acknowledge** | This tab is used to acknowledge files under 'File Return Request' status. |

## 11. Doctor Accounting

Keeping a track of revenue generated and its distribution amongst the employees is much difficult task than it sounds. This module is responsible for keeping and maintaining the doctor's payment status. This module allows user to define the rules of payment. Most of the providers in a facility do not agree to work on fixed salary basis. They will prefer to get some percentage of the revenue generated by the facility as their salary. Some provided may agree to work on fixed salary plus some profit share. Hospital may deduct or add some money into doctor's salary as per business rules every month. This way, managing the salary part of each doctor gets troublesome. Miracle HIS provide an easy way out of this problem. While maintaining 100% privacy and confidentiality, it allows a hospital to manage monetary transactions easily and errorless.

**Following functionalities are available in Doctor Accounting module:**

| S. No | Option | Description |
|---|---|---|
| 1 | **Final Statement** | This form is used for creating the final statement of the doctor on the basis of pre-defined rules. Users can make an entry of the provider's earnings and the deductions from here. Users can print the final statement as per the doctor and with the select all options. An authorized user can also cancel the final statement. |
| 2 | **Payable Statement** | This option allows an authorized user to have a look at final payable statement of each provider. A user can take print of the statement. This tab will let user to generate a report in 'Summary' or 'Detailed' fashion. A user can import this report into excel file as well. A generated report will contain OP/IP amount, total fee, service charge etc. This list will show the department/specialization of the provider Admission |
| 3 | **Doctor Amount Adjustment** | This form is used as an adjustment platform for an authorized user to make necessary adjustment(s) to a specific doctor's payout amount, which is based on the bill(s) generated previously. An authorized user can simply choose a provider, select the month and select an invoice on which doctor's final payout with get deduction or benefit or share. This situation arises mostly when a doctor is providing any discount to a patient. The amount discounted from the patient's bill is added to the doctor's deduction list. |
| 4 | **Doctor Setup** | Doctor setup is the master setup that allows an authorized user to define any provider's salary or share or both. User can set the monthly gross salary or share of any provider to automate the salary imbursement. This tab is highly confidential and is not available for every user. User can set a time period between which the defined salary will be credited into a doctor's account. |
| 5 | **Earning Deduction Head** | This option is used to add any provision or facility or a service that is supplied to any provider. Hospital may choose to charge or pay a doctor for providing these facilities. These facilities may |

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| | | or may not be used by all the providers. For these services, hospital will charge taxes or TDS as well. Hospital may choose to charge taxes after the final amount is calculated or before the final summation depending on the hospital's business rules. |
| 6 | **Head Details** | This option is used to define the amount or percent of the amount to be charged from each of the provider. User can choose type of the service either 'deducting' or 'earning' from the Head Type list.<br>After choosing any Head Type, choose any Head Name that was added to the list from Earning Deduction Head page. After choosing any Head Name user can define any particular amount or percent of amount to be charged or to be paid, to each of the providing. Amount to be charged or to be paid is totally dependent on the hospital's business rules |
| 7 | **Team Doctor Details** | In this option the users are able to define the sharing of the team as per the number of the doctors available in that particular team. User can create a new team or modify an existing team as per the requirement. |
| 8 | **Exclude From Doctor Revenue** | This option is used to pre-define all the services that will be excluded from doctor's revenue. These services will not add up to any doctor's revenue deduction list. |
| 9 | **Unsettled Bill Page** | This option is used to release any unsettled bill. User can choose bills up to current date.<br>User can choose receipt date up to current date. User must choose one option from 'Patient Type' i.e. either OPD or IPD. |

## 12. Emergency

An emergency department (ED), also known as an accident & emergency department (A&E), emergency room (ER), emergency ward (EW) or casualty department, is a medical treatment facility specializing in emergency medicine, the acute care of patients who present without prior appointment; either by their own means or by that of an ambulance. The emergency department is usually found in a hospital or other primary care center. Due to the unplanned nature of patient attendance, the department must provide initial treatment for a broad spectrum of illnesses and injuries, some of which may be life-threatening and require immediate attention. In some countries, emergency departments have become important entry points for those without other means of access to medical care.

**Following functionalities are available in Emergency module:**

| S. No | Option | Description |
|---|---|---|
| 1 | **ER Patient List** | This tab allows user to view a list of all patients admitted in emergency ward. User can apply filters to search any patient and also export this report into excel by clicking on 'Excel Export' button. |
| 2 | **Demographics** | This tab is similar to the registration page but here, user doesn't have to fill all the details. User can even skip entering the first name and system will automatically enter 'UNKNOWN' to save time. User can later edit/modify the entered details. |
| 3 | **Change Store** | This tab is used to change the inventory store of the hospital. User can select from the required store from the drop down and click on 'Proceed 'button. |
| 4 | **Reports** | This tab allows a user to generate various reports corresponding to ER patients. These reports include:<br>1. Admission/Discharge<br>2. ER Bill Details<br>3. ER to IP Transfer |
| 5 | **Change Bed Status** | This tab is used to view patient's current status in ER ward and to change the bed status. User can select a patient and change his/her ward details if he/she needs to be transferred to a different ward. |
| 6 | **ER Bed Status** | This tab is used to view/modify bed status in ER ward. |

# 13. Operations Theatre

An operating theater (also known as an operating room, operating suite, and operation theatre or operation suite) is a facility within a hospital where surgical operations are carried out in a sterile environment. A hospital must ensure that their Operation Theatre(s) or OT(s) are available to be used by any other patient. A hospital also needs to keep a check on every admitted patient's status. To handle all these issues, Miracle© HIS provide OT module to manage all the OTs and their availability in the hospital. This module allows capturing, storing and accessing the patient's operative details and scheduling against different OT's, throughout the hospital facilities, including the steps of OT booking, confirmation, check in, surgery posting and many more for the inpatient as well for the outpatient and emergency patient.

**Following options will be present on the OT Module:**

| S. No | Option | Description |
|---|---|---|
| 1 | **Operation Theater** | Provision for making the advance booking on the basis of the date and the Time with the details description of the Main Surgery and the associated components with the surgery like the OT Gas and many More. |
| | | Once we define the slot for a patient then the available option for the users are given below. |
| | | From the Edit option here the user can make the changes in the Slot information which is previously defined by the same or another user. |
| | | Provision to make the Copy Paste of the whole slot of the patient from one date or timings to another date or timings. |
| | | Provision to make the surgery posting of the patient. |
| | | Provision to add the details of the patient's Surgery in forms of the Pre-defined dynamics Templates which are created as per the defined format provided by the Doctors. |
| | | Provision to mark the patient's Surgery Status with the user friendly color status like the Confirm, Un-Confirm, Check-in and Cancel. |
| | | Provision to enter OT check-in and check-out time |
| | | Provision to make the Surgery Booking Facility Wise with different OT available in the Facility. |
| | | Provision to search the Surgery Booking Status Wise which is useful in term of saving the time of the Users. |
| | | Provision to enter the Masters of the OT in the same module. |
| | | Provision to create the Masters of the Templates as per the doctor suggestions. |
| | | Provision to search the OT Booking Details date wise and Date wise with the PAC Clearance. |
| | | Provision to create the Check List for the OT and the option is there for making the Existing Templates inactive. |
| | | Provision for OT Check list with remark. |
| | | Provision to capture whether the surgery with a clean surgery or unclean surgery (i.e. with complication or without complications) |
| | | Provision to mark whether the site has been prepared. |

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| | | Various Reports is available for the OT module like Surgeon wise. Surgery list (Summary and Detail), Anesthesia Type Wise Surgery list (Summary and Detail), Case Type (Major, Minor, Minor Elective) wise Surgery Report., Department wise Surgery list (Summary and Detail), Surgeon wise Theatre utilization and many more. |
| 2 | **OT Scheduler** | This option is used to create the new surgery slot for the IP patient date wise as well as also time wise and for that slot which is already created for the Patient having the various functions like the surgery posting, Status Updating and many more. |
| 3 | **OT Master** | This option allows users to make the Masters of the OT as well as also allow the users to make the OT as an Inactive which is not needed for any reason. |
| 4 | **Booking Details** | This option is used to show the details of the surgery which is already booked and the users having the various filters in it for fast searching. |
| 5 | **OT Templates** | This option is used to Create, Edit the new defined templates here which are used in the OT Department. |
| 6 | **OT Check List Master** | This option is used to describe the Check List as a Master means the user can make the check list here which is directly display in all the booking counters. |

# 14. Blood Bank

It is an integrated Blood Bank Automated System refers acquisition, storage, validation and circulation of various live data and information electronically regarding blood donation and transfusion service. Multiple blood banks can be managed by a single Organization. This is an effective management tool for individual blood banks and multiple blood banks under a single Organization. The citizen can avail the blood stock availability status at their fingertips through web and integrated SMS and IVRS facility.

**Following functionalities are present in the Blood Bank module:**

| S. No | Option | Description |
|---|---|---|
| 1 | **Donor Screening:-**Donor Registration | In Donor registration, The Donor who comes for donation has to be registered with the Hospital. Donor Registration screen can be used to register the Donor. We Fill All the detail of Donor like Name, Place, Age etc. |
| 2 | **Donor Screening:-**Physical Examination | Physical Examination done for the patient who comes for donation will be captured here. All the parameters are available to capture data and entire questionnaire is also available on the Physical Examination form.<br>Then the User select 'physical examination & health history' screen has 2 radio-buttons for selection for accepted donor and deferred donor.<br>Accepted donor:<br>If donor physical examination is cleared then user select accepted donor radio button.<br>Deferred donor:<br>If donor physical examination is not cleared then user can select deferred donor radio button |
| 3 | **Phlebotomy** | This Phlebotomy tab is used for collecting the blood from Donor. In this page we have some detail to be fill. like bag no, blood collection quantity etc. |
| 4 | **Component Requisition Status** | This Tab is used for to see the status who request for Blood. |
| 5 | **Component Separation** | Component separation tab is basically is used for to separate the blood component. Select the donor, bag no. and other details will be automatically filled. Donation done by the patient can be seen in "donation Type" field and the separation combination can be selected and seen. |
| 6 | **SCREENING**:- Donor Blood Group | Here we update all the blood parameters and donor blood group is also updated. |
| 7 | **SCREENING**:- Infectious Screening | Here we mark the investigations as reactive and non-reactive based on the results of the tests. |

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| 8 | **SCREENING**:- Final Validation | User can Accept or Reject test based on the above mentioned factors using "Final Validation" option. |
| 9 | **Blood Stock** | The stock of blood can be seen under this option with details like Bag no., Blood Group, Component name, Quantity of component, collection date and expiry of blood |
| 10 | **Blood Requisition:-** IP Component Requisition | Any requisition for IP patient is done using "IP component requisition" in blood bank module and "Blood Requisition" option is available in Ward Management Module for requesting blood for an Inpatient**.** |
| 11 | **Blood Requisition:-** Requisition Acknowledge | The Requisition raised for Blood Component has to be acknowledged using "Requisition Acknowledge" option. |
| 12 | **Blood Requisition:-** Cross Match | Through this form user can cross match the acknowledge component. User selects the search button then all request acknowledge component record will be displayed. |
| 13 | **Blood Requisition:-**Blood release requisition | After the cross match when the Blood Release Requisition comes from ward. This option will be used by ward, option is available in Ward as well as Blood Bank |
| 14 | **Blood Requisition:-** Release Acknowledge | Once the Release Requisition comes it has to be acknowledged in Blood Bank.<br>Blood Bank will acknowledge the Requisition by entering the release quantity. Blood Bank user can also view the requested quantity and can release as per the request or availability. |
| 15 | **Blood Requisition:-** Cross Match Cancel | User can cancel the option the cross match using "Cross Match Cancel".<br>After selecting the cross match no. we can see the bag no., cross match date, component, blood group and a check box to select and save if the cross match has to be cancelled |
| 16 | **Blood Requisition:-** Blood Transfusion Details | User has the provision to enter the Transfusion details, selecting the issue no. will load the details of the patient. There are some questions which should be ensured before transfusion. We can see the component, bag no. quantity, blood group, Transfusion start time and end time. Reactions if any and reason for reaction. |
| 17 | **Blood Requisition:-**Out Patient Blood Request | For outpatient the blood request form has to be filled. |
| 18 | **Component Issue:-**Blood Acknowledge | Once the Blood is released, Blood Acknowledgement is done from ward. This option is also available in Blood Bank. |
| 19 | **Component Issue** | Here we Issue the blood component to the patient. |
| 20 | **Component Return** | The component Return will be raised from ward using "Component Return" option. |

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| 21 | **Component Return Acknowledge** | Blood Bank will acknowledge the return from ward by checking the Acknowledgement checkbox or user has the provision to discard if Blood Bank is not taking the stock return. |
| 22 | **Component conversion** | This option can be used for converting a component into child component. Here we have the provision to select the bag no. and other details will get automatically filled. We can select the child component and quantity of the component. |
| 23 | **Bag Discard** | This option is used to discard the bags. There is a check box "Discard" option available against each record. Select and save the bag gets discarded. |
| 24 | **Blood Bank Module Report** | Here we have different types of report of blood bank. |
| | **Blood Bank Masters** | |
| 25 | **Setup Master** | Blood Bank setup master covers all the masters which will be used in the module. |
| 26 | **Blood Group Master** | The Blood Group Master will open and using this form user can create, edit and save the blood group. |
| 27 | **Donation Type Master** | User can create the donation type master using this option. Master has Prefix, Donation Type, Min Age, Min Weight, Max Age, Max weight as mandatory fields. |
| 28 | **Donor Type Master** | User can create the donor type master using this option. Master has Donation Type, Donor Type, Donor Type Description as Mandatory fields |
| 29 | **Procedure Type Master** | This master gives the provision to define the procedure type. Donation Type, Donor Type, Procedure Type and Procedure Type are mandatory fields. |
| 30 | **Blood Component Master** | Using this option we can create Child and Parent components |
| 31 | **Cross Match Method Master** | This master can be used to create methods used to perform cross match |
| 32 | **Bag Master** | This master is used to create bag names which are used to collect blood. |
| 33 | **Camp Master** | Sometimes some group of people donate blood, in this case user need to create a camp master |
| 34 | **Kit Type Master** | User can create the Kit Type for the reagents used in this master which will be used in machines for running the samples. |
| 35 | **Kit Receiving Entry** | Kit names can be created here and the no. of kits of that type can be entered. Here the Kit Type along with Kit names and quantity will be entered. |

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| 36 | **Bag Premixed Type Master** | Bag Premixed type master can be created using this option. Different types of bags with different premixed content can be created as different premixed type bag. Enter the name and save. |
| 37 | **Bag Premixed Master** | Every Premixed Type can have different bags which can be created using this option |
| 38 | **Indication Master** | Indication master is used to capture patient's condition i.e. if the patient is low B.P, Anemic etc. |
| 39 | **Component Blood Group Issue Validation** | The combination of matching of order component and issue component combination can be defined here. |
| 40 | **Component Combination Master** | The Blood component can be used to further split into further components. The combinations can be setup in this master. |
| 41 | **Component Requisition Question Master** | At the time of component requisition some set of questions are asked, the questionnaire for the same can be prepared here. |
| 42 | **Sub Component Master** | Sub components can be created by selecting the bag type, component combination type and spin details can be entered and saved. |
| 43 | **Component Combination Indication Tagging** | This screen binds the indications which can be marked against a component and this option can be seen in Transfusion details form. |
| 44 | **Bag Details Entry** | Bag details will be entered using this option by entering bag, bag type, batch no. bag capacity, no. of quantity. |
| 45 | **Document Setup** | This option is used to define the series of documents which are getting generated in Blood Bank. |
| 46 | **Quality Control Program of Reagents** | The Quality Control Programs which run on machines can be captured here |
| 47 | **Referred Counseling Centre** | User selects the 'Referred counseling center' option then the screen will be displayed and through this form user can create new referred center. |
| 48 | **Opening Stock** | The opening stock can be entered from this option. |
| 49 | **Instruction Master** | Set of instructions can be drafted using this option |
| 50 | **Component Combination Instruction Tagging** | The tagging of instructions with component can be done using this option |
| 51 | **Component Conversion Master** | The possible conversions from a component can be entered here and this data will be available in Component Conversion option of Module |

# 15. CSSD

Every day millions of medical procedures are performed utilizing a wide range of medical supplies, instruments, and equipment. These devices are required to be properly cleaned, disinfected and sterilized to ensure a proper working and good point of care for patients as in absence of proper handling, it can compromise the quality of care. Central Sterile Supply Department (CSSD) plays an essential role in order to provide the quality care and support infection control.

**Following functionalities are available in the CSSD module:**

| S. No | Option | Description |
|---|---|---|
| 1 | **Setup Master** | Setup Master allows the user to create masters related to items sets, machines,<br>Location, machines programs and tagging the same to a particular machine. |
| 2 | **Machine Master** | From here we can create Machines. |
| 3 | **Item Type Master** | Here we can create CSSD item Type like (Autoclave, SET etc) |
| 4 | **Location Master** | Here we set the locations where department and machine held |
| 5 | **Item Master** | Here we create a Items of CSSD |
| 6 | **Program Master** | Here we set the program of machine. |
| 7 | **Machine Program detail** | Here we fill the program detail |
| 8 | **Standard check list Master** | Here we create the checklist list Used by CSSD department |
| 9 | **Manufacture Master** | Creating a Manufacture form this tab. |
| | | **PROCESS** |
| 10 | **Bowie-Dick Test** | Option allows the CSSD to capture the test result of daily monitoring for any air in the chamber before performing the sterilization. The details captured includes the<br>Sterilizer name, program type, Temperature, Jacket and chamber pressure, hold time, Cycle start and finish Time, Tape color change, Towel dryness and finally if the test fails and pass. The option is also provided to capture the Operator name, along with space to capture the Problem<br>Encountered and action taken in the case where the test result is failed. Option is also provided<br>to view the test results for a particular period with filters on Sterilizer name, Program, Operator<br>and test status as Failed or Passed |
| 11 | **Sterilization Request** | Option allows the user to send the sterilization request to the CSSD, with the details of location from where the request is being sent. The option is given to add new item<br>based on type through Add New Item, capturing Item group, Name, Quantity, and also whether it is re-sterilization or not. The application will auto-generate the request number on saving. |

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| 12 | **Receiving** | Through this option, CSSD can maintain the record of Items they are receiving the Request by the concerned department. The user can search the Request with the filters for date, request number and Item type. On selecting the Request, some data will auto-populate such as Requesting department, date, Location and Item type, other details such as receiving employee, checklist and process status need to be selected by the user. |
| 13 | **Sterilization** | This option allows the user to capture the sterilization details of the items. The user selects the items from adding new items (list of packed items), and fill the required details<br>such as Sterilization Name, Machine, packed by, Checked by, Upload and unload operators name, Program details, Temperature, Pressure, In and Out time, and batch number of the load .If load contains the set, then the user can view the items in a set by clicking on the Item details option. Application will auto-generate the Load number on saving, and user can view the list of loads for particular period from the option provided |
| 14 | **Issue** | This option allows the user to issue the sterilized items to the concerned department. The details of To Department, Issuing Location, and Issuing Employee are captured before saving .Item issue Number will auto-generate on saving the activity |
| 15 | **Acknowledge** | The concerned department has to acknowledge the receiving of sterilized items through this option. This completes the CSSD flow. |
| 16 | **Status** | Application provides a CSSD dashboard for the user to view the status of items during the sterilization process. Status information includes<br>Request Number and Date<br>o Receiving Number and Date<br>o Item Details<br>o Is Re- Sterilization or Not<br>o Requested Quantity<br>o Received Quantity<br>o Sterilized Quantity<br>o Issued Non-Sterilized Quantity<br>o Issued Sterilized Quantity<br>o Completion Status<br>o Requested and Received By |
| 17 | **Reports** | 1.Status Report (Receiving and Issue) – Which can be filtered with option of choosing the period and Report Type (Date wise, Location wise, Item type wise, Item wise)<br>2. CSSD Stock Report – User has the option to view the stock of selected items for a set period.<br>3.TAT (Turnaround Time) Report: This report option allows the user to view the Item<br>Sterilization TAT throughout the process, the user can select the step from the Filters provided to analyze the particular step TAT. |

## 16. Dietary Management

Dietary management, also known as “foodservice management”, is the practice of providing nutritional options for individuals and groups with diet concerns through supervision of foodservices. Practitioners in dietary management, known as dietary managers, work in hospitals, long-term care facilities, restaurants, school and college cafeterias, correctional facilities, and other foodservice settings, usually implementing meal plans established by a dietitian or nutritionist. They are responsible for supervising the work of other nutrition personnel such as cooks and dietary aides.

**Following functionalities are available in the Dietary Management Module:**

| S. No | Option | Description |
|---|---|---|
| 1 | **Diet Type** | This tab is used to create a new category of ‘Diet Type’ and also to create a ‘Sub-Category’ of that diet category. User must select ‘Diet Type’ option from the menu to proceed.<br>Create New Diet Category by clicking on the button. User Clicks on (new) button to enter category Type. User must enter the name of the diet type and hit ‘Save’ button. |
| 2 | **Diet Menu Item Master** | This Tab is used for creating the Menu, also This tab is used to set the status of any food item to ‘Active’ or ‘In-Active’. User can click on edit button to edit the name or quantity/value if applicable. User can add new items to the list by clicking on the New’ button. User must provide the name of the food item and then click on the ‘Save’ button to add that item to the list. |
| 3 | **Patient List** | This list provides a quick look at all the patients currently admitted in the wards. User can see the status of each of the patient. User can search any patient by providing his/her MRD#, IP#, name etc. User can also export this list to excel for analysis purpose. |
| 4 | **Diet Master** | This tab is used to add any food item to a ‘Meal Type’ (ex – Indian, Continental and Afghani etc.) for a selected ‘Diet Slot’ (ex – Breakfast, Lunch and Dinner etc.). This tab helps in pre-defining the food menu to save time and energy.<br>**User can also add a new ‘Diet Slot’ using ‘Diet Master’ by clicking on ‘Add New Diet Slot’ button** |
| 5 | **Diet Planner F&B** | This tab helps user in tagging any selected food item list to any day of a week for a selected diet slot and selected meal type. To open this option, hover your mouse over ‘Diet Master’ option without clicking on it. Diet Planner F&B option can be selected from the menu |
| 6 | **Diet Planner** | This option is used for tagging any meal type with any ‘Diet Type Category’ (ex – Normal Meal, Full Liquid Diet etc.) for a selected Diet Slot and selected day of the week. To open this option, hover your mouse over ‘Diet Master’ option without clicking on it. Diet Planner option can be selected from the menu. |
| 7 | **Patient Precaution** | This tab is used by dieticians to warn the concerned departments and the kitchen about the precautionary measures to be taken while preparing meal for the selected patient. User must select or search the patient using searching parameters. User can enter the diagnosis details |

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| | | And diet details in their respective spaces. User then provides description/precautions to be followed under the 'Description' field. User must hit the 'Save' button to save the details. |
| 8 | **KOT Master** | This tab is used to add items (name of the dish) that can be prepared in the hospital's kitchen. User simply need to open 'KOT Master' from the menu, enter the name of the item and hit 'save' button to add the item to the list. |
| 9 | **RT Feed Setup** | This option is used to define liquid diets. User can add, remove or edit the solutions to be given to a patient with their volume/quantity. User needs to select the liquid diet type and time interval. User then chooses the item to be provided by clicking. |
| 10 | **Precaution/Food Habit Master** | This tab is used to add new meal type, precaution, and food habit and kitchen entry. User needs to select 'type' and 'name' of the item/habit/type. Hit 'save' button after adding any item to the list. |
| 11 | **Census List** | This tab provides a list of all the patients with their wards and bed numbers. User can follow a legend given below to know the current status of the patient. |
| 12 | **Diet Form** | This form reflects all the diet requisition received from the ward for a patient. User can acknowledge all these requests using this tab. User must select the request from the list to perform any action. |
| 13 | **Patient Diet List** | This tab is used to print 'patient diet list'. This list is automatically generated from the database and all 'diet advised by the doctor' are highlighted in blue color. |
| 14 | **Calculate BEE/BMI** | This tab is used to calculate BEE/BMI based upon the values entered by the doctor. User needs to simply enter the measurement and hit 'Calculate' button to get the BEE/BMI of the patient. |
| 15 | **RT Feed** | This tab reflects all the requests regarding the liquid diet. User needs to select a request to see patient's requirement for a day. User can apply search criteria to filter the result or to find a patient from the list. |
| 16 | **Meal Card** | This tab is used to generate a diet plan for any patient. User needs to select a patient admitted in any ward. User must select the diet type category, meal type and days of the week. User can enter the diet requirement for that patient. Table on the left will display the food menu for the current day and the table in the middle will display the food menu for the next day. User can select 'food precaution' and 'food habit' of the patient. User can save the form by clicking on the 'save' button. User can click on 'previous diet list' to see the diet history of the patient. |
| 17 | **Meal Card Print** | This option is used to print a list of patients according to their wards. This list contains name of the patients, their diet name and all the precautionary measures to be taken care of while preparing meal for them. This list is useful for the kitchen staff. |
| 18 | **Liquid Diet Print** | This tab is used to generate a list of all the patients who are on liquid diet (any type/category). User needs to hit the 'print' button to preview the list and finally take a print out of the list. |

| | | |
|---|---|---|
| 19 | **Extra Diet Order** | This tab is used to acknowledge all the diet request generated from any ward. User is able to see all the requests in the list. User needs to select a request and do the needful accordingly. Main use of this module tab is to generate a KOT (kitchen order ticket) for the patient. User can filter out the results by applying search parameters. |
| 20 | **Monthly Report** | This button is used to generate a report for any selected month (or date range). User can select from drop down of 'Report Type' to choose the category of report. User can either take a print out of the report or export the report to excel. |
| 21 | **Diet Label Print** | This tab is used to print labels for each patient's meal/diet. User can select the patient(s) and click on 'Label Print' to execute the print command. |
| 22 | **Kitchen Order Entry** | This tab is used to raise a KOT for any diet/meal request. Functionality of this page is similar to the functionality of 'Patient KOT' button of the Extra Diet Order tab. User needs to enter the MRD#, Bed# or IP# of the patient before generating KOT. User can also search the patient by clicking on the binoculars button. User needs to enter item description, reason and status before saving the request. |
| 23 | **Kitchen Order Details** | This tab is used to view details of any KOT generated. User needs to select any KOT and click on acknowledge the request by clicking on the 'Acknowledge' button. User can acknowledge the KOT for OPD and IPD patients. User can filter the results by applying search parameters (date range). User can click on 'Order Out' button to send out the order for the patient. User can take a print of the request. |
| 24 | **Kitchen Order Summary** | This tab is for viewing the KO summary for a selected date range. User can select 'Auto-Refresh' button to automatically add the new KOT to the list. |
| 25 | **Kitchen Order Out** | This tab is used to send the food out for the patient. User needs to enter the KOT no. generated in the KO entry. User can use this tab to cancel the KOT as well. |
| 26 | **Ticket Printing** | This tab is used by the kitchen staff to generate a print containing diet details of each of the patient. |
| 27 | **Patient Diet History** | This tab is used to view the patient's diet history. User needs to enter the IP no. of the patient whose history user wants to view. User must select between normal diet and liquid diet before clicking on the 'preview' button to generate the history of the patient's diet. |

## 17. Linen & Laundry

Hospital Laundry is one of the most important services which if ignored can induce the risk of cross-contamination as well as soil the patient experience. In the hospital industry, the linens are soiled with various types of body fluid like blood, urine, and feces etc. which need to be disinfected and serviced in a proper streamlined flow to ensure the right quality linen and good point of care for the patients. Linen and Laundry module make sure that linens are processed and cleaned in a streamlined manner so that patient comfortable and satisfactory experience.

**Following functionalities are available in the L&L module:**

| S. No | Option | Description |
|---|---|---|
| 1 | **Laundry Receipt** | Option to receive the dirty linen from other departments. The user has the option to capture From Department, Item details, Quantity, Batch number while Adding the items to the list. Other details such a username and to the department, Receipt no. will auto populates on the screen. The option is also provided to edit or delete the records before saving the receipt. |
| 2 | **Washman Issue:** | Issuing the dirty linen to the washman, where dirty linen received can be fetched against the Receipt Number. The option is provided for capturing the washer name, and on saving Issue number will auto-generate against the washman name and receipt number. The option is also provided to add a new washer man name to the existing list. |
| 3 | **Washman Receipt** | Option is provided to track and collect back the issued items from the washman. Through "Get Washman Issue Linen" option user can view the issue number, washer name etc., and can fetch these items on the main screen for a receipt. In the case where items received is less than the issued quantity user can edit the quantity from the edit option, and rest of the items will remain as pending to receive |
| 4 | **Laundry Issue** | This option allows the user to issue the washed linen to various departments. The user can directly fetch the washed linen through Washman receipt number and issue it to a department by selecting it from the drop-down. |
| 5 | **Opening Stock** | Option is provided to maintain the linen inventory, through Opening Stock upload and stock adjustments, which is done by making an adjustment to the item stock under issue or receipt. |
| 6 | **Report** | Linen and Laundry reports can be viewed under "Report" providing details of<br>• Current Stock<br>• Stock Ledger (Filters - To date and From date)<br>• Dirty Linen Receiving (Period and Status-Based)<br>• Fresh Linen Receiving (Period and Status-Based)<br>• Washed Linen Issue (Period and Status-Based)<br>• Issue Receiving from Laundry (Filters - To date and from date).<br>• Issue Receiving Balance from Laundry Filters - To date and from date). |