MIHR HOSPITAL MANAGEMENT INFORMATION SYSTEM DOCUMENTATION

PSMI

20th December 2019

To: **PSMI**
Tendeseka Office Park,
Block 2, Ground Floor
Samora Machel Avenue
Eastlea
HARARE

Attention: Dr. T.C.M Gutu
MANAGING DIRECTOR

Dear Sir,

RE: EXPRESSION OF INTEREST FOR THE IMPLEMENTATION OF INTEGRATED HOSPITAL MANAGEMENT INFORMATION SYSTEM

MiHR Business Partner hereby presents for your consideration our proposal for the implementation of a Hospital Management Information System.

We have in this document, included our Company Profile, Business Registration Certificate and other documents, the proposed designs of our system.

We wish to submit that we are a reputable solutions provider with proven ability to deliver software solutions. Our technical capability and good practices based on defined working methodology coupled with our experience in service delivery will ensure that the intended scope of work is met in entirety.

We would greatly wish to work with you if our proposed solution meets the requirements of the Board.

Sincerely yours,

Masimba Mutsai
BUSINESS DEVELOPMENT MANAGER
For: MiHR BUSINESS PARTNER (PVT) LIMITED

Company Profile

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***Email*: enquires@mihrafrica.com**
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mutsaimasimba@gmail.com
***Address*: 15 Bloomfield Road, Greendale North, Harare**

Introduction

- MiHR Business Partner (PVT) Limited hereafter known as (MiHR) is a professional Software Development organisation based in Malawi, with a fully integrated web based ***Hospital Management Information System*** as one of its many products.

Vision

- We would like to be the preferred business partner for companies that want to expand their footprint on the African Continent.

Mission

- To add value and efficiency to organisations through the introduction of user friendly digitized solutions.

Our Values

- To trade honestly with our stakeholders.
- To create an organization of equal opportunity.
- To embrace employee and stakeholder diversity.

Overview

- MiHR Business Partner (PVT) Limited was incorporated and registered in December 2015 to provide different software solutions.

Achievements

- First home grown company that has developed a fully integrated web based Hospital Management Information System and Human Resources Information and Payroll Management System and a Sales Management System.

CONFIDENTIALITY STATEMENT

This document contains confidential information from MiHR Business Partners (PVT) Limited, which is provided for the sole purpose of permitting PSMI (the recipient) to evaluate the proposal submitted herewith. In consideration of receipt of this document, the recipient agrees to maintain such information in confidence and not to reproduce or otherwise disclose this information to any person outside the group directly responsible for evaluation of its contents.

We pledge that we are guided by ethical and professional standards and values and we can't disclose any information about our client unless authorized by the client in writing.

IN WITNESS WHEREOF, MiHR and MDF have executed this Agreement effective as of the date and year first written below.

PSMI	**MiHR BUSINESS PARTNER**
_____	**MASIMBA MUTSAI**
Representing PSMI	***Representing MiHR***
_____	**BUSINESS DEVELOPMENT MANAGER**
Designation	***Designation***
_____	**20th December 2019**
Date	**Date**

Quick Tour

Abstract

PSMI are currently using a manual system for the management and maintenance of critical information.

The current system requires numerous paper forms, with data stores spreads throughout the hospital management infrastructure. Often information is incomplete, or does not follow management standard. Forms are often lost in transit between departments requiring a comprehensive auditing process to ensure that no vital information is lost. Multiple copies of the same information exist in the hospital and may lead to inconsistencies in data in various data stores.

A significant part of the operation of any hospital involves that acquisition, management and timely retrieval of great volumes of information. This information typically involves; patient personal information and medical history, staff information and ward scheduling, staff scheduling and various list of other faculties. All of this information must be managed in an efficient and cost wise fashion so that an institution's resources may be effectively utilized. HMIS will automate the management of the hospital making it more efficient and error free. It aims at standardizing data, consolidating data ensuring data integrity, error free and reducing inconsistencies.

MiHR Hospital Management Information System (MiHR - HMIS)

MiHR Business Partner is proposing to supply, install and implement a versatile solution system running on the MySQL or Microsoft SQL Database and PHP scripting language combined with JavaScript. This combination comes up with a highly flexible, configurable and scalable system that features many unique options and can be easily enhanced with custom options depending on the hospital's future and current needs by request.

There is always the wide choice of features that can be included in the system. Moreover, the most important thing, the software is created to streamline various procedures that meet the needs of all the users. The HMIS feature list is concentrated on providing the smooth experience of patients, staff and hospital authorities. User expectations differ; they still are covered by components of the hospital information system. Quality and security still remain the main criteria of the medical industry. It is also known for the constant and rapid changes to improve the efficiency of medical services and satisfaction of the patients.

The interactions between the hospital and the patient can be simplified for the convenience of both sides. With this System – PSMI has the opportunity to create an efficient, clear and fast delivering healthcare model.

What is MiHR – HMIS?

- It is Web-based meaning that it is built using web technology.
- Programming languages used include: HTML 5.0, PHP5, MySQL, XML and JavaScript. Other techniques used include asynchronous JavaScript (Ajax) and JavaScript Object Notation (JSON).These have all been used to create a perfect user-friendly system with an interface that gives the system user an experience like no other.
- The web-based system gives the users the ability to work from anywhere in the world provided they can access internet.
- In case the system is to be used in a specific location only; a local host server can be used and this option does not require internet services.
- MiHR - HMIS is incorporated with a multi-user, multi-level authentication system which ensures that different users can only access the panels where their work is.

Computer software has revolutionized how we find, share and store information. The digital world is moving at a rapid pace and doesn't show any signs of slowing. For businesses, digitized operations have become a fundamental part of success. But why is this software so important? How significant is the impact of using it to run your operations?

Why would you want to choose MiHR - HMIS System?

1. **Computations**
   Computation of patient bills and other charges is accurately done and is controlled by parameters that users can change.
2. **Multi-user and Multi-Locations**
   As long as server is powerful any number of users can work in the System concurrently. Remote branches can access the system over the internet.
3. **Customization**
   MiHR - HMIS can be customized according to the customer needs. We pride ourselves of building custom systems.
4. **Security**
   Each user created in MiHR - HMIS System can be restricted to certain levels of access depending on their duties and responsibilities.
5. **Improved Processes**
   Automation is one of the main benefits here. It helps to optimize the user experience. Medical specialists, patients, and hospital authorities can interact online, make the appointments and exchange information.

6. **Digital medical records**
   The hospital database includes all the necessary patient data. The disease history, test results, prescribed treatment can be accessed by doctors without much delay in order to make an accurate diagnosis and monitor the patient's health. It enables lower risks of mistakes.
7. **Accountability**
   Hospitals authorities are able to manage their available resources, analyze staff work, reduce the equipment downtime, optimize the supply chain, etc.
8. **Financial control and planning**
   The management has the ability to monitor different financial operations including expenses, profits, and losses, paying bills, in and outpatient billing. The financial awareness helps to analyze business prospects quite clear and move in the right direction.
9. **Insurance claims processing**
   Integration with health insurance services improves the experience of the patients and brings benefits to the institution. It allows you to be innovative and helps both the patient and hospital to handle many aspects of the insurance process successfully.
10. **Less time consuming**
    As the services and interactions are improved in all possible ways, everything is being planned with greater precision. It saves the time of all the system users and provides them with up-to-date information.
11. **Patient self-service**
    Patients have their own system accounts where the list of various actions can be performed. They are able to make online requests or reservation, receive the test results, and receive the consultation of the medical specialists and many more.
12. **Better customer experience**
    Since the clinic management system is patient-oriented, the treatment process can be less stressful. Doctors have more time for the examination and interaction with patients. In addition, all the requested information can be received online.
13. **Easy to use and Learn**
    MiHR - HMIS is simple and has user friendly features that allow new users to quickly start using the System with ease.
14. **Low Total cost of ownership**
    Built on Windows OS using Microsoft SQL database, it avoids the need for any software licenses and can be used on basic desktops.
15. **Integration Capabilities**
    Provides easy integration and interfaces to Financial accounting systems and more third party applications.
16. **Cloud Enabled**
    No expensive hardware. No managing the IT infrastructure, you can hot the entire solution on the cloud.

17. **Robust, with good backup facilities**
    The server backs up the database automatically after every 24 hours.
18. **Generating Reports**
    MiHR - HMIS is designed in such a manner that it generates different kinds of reports for any duration of business.
19. **Training**
    Training is also provided to users based on their needs.
20. **Web-based**
    Online systems are the future of digital systems. We bring you the future right now.

Introduction to MiHR – HMIS System

The Software is for the automation of Hospital Management.

It maintains two levels of users: -

a. Administrator Level
b. User Level

The Software includes:-

- Maintaining Patient details.
- Providing Prescription, Precautions etc.
- Providing and maintaining all kinds of tests for a patient.
- Billing and Report generation.

System Administration

Users with System administrative privileges can customize the system to reflect the organizational hierarchy of PSMI, information to be collected by PSMI, set of validation constraints that collected data must adhere to, control of access of data and different system parts, and other system customizations that affect the system at large.

Accessing the System

The System uses an in-built secured Authentication and Authorization method that requires users to be authenticated to use any service that requires a user to be logged in and require user to be authorized as cleared to use some of privileged system services, such as right to control data to be collected.

Managing Employee Records

System uses Records management module to control the collection information.

Properties of MiHR - HMIS

- Web enabled
- Platform independent
- Runs on all major web browsers
- Runs on most relational databases
- Works Off-line
- Loosely coupled with Bundle/Modular approach
- Interoperable
- Internationalized

User Manual

The initiated development of MiHR Hospital Management Information System with the essence of establishing a national database, to address and strengthen existing information system through coordinating and networking of existing Hospital procedures and patient data collection systems.

MiHR Business Partner will take the responsibility of developing, implementing and maintaining the system. As for any big system development the process is not an overnight thing. MiHR – HMIS is evolving, though with a remarkable speed, the inputs of stakeholders are all time required.

This manual outlines the systematic procedures for accessing and using various parts of the system. In case you do not get the assistance you expected from the manual please don't hesitate to consult our designated contact person.

Description of the System

The following part is intended to give user an insight on how to use the system and access different features and system components.

Login

Open the browser and type the following address: http://www.mihrafrica.com/mihr or a specified IP address of PSMI that will be used to access the system on a Local Area Network, then a page similar to the one shown in the image below will be displayed whereby a user will be required to type in their correct username and password and ability to select their user role in the System.

This system works best with Mozilla Firefox, Google Chrome or Opera browsers. From here on, the use of the word "browser" will refer to above mentioned web browsers only.

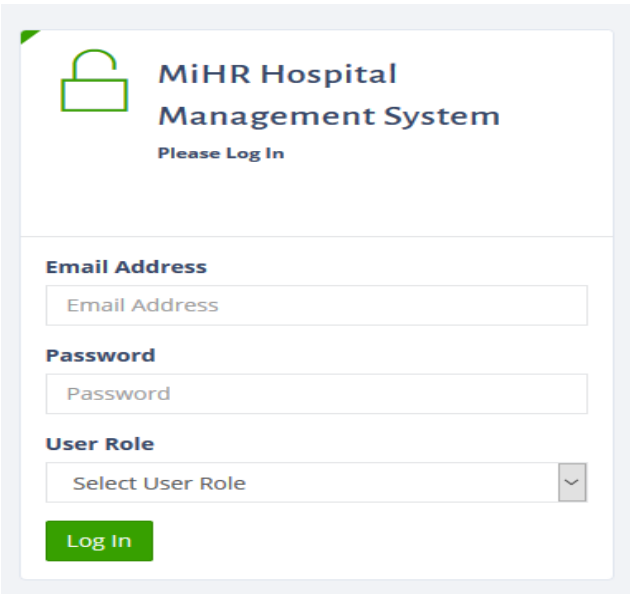


Figure 1: Image showing Login Interface

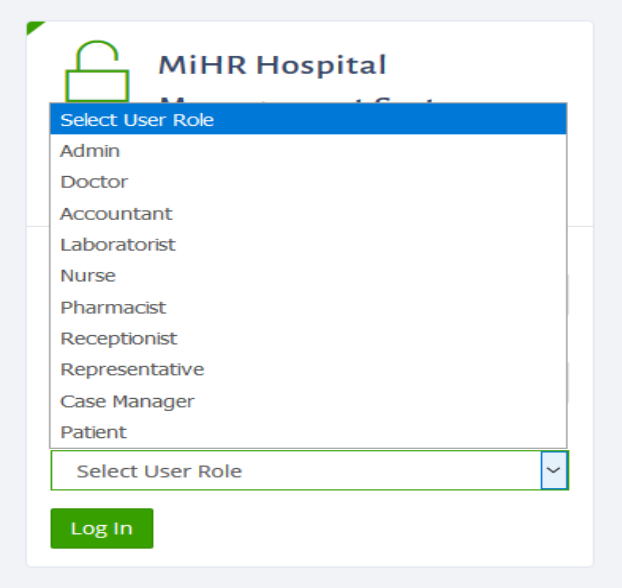


Figure 2: Image showing User Level options

However on unsuccessful login an error message will be displayed (see figure 2 below) and you will be required to re-type the username and password

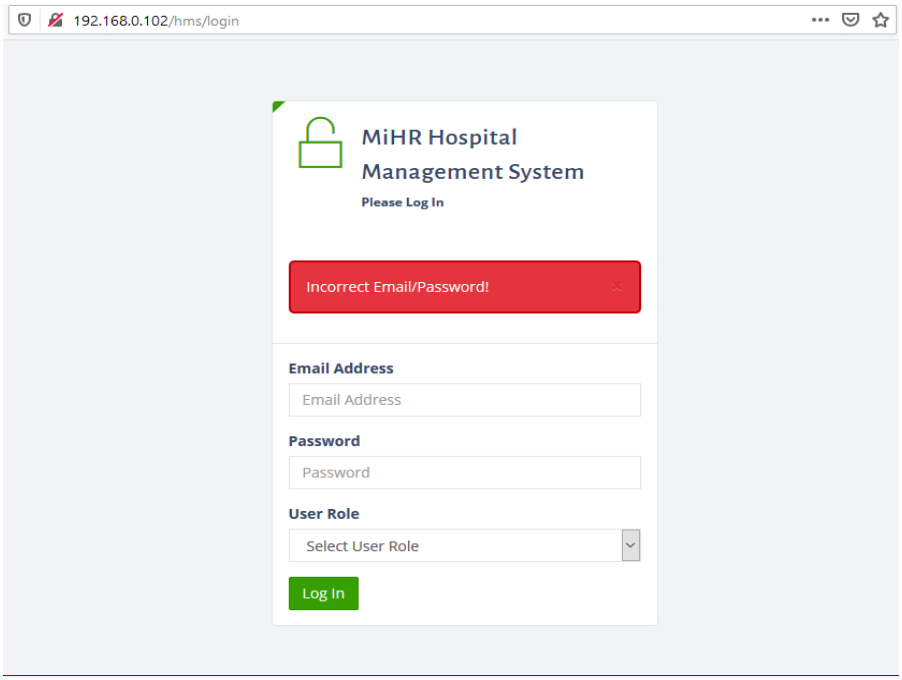


Figure 3: Image showing error message on unsuccessful login

Forgot password

In the instance where a user forgot his or her password, the "Forgot my Password?" link on the login page is there to assistance. On clicking the link a user will be sent to a page and required to provide either a username or email address used initially during registration. After that the user can click the "reset password" button to reset password. A prompt will appear on the page informing the user to reset password.

User Dashboard

Upon successful login, a user will be directed to the Dashboard page with the menu on the left hand side of the page through which he can access various modules of the system (see figure 4 below).

The User Dashboard will enable Users to do the following:

i. View minor modules like :
   - Appointment Manager
   - Graphical comparison between the numbers of new patients. Revisits and Reviews received in the hospital.
   - Very Progress of patients and appointments in a graphical format

ii. Access to self-service menu.

iii. Access to the View only menu.

iv. Access to Management Self Service – this service is available to Senior Management for their day to day functions.

v. To logout from the system.

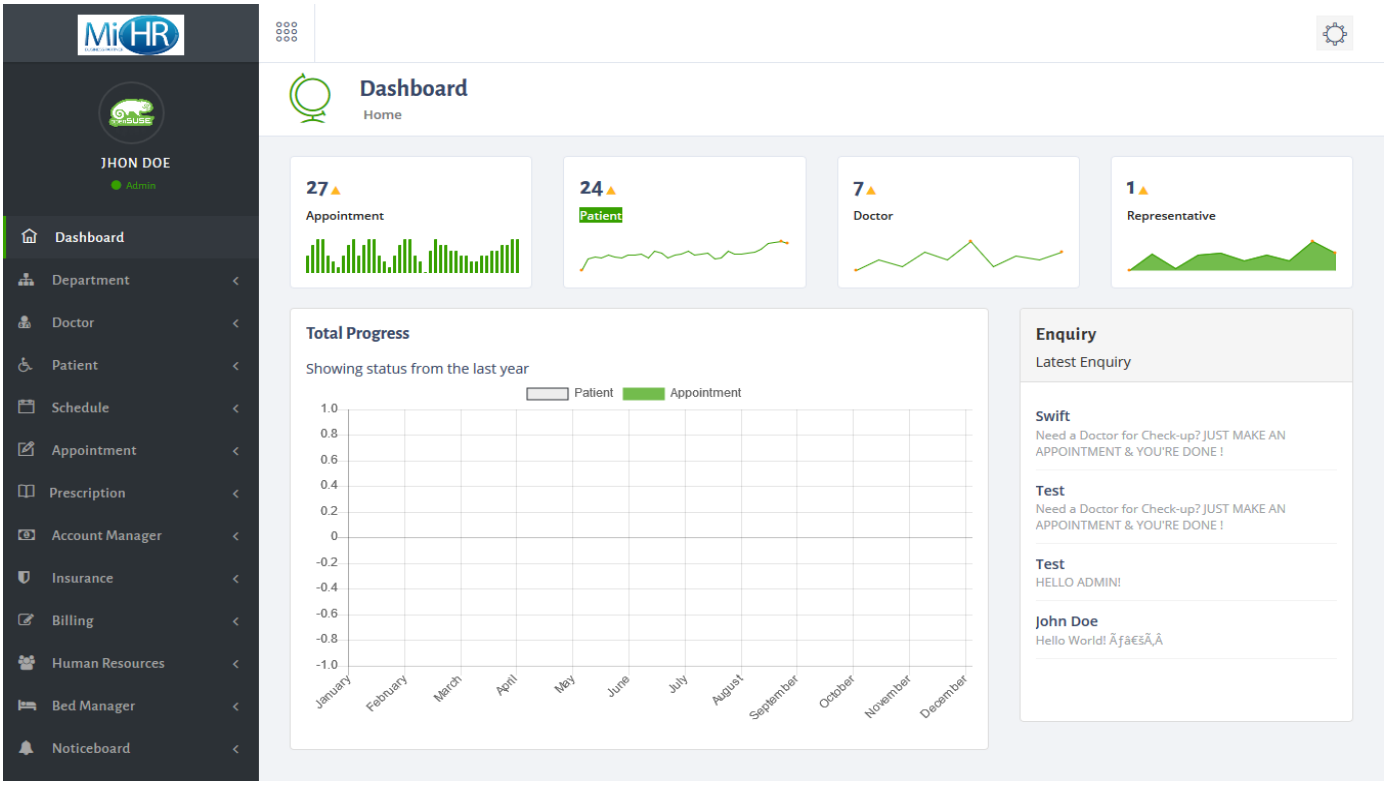


Figure 4: User Dashboard image showing homepage on successful login

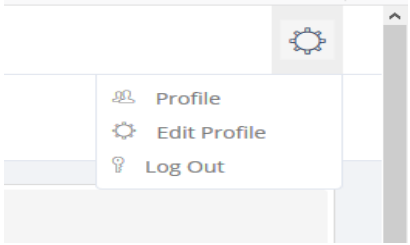


Figure 5: Logout menu

Register

1. User Registration

For a member of staff to user the System a registration process has to happen. The System Administrator or immediate Supervisor will have to register them in order to have access to the System. To do this, there is a Registration Form. On selecting it, a page similar to the one shown below (Figure 6) will appear requesting the Supervisor or Administrator to fill in all required details and submit them by clicking the “Save” button

After doing so the User’s account is activated and an email or SMS will be sent to the users email account or phone number provided during registration. This step so far, will enable for an account to be created but access to information already in the system will still not be possible until verification of user is done by Senior Management.

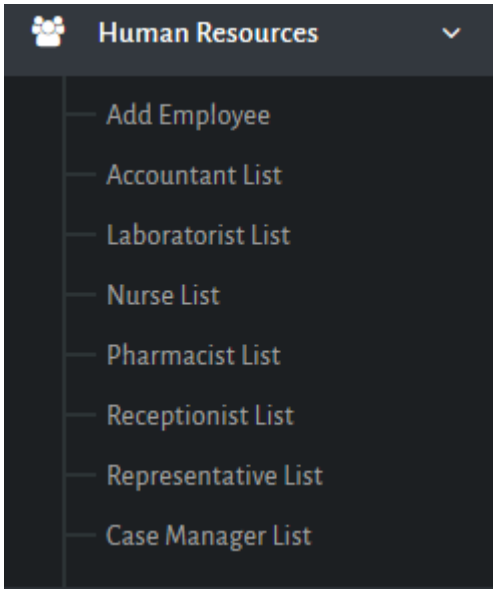


Figure 6: Menu for Creating Different Users according to each Department

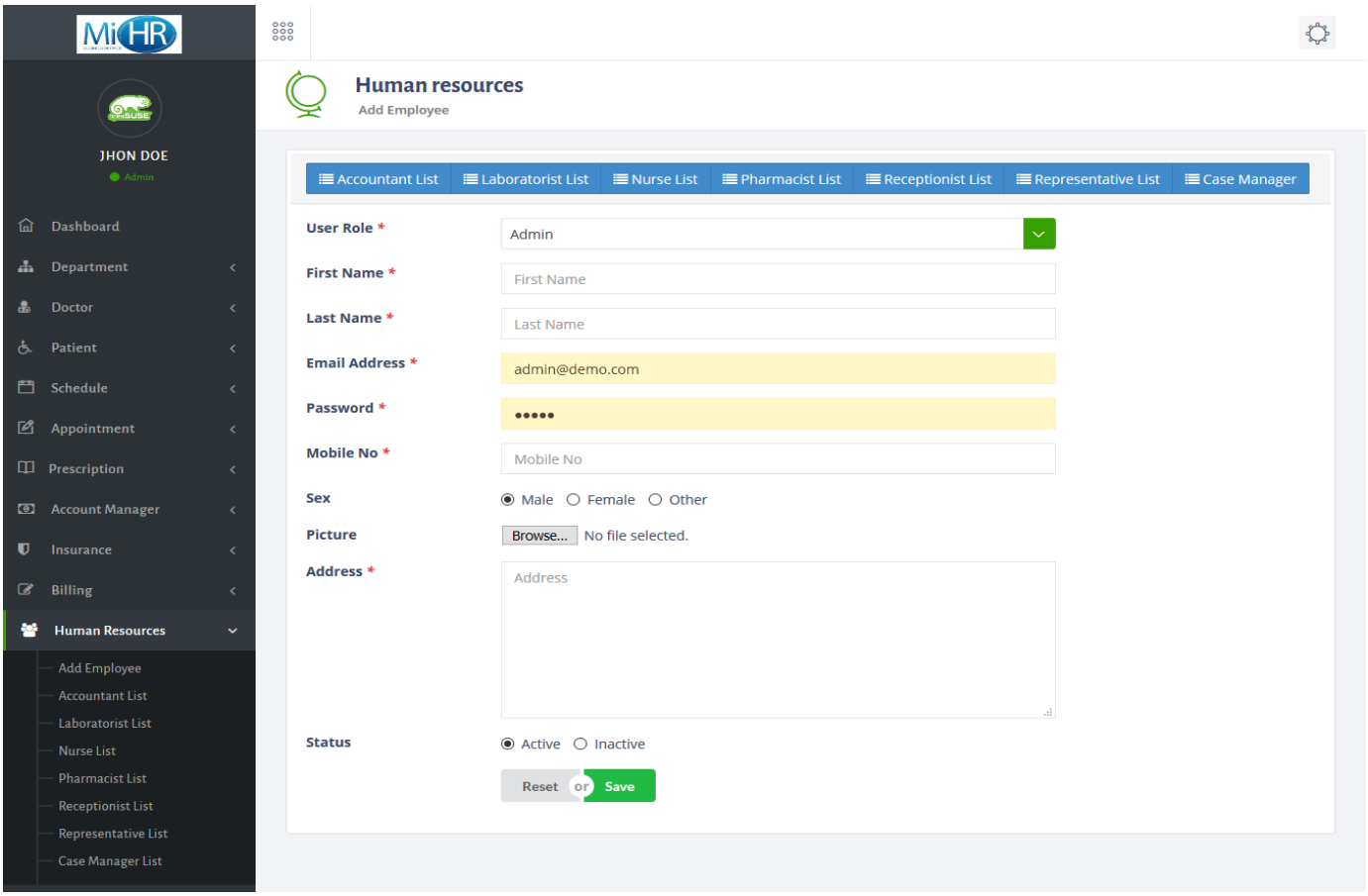


Figure 7: Personal Info detail form to be used for activating a User

MiHR – HMIS Functionalities / Modules

1. Reception

- ✓ Registration of New Patient - capturing the personal details (Demographics), next of kin details, employer details, insurance scheme details. Photo of the patient is also captured during this stage.
- ✓ Quickly search patients by names, telephone no, email address ID no and other patient details.
- ✓ Manage patient information where editing is needed for change.
- ✓ Patient Chart: Contains all the information about a certain patient. From consultation files, patient bills, admission forms, discharge summaries etc; this panel has everything the system has on a certain patient.
- ✓ Quick Billing of patients for consultation services.
- ✓ Queue patients to different department / rooms.
- ✓ Doctors scheduling.
- ✓ Appointment scheduling.

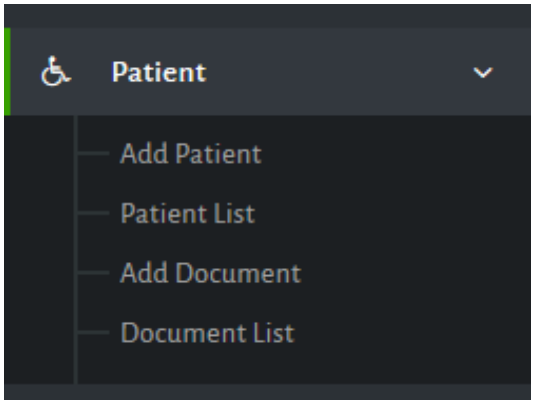


Figure 8: Drop down menu for Patients personal information

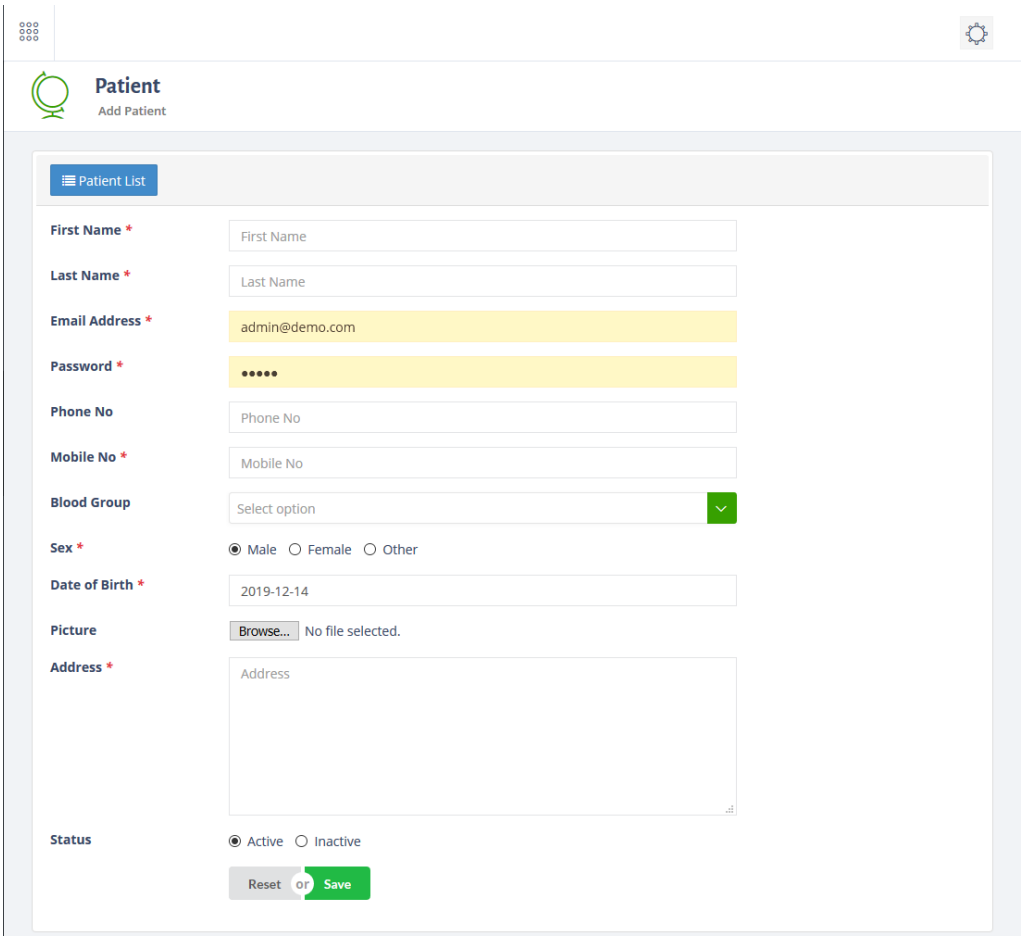


Figure 9: Patient Registration form

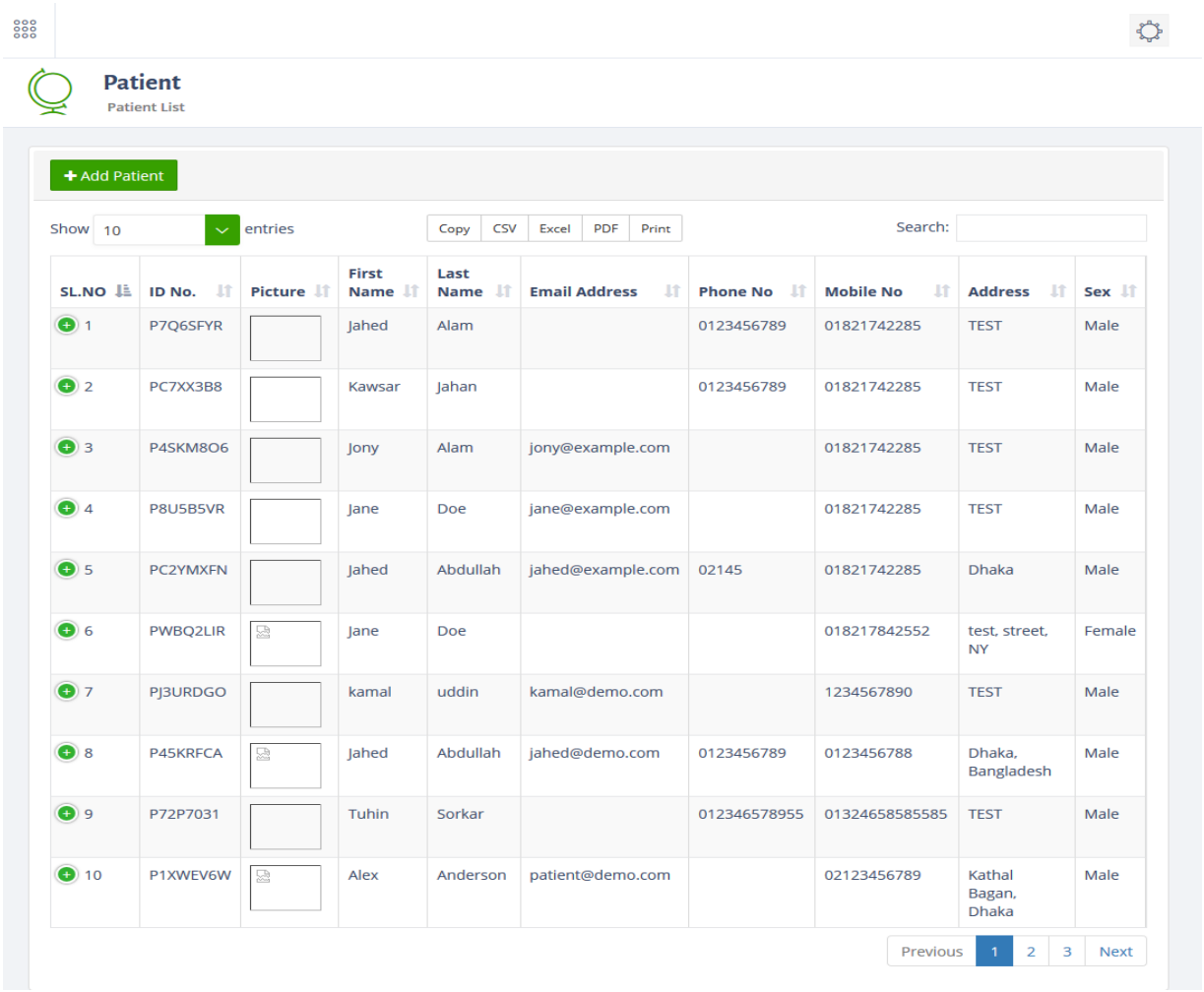


Figure 10: Image of Patient List summary with a Search Option.

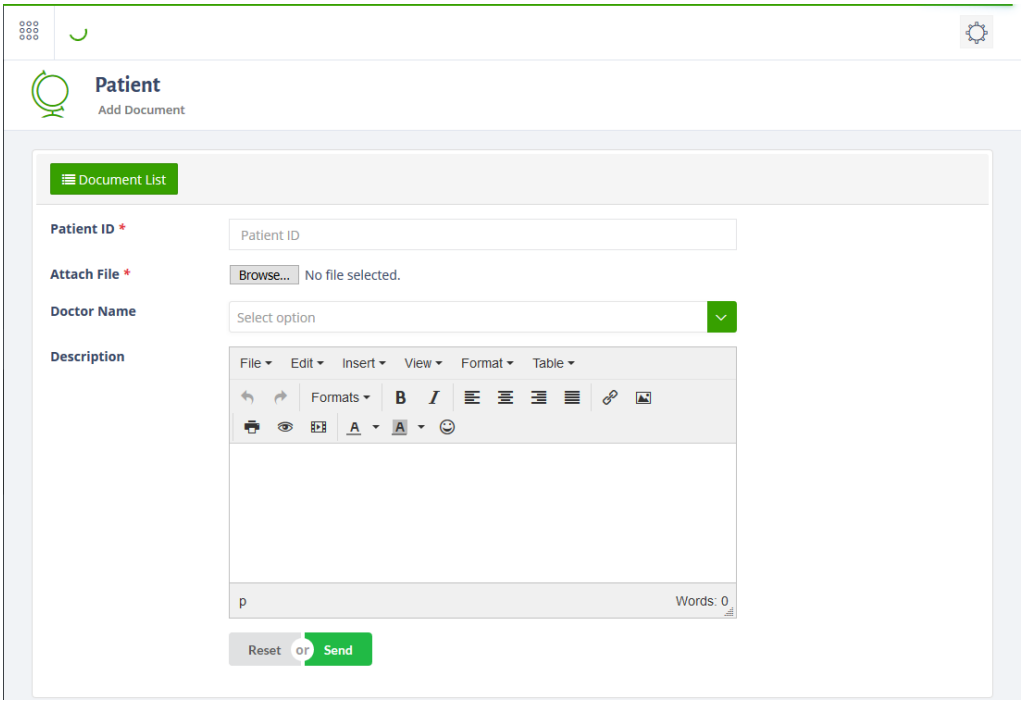


Figure 11: Image showing a form for editing crucial documents for patients

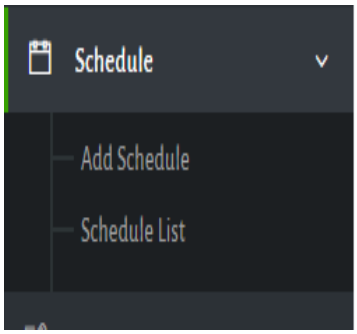


Figure 12: Doctors scheduling drop down menu

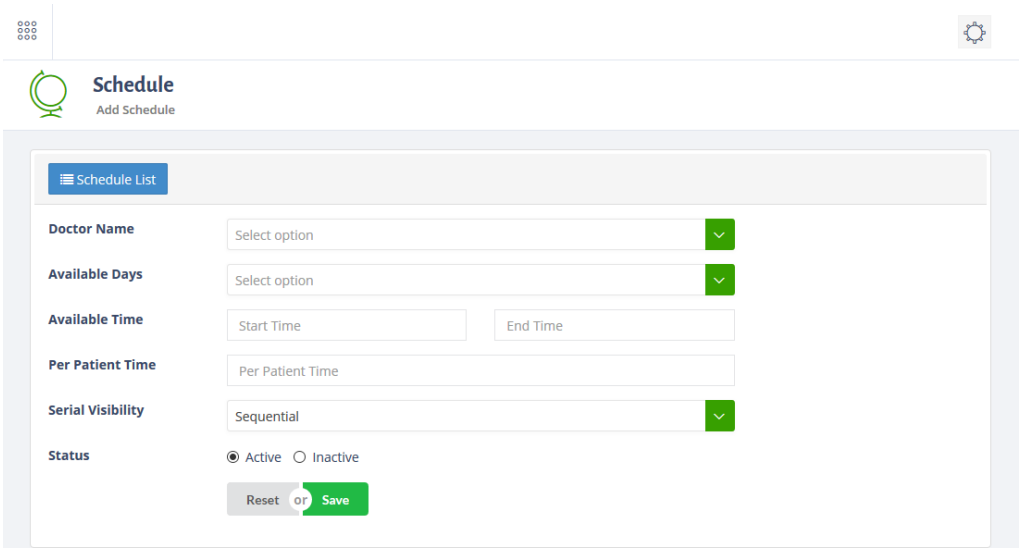


Figure 13: Form used by the Reception area to schedule Doctors

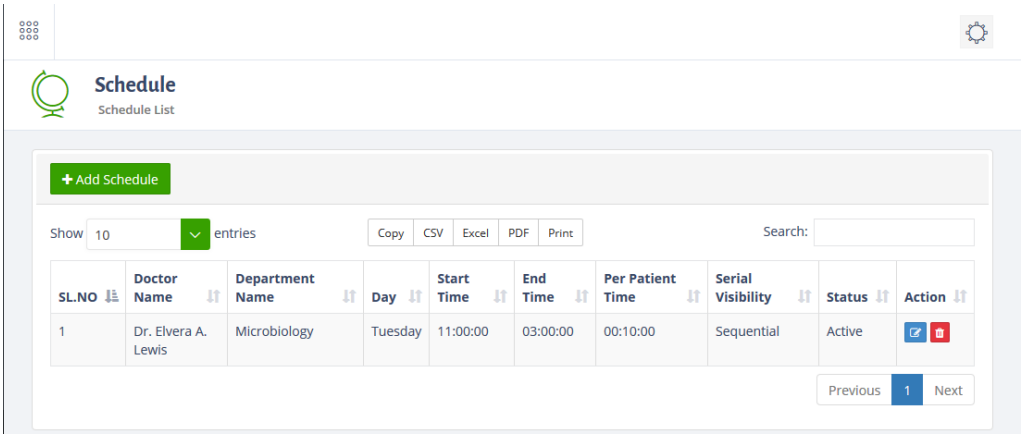


Figure 14: Summary of Doctor's Schedules

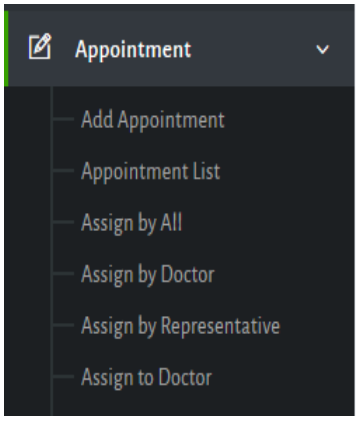


Figure 15: Appointment scheduling dropdown menu

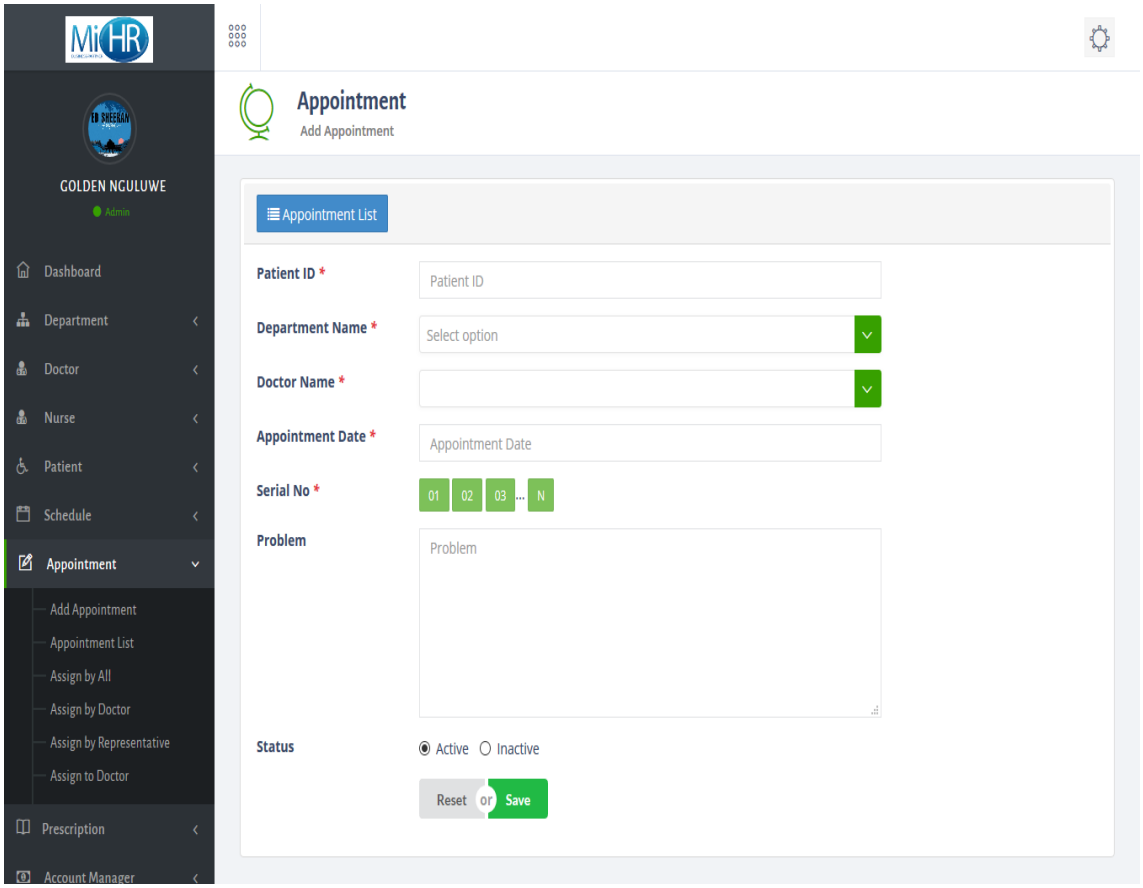


Figure 16: Appointment form

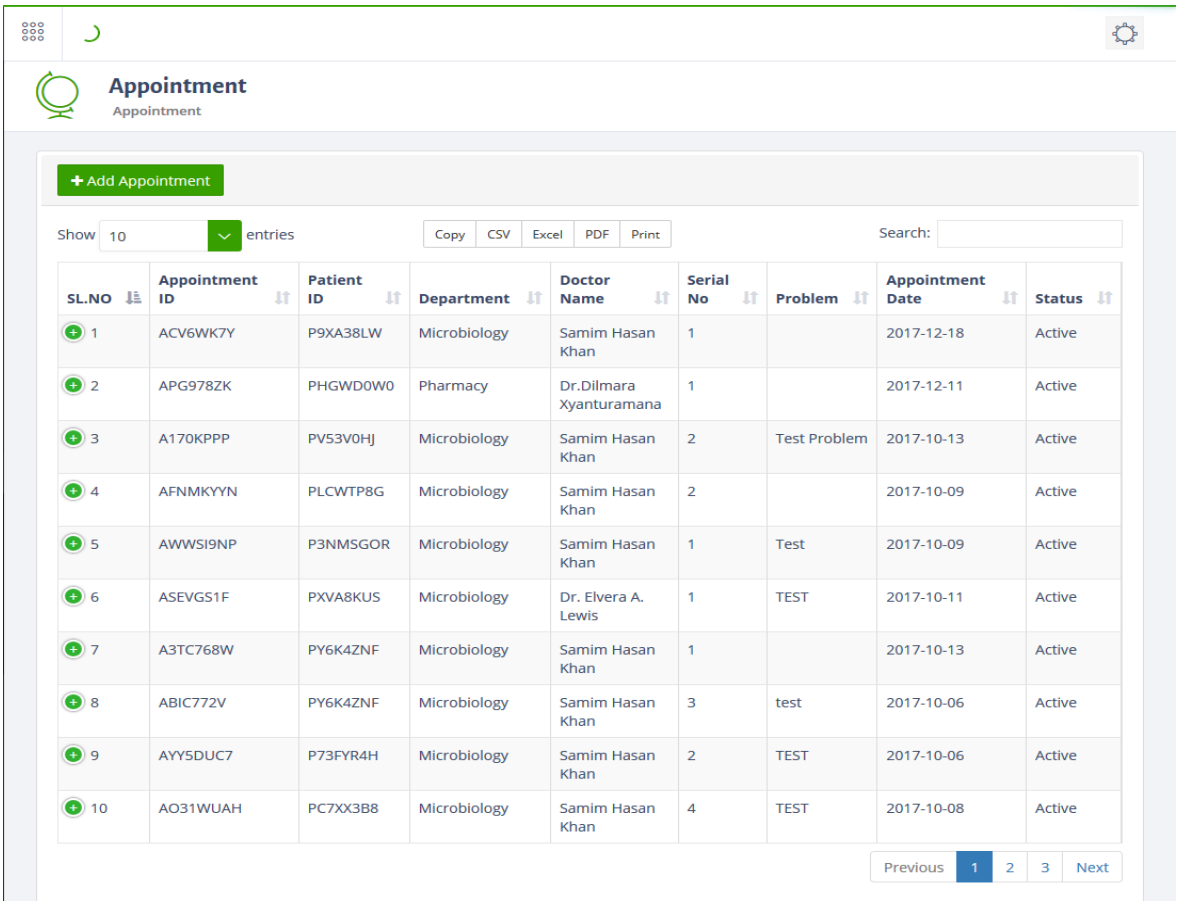


Figure 17: Summary of Scheduled Appointments

2. Nurses' Station

- ✓ Quick and easily input vital signs of the patient (Temperature, Weight, Blood Pressure, Pulse Rate, Respiratory rate, Random Blood sugar).
- ✓ Enter any known problems/allergies plus any other details of the patient.

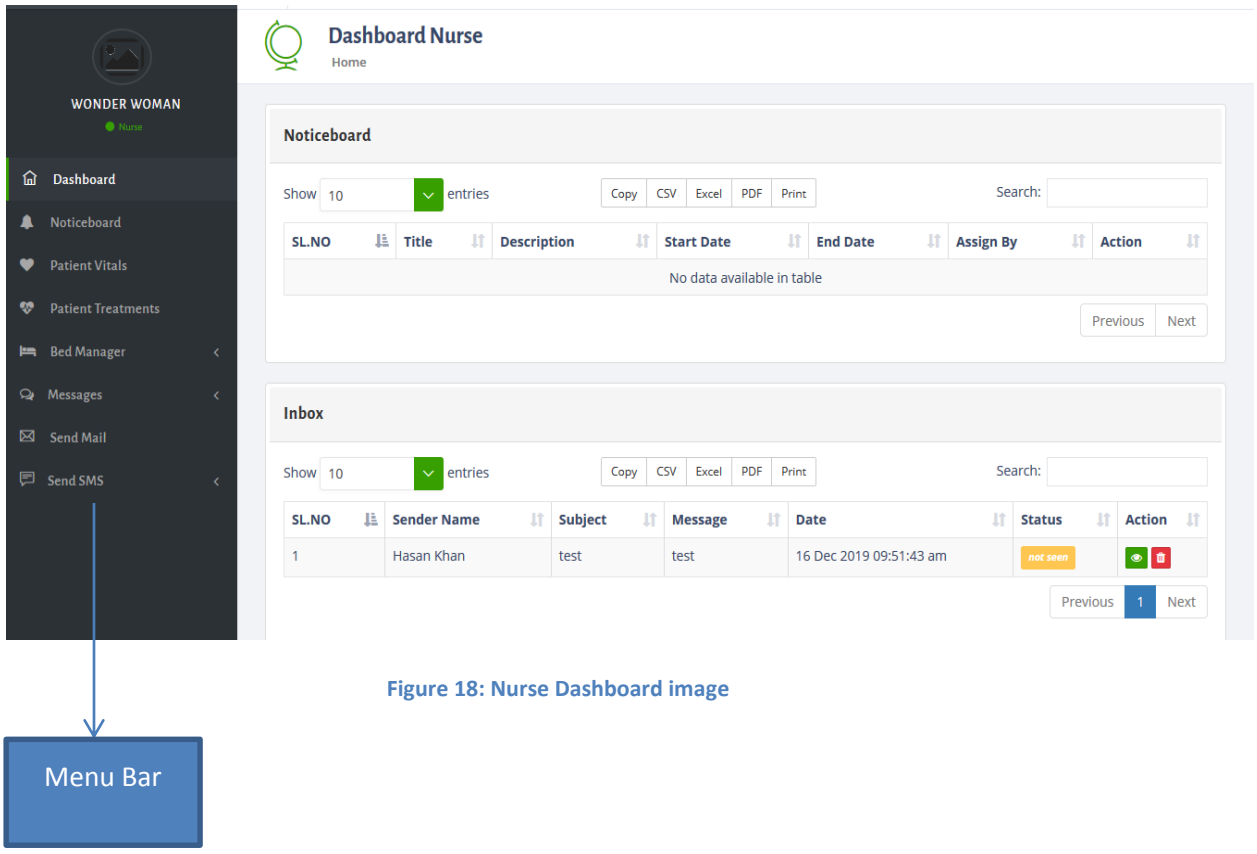


Figure 18: Nurse Dashboard image

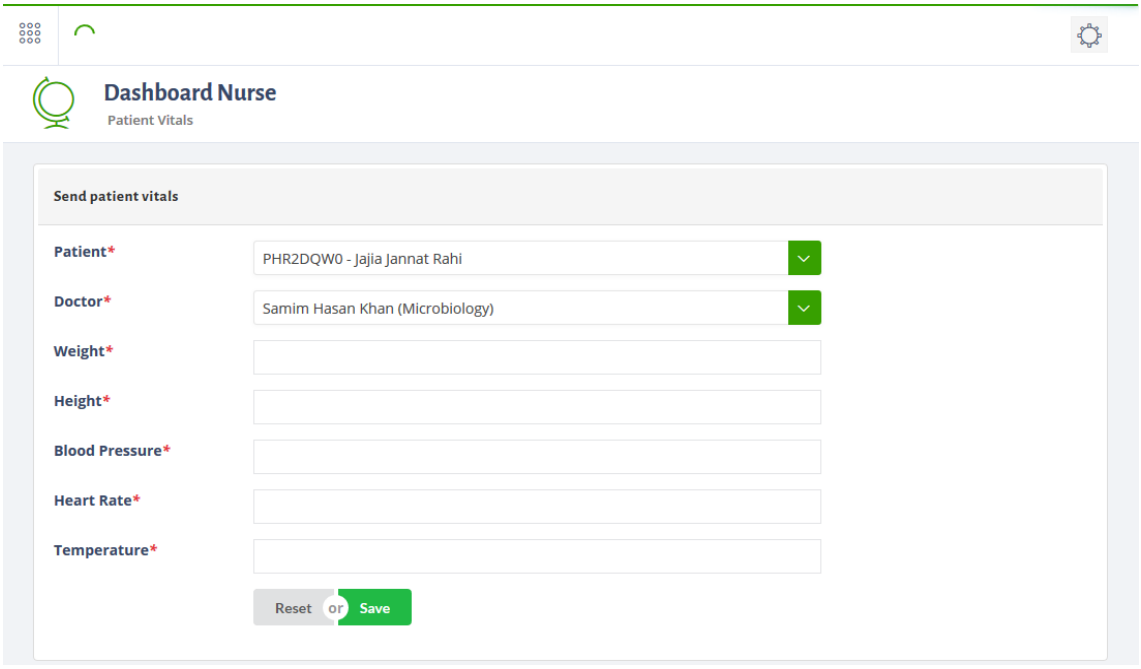


Figure 19: Image of Form used by Nurses to enter patient vitals and other necessary info

3. Consultations

NB: This module is replicated in all departments that require consultation, for example: General, Pediatrics, Eye Clinic, Dental Clinic, Physiotherapy, Emergencies, etc.

- ✓ Aided entry of, family & socio-economic history, past medical history of presenting illness, physical examination and other clinical notes.
- ✓ Computers assisted differential diagnosis and drug prescriptions.
- ✓ View the vital signs of the patient as pre-entered by the nurse
- ✓ Review previous visits notes, prescriptions, investigation and patient history.
- ✓ Quickly select/enter diagnosis for each patient.
- ✓ Send the patient to another department e.g. physiotherapy or eye clinic to see a specialist.
- ✓ Prescribe drugs, order investigation and view results ones posted by the relevant department.
- ✓ Prescribed drugs are automatically reflected at the pharmacy where they are located by patients.
- ✓ Clinical instruction template to be filled by the doctor while sending laboratory, x-ray and ultra-sound request.

- ✓ Patient bill is automatically updated whenever an investigation is requested or a prescription is made.
- ✓ Recommend patient for admission and record admission notes.
- ✓ Review inpatient by viewing, prescription administration chart and vitals entries. Doctor can also write their progress notes in this panel.
- ✓ Make patient appointments.
- ✓ A billing module is provided for any sort of special services offered that the doctor might want to bill.

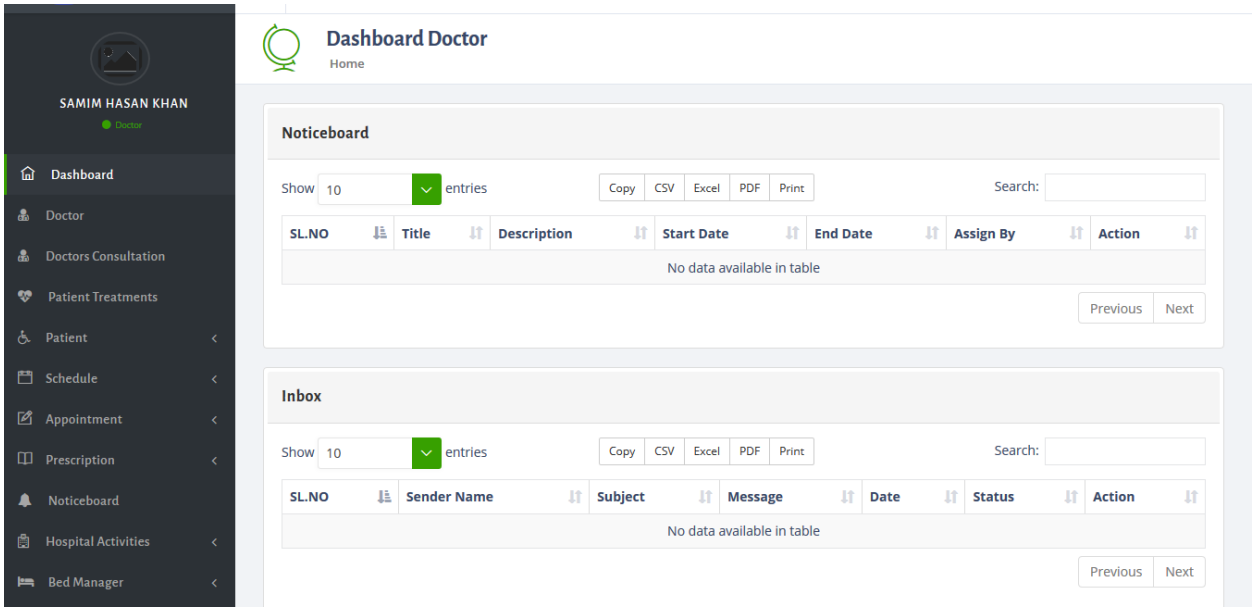


Figure 20: Image of Doctor Dashboard

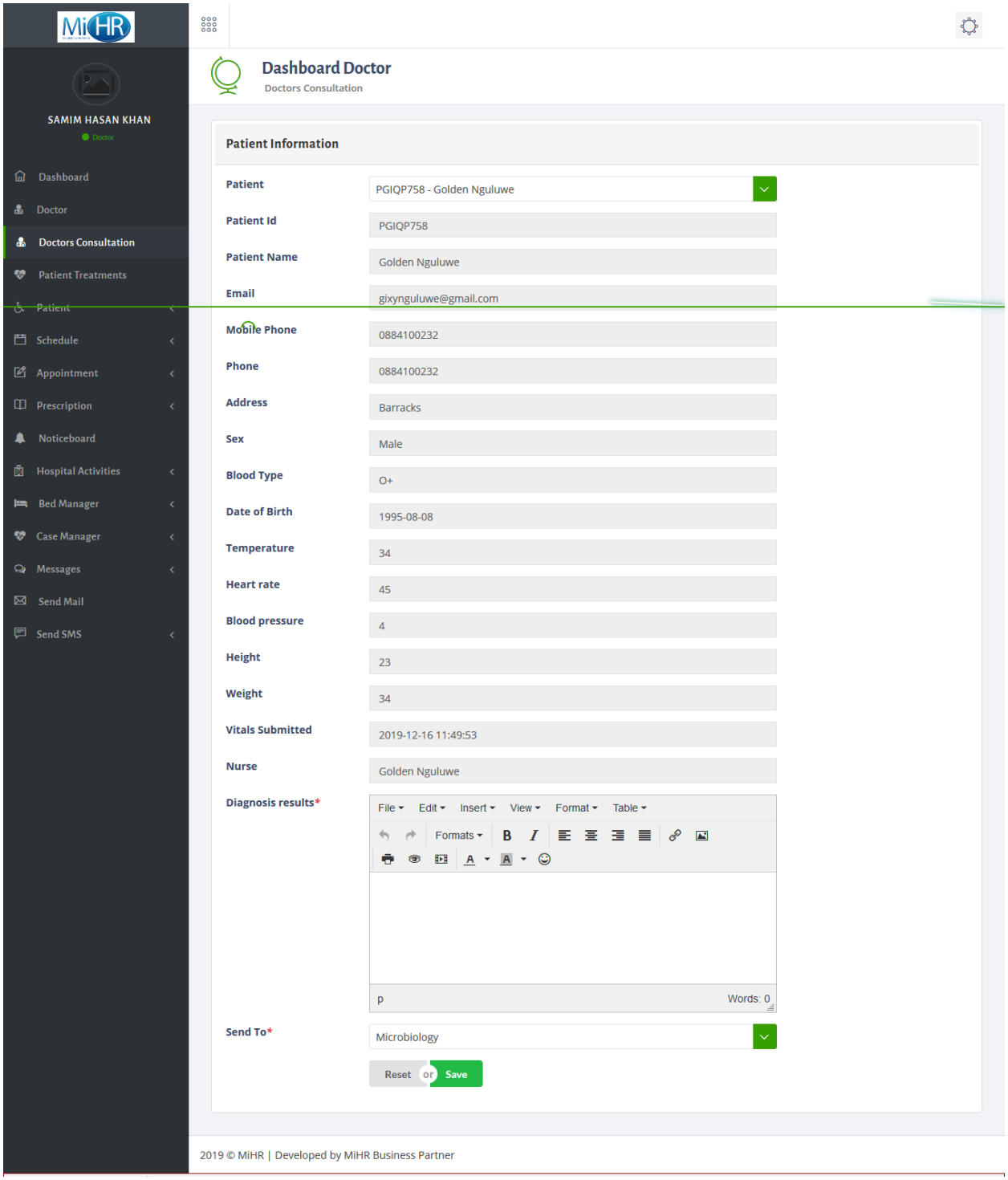


Figure 21: Consultation Form

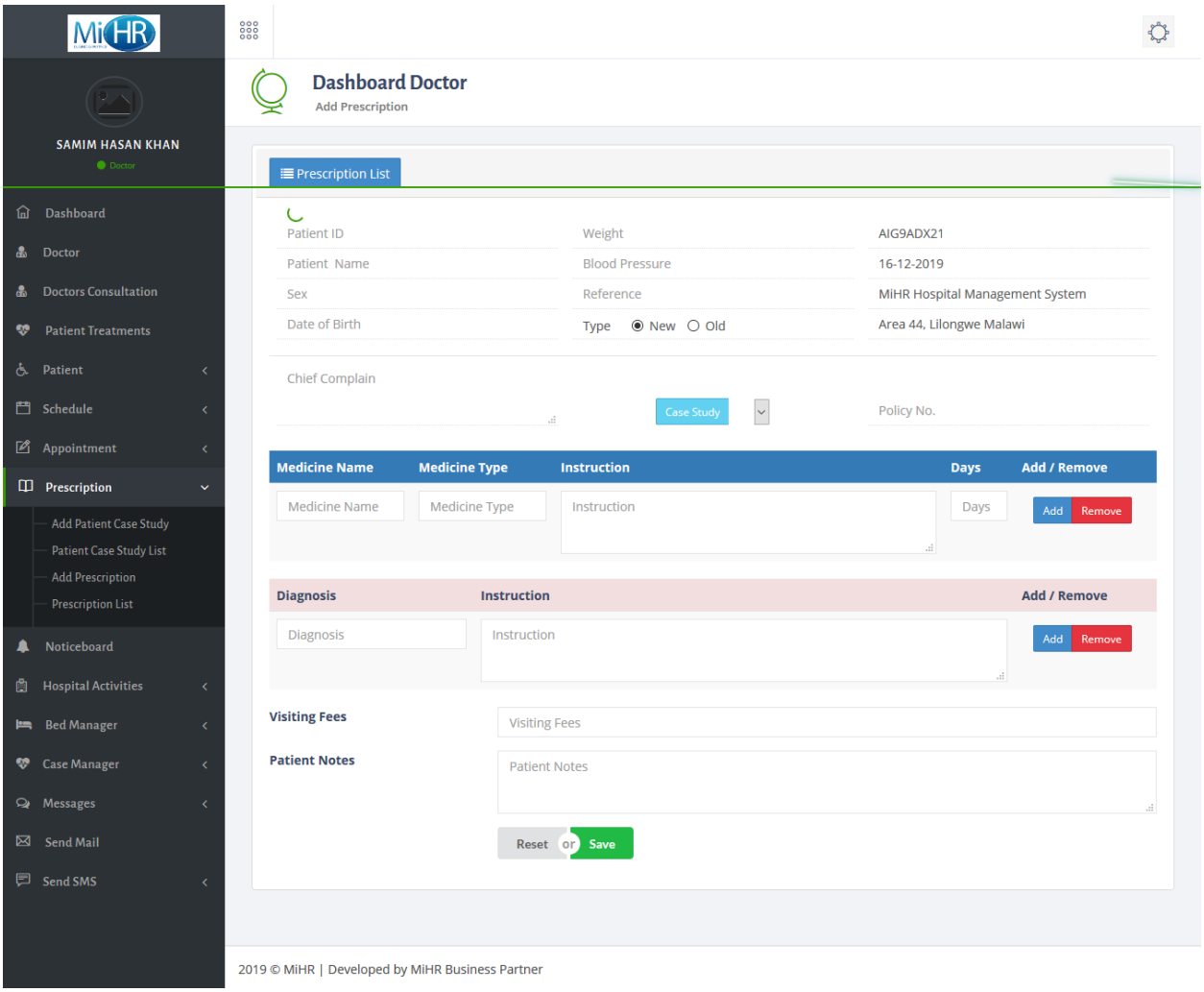


Figure 22: Image of Prescription Form

4. Laboratory

- ✓ Billing of Lab tests posted by the doctor.
- ✓ Lab technologist can view if requested lab test has been paid for before proceeding with the test for cash paying patients.
- ✓ Manage all lab requests (both internal and external).
- ✓ All lab tests are standardized and pre-configured in the system.
- ✓ Quickly and easily fill lab results and send back to the doctor.
- ✓ Automatically generate lab reports indicating time of request and time test is done.

- ✓ Automatically append the name of the technician connecting and posting the result.
- ✓ Track all laboratory consumables and get an alerts on stock levels.
- ✓ View a printable lab result.

5. Radiology

- ✓ Billing of Radiology scans posted by the doctor.
- ✓ Radiology technologist can view if requested services have been paid for before proceeding with examination for cash paying patients.
- ✓ Manage radiology requests (both internal and external).
- ✓ Most radiology tests are preconfigured in the system.
- ✓ Quickly and easily fill results and send back to doctor.
- ✓ Upload scans to the system for viewing by the doctor.
- ✓ Automatically generate radiology report showing time of request and time done.
- ✓ Automatically append the name of technicians collecting and posting the results.
- ✓ View a printable radiology result.

6. Theatre

- ✓ Billing of procedures performed on the patient in theatre.
- ✓ Taking down of theatre notes on the patient file.
- ✓ Theatre timetable to manage all upcoming theatre procedures.
- ✓ Automatically generate theatre report showing time of request and time done.
- ✓ Automatically append the name of theatre technicians posting the theatre notes.
- ✓ View a printable document showing the theatre notes.

7. Pharmacy

- ✓ Billing of Patient's drugs as prescribed by the doctor.
- ✓ Pharmacist can view if drugs have been paid for before issuing to cash paying patients.
- ✓ Can print prescriptions if required.
- ✓ Maximum and minimum stock levels (for stock control and reorder).
- ✓ Ability to control expiry dates
- ✓ Automatic mark-up unit cost.
- ✓ Track stock movement (Bin Card).

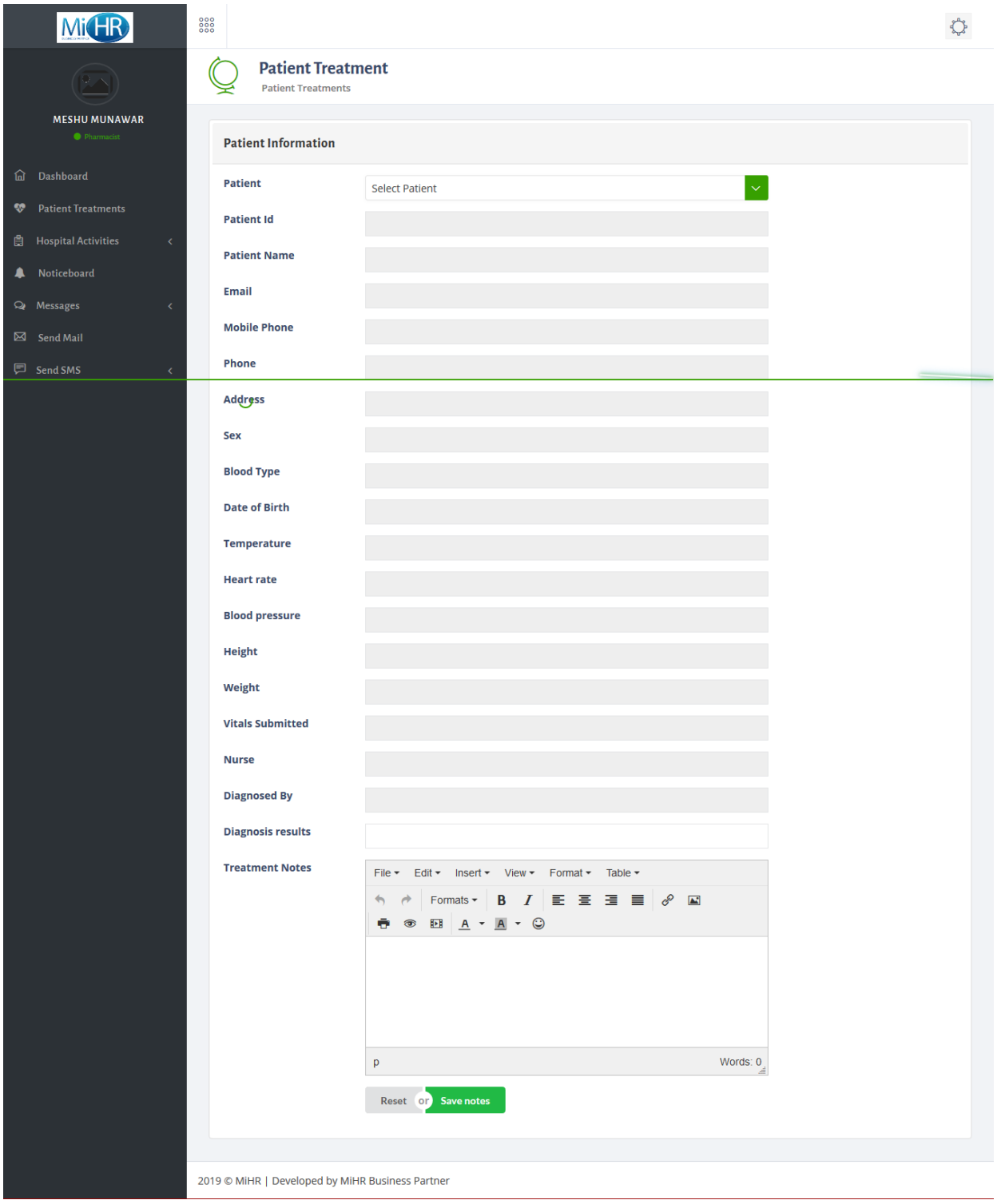
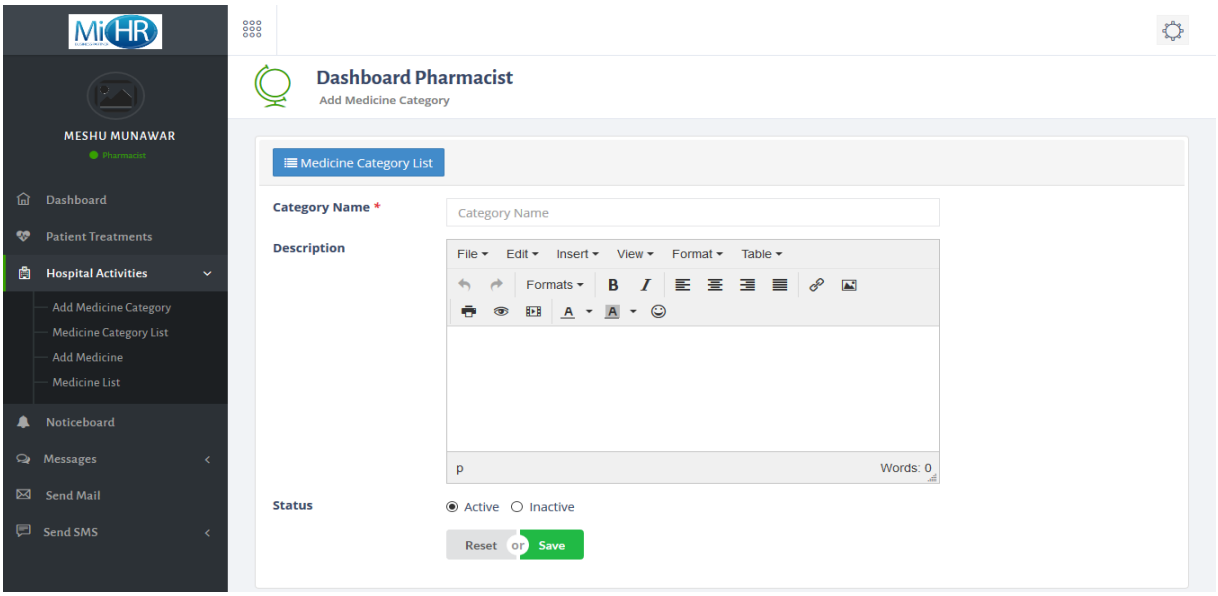


Figure 23: Patient Prescription form



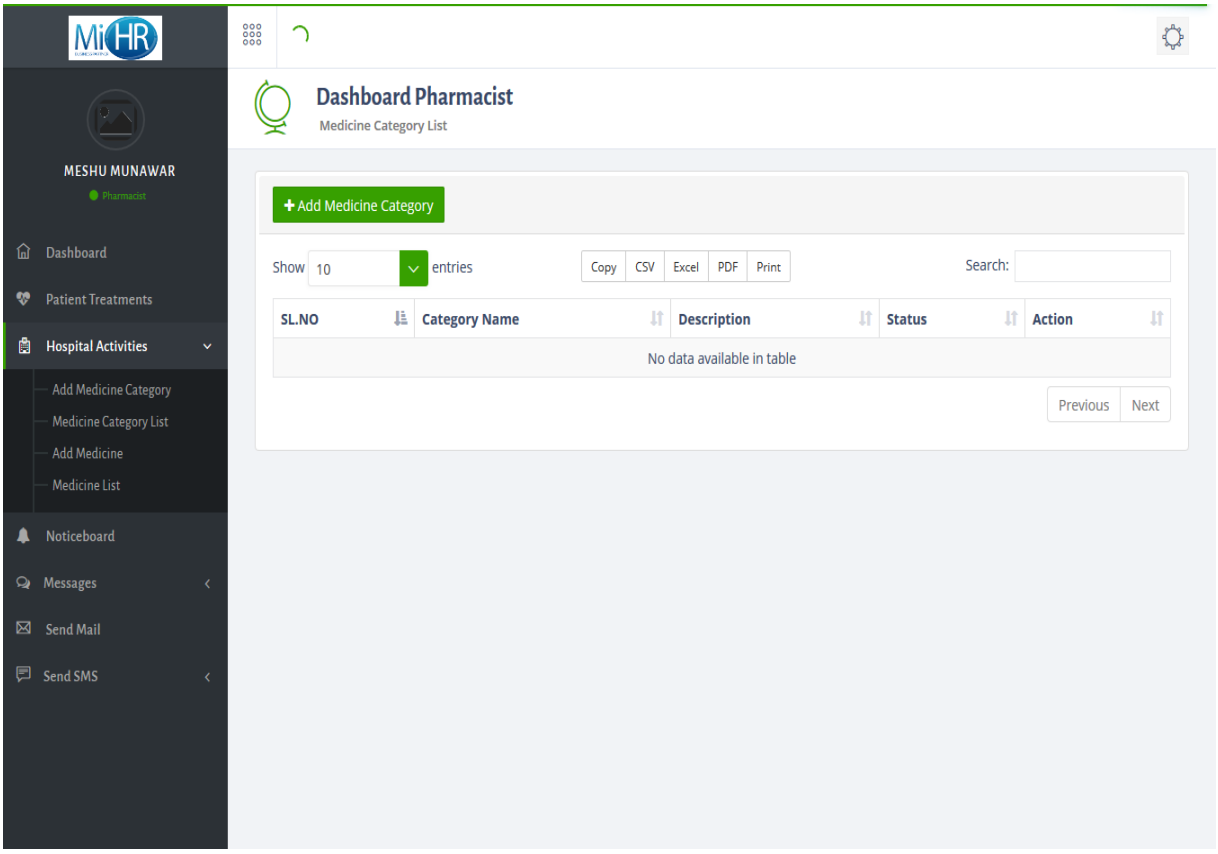
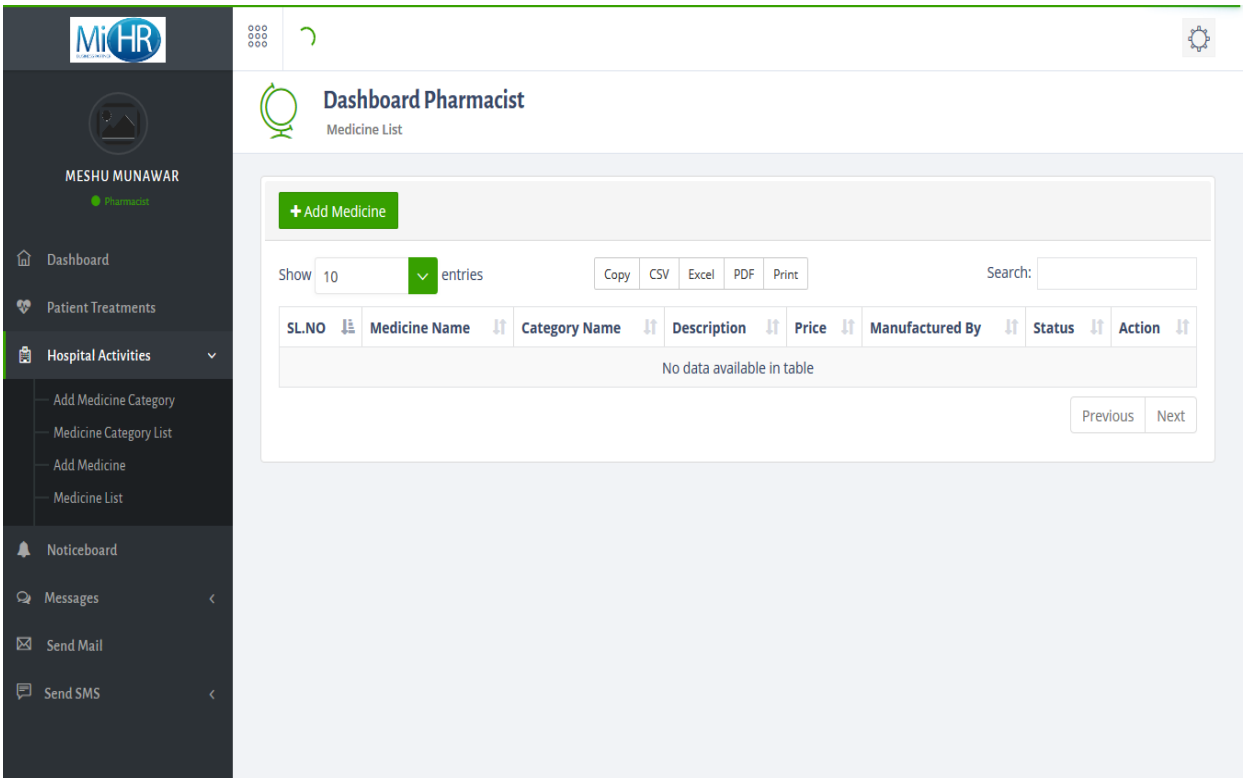


Figure 24: Top image – form for entering medicine / drugs & bottom image Summary of Medicines / Drugs



8. Payments/ Cashier Module

- ✓ Bills posted from all other departments are viewed in this module for payments.
- ✓ The bill can be broken down to be paid using several methods of payment i.e. Cash, Companies (Insurance companies).
- ✓ The total payments have to match the total bill for payment to go through.
- ✓ Cash payments automatically hit the cashier's ledger for End-Of-Shift Cash reconciliation summary report.
- ✓ Print receipts and invoices in case of company patients.

Figure 25: Dropdown menu for Insurance Management

9. Records

- ✓ Admitting patients to the system, noting down their mode of payment and the doctor in charge of them.
- ✓ Automatic generation of printable admission report.
- ✓ Discharge of patient noting down diagnosis code and patient diagnosis.

10. Inpatients Management

- ✓ View all available beds under ward manager
- ✓ Admit patient to specific bed via the system
- ✓ Carry out bed and ward transfer
- ✓ Update the system's prescription administration sheet each time a drug is administered.
- ✓ Record patient's vital entries each day. The system automatically generates graphical representation of these figures in terms of bar and line charts.
- ✓ A module for nurses to type their cadex.
- ✓ Update patient's bill as drugs/services are administered.
- ✓ Finalize bills and automatically generate patient's medical bill report.
- ✓ Discharge patient via the system and automatically generate discharge summary.

11. Procurement

- ✓ A panel for finding stock items using several parameters.
- ✓ Processing GRN (Goods Received Note) during Purchases (Goods Received Inwards).
- ✓ Managing stock requests and transfers from other departments.
- ✓ Regular and random stock taking.
- ✓ Making stock adjustments in case of stock variance. This has to be approved by Senior Management.
- ✓ Stock Valuation of the whole store.
- ✓ Stock usage register to manage non-billable items like foodstuffs.
- ✓ Goods returned outwards to manage items returned to suppliers.
- ✓ Raising LPO's which are then authorized by the Accountant before being forwarded to the supplier.

12. Stores & Pharmacy Management

- ✓ Ability to create multiple storage locations for your stock items.
- ✓ Issue stock items and pharmacy and other departments.
- ✓ Track stock movement from purchases to sales (also generate reports).
- ✓ Stock level and expiry date alerts.
- ✓ Stock ledger.
- ✓ Automatic update on stock ledger once goods are received.
- ✓ Carry out stock take and adjustments.
- ✓ Generate variance report.

13. Accounts Module

- ✓ Making journal entries to debit/credit various ledgers.
- ✓ Finding journal entries.
- ✓ Chart of Accounts plus a provision of adding new accounts, editing and deleting existing ones.
- ✓ Debtors Management:
  - ❖ Adding and editing Debtors (Insurance Companies);
  - ❖ Receiving payments to clear invoices,
  - ❖ Printing out debtors' statements for any period of business.
- ✓ Creditors Management:
  - ❖ Adding and editing Creditors (Suppliers);

- ❖ Making payments to clear invoices,
- ❖ Printing out creditors' statements for any period of business.

✓ A panel for finding invoices and previewing them.

✓ Chief Cashier cash collection at the end of cashier shift.

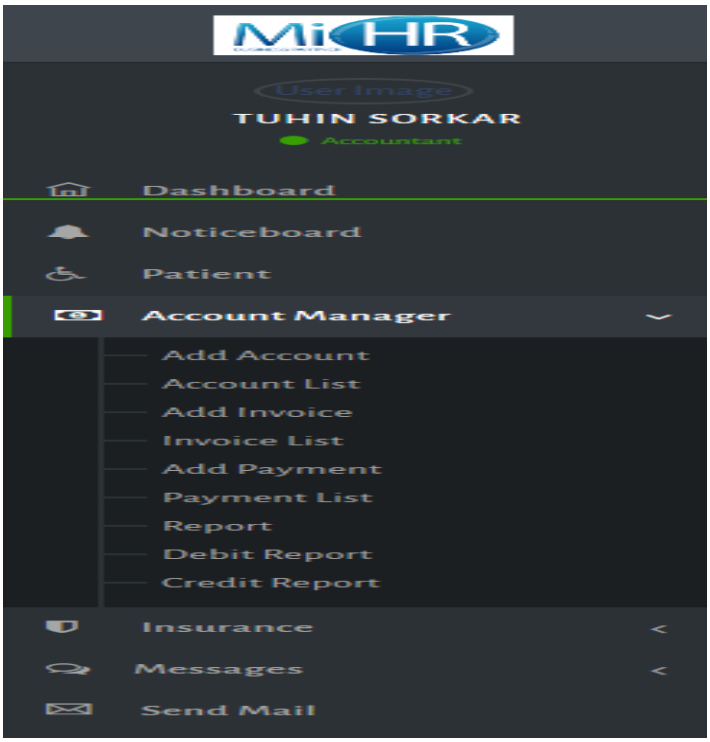


Figure 26: Drop down menu for Accounts functions

14.Reports

✓ Cashier Daily Summary. Balance Sheet.

✓ Invoices Reports- Today Invoices, All invoices, By Company.

✓ Receipts Reports.

✓ Procurement:

- ❖ Goods Received Report-By item, All, By Supplier.
- ❖ Goods Returned Report-By item, All, By Supplier.
- ❖ Reprint-Goods Received Note, Goods Returned Note, Local Purchase Order.
- ❖ Invoice Listing-Inwards and Outwards.
- ❖ Summarized Bin Card.
- ❖ Inventory-All, By Category, By Supplier.

- ❖ Expiry Report.
- ❖ Reprint Variance Report.

✓ Health Reports:

- ❖ Reprint Admission Form,
- ❖ Reprint Discharge Summary, Diagnosis Reports, Birth Reports.

✓ Stock Usage Reports
✓ Messages Reports
✓ Activity Log-All, By User.
✓ Debtors List
✓ Creditors List
✓ System Users List
✓ Stock Movement Report.
✓ Employees List
✓ Goods Price List-All, By Section
✓ Services Price List-All, By Section
✓ Stock Transfer Report-All, By Dept.
✓ Bin Card
✓ Re-order Level-All, By Supplier.
✓ Patients Reports-All Patients, In-Patients.
✓ Inpatients Reports Outpatient Reports All Patients Reports

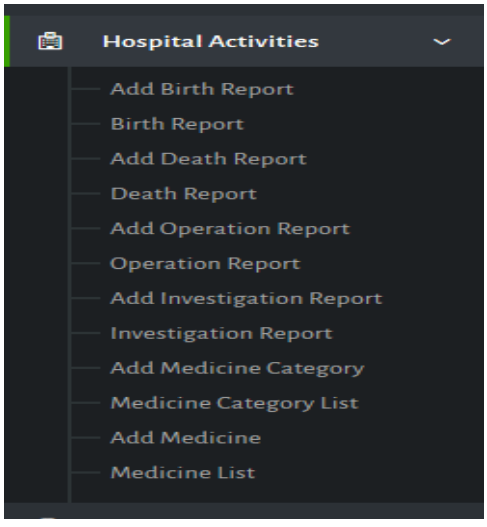


Figure 27: Image showing example of some of the reports that can be produced

15.Tools and Administrator Settings

- ✓ Hospital Details Management.
- ✓ System Users Manager-Adding or Editing Users. The access level is also managed in this panel.
- ✓ User Access Rights-Discriminating what each access level can do and not do.
- ✓ Items Access Rights-Discriminating what items (goods and services) each user can see and not see (department based).
- ✓ Editing Account Details-Change Login Credentials.
- ✓ Set up Inpatient Ward Beds.
- ✓ Medical Notes.
- ✓ Add/edit Medical Data.
- ✓ Import and Export Databases.

16.Other Unique System Features

- ✓ Highly customizable to suit your size and exact need.
- ✓ Consistent and attractive user interface that makes it easy to use.
- ✓ Fast, stable, reliable and secure.
- ✓ Perfectly integrates with your hospital workflow.
- ✓ Well organized and informative reports that can export to Word, Excel and PDF among other formats.
- ✓ According that smoothly integrates with all your hospital opera with minimum user intervention.
- ✓ Readily available & well organized data that can be used for different types of analysis.
- ✓ Remote access view in real time and any time what is happened your facility from anywhere in the world.

Hardware & Software Requirements

For such a comprehensive system to work to its maximum the right type of Hardware and Software is to be put in place.

Below are the required specifications to be used:

1. ***Software***
   - Windows Server 2012
   - SQL Server 2014

2. ***RAM***
   - 8GB
3. ***Processor***
   - Either i7 or i5
4. ***Hard Drive***
   - 200gb and above (depending on users)

Training

Data Utilization Trainings (DUTs)

Data Utilization Trainings (DUTs) were the trainings which are done to equip the Users of the System with the relevant knowledge on Hospital management and use. The trainings are done to the Head of Departments and Senior Managers on how best they can understand, analyze and use the information collected in informing the management of HMIS under their capacity. Therefore, conducting of DUTs is meant to enforce effective utilization of the system as a key source of hospital, patient management and decision-making mechanism.

The trainings are organized and facilitated by experts from MiHR Business Partner.

Challenges during DUTs

Challenges that could be encountered during the DUTs include:

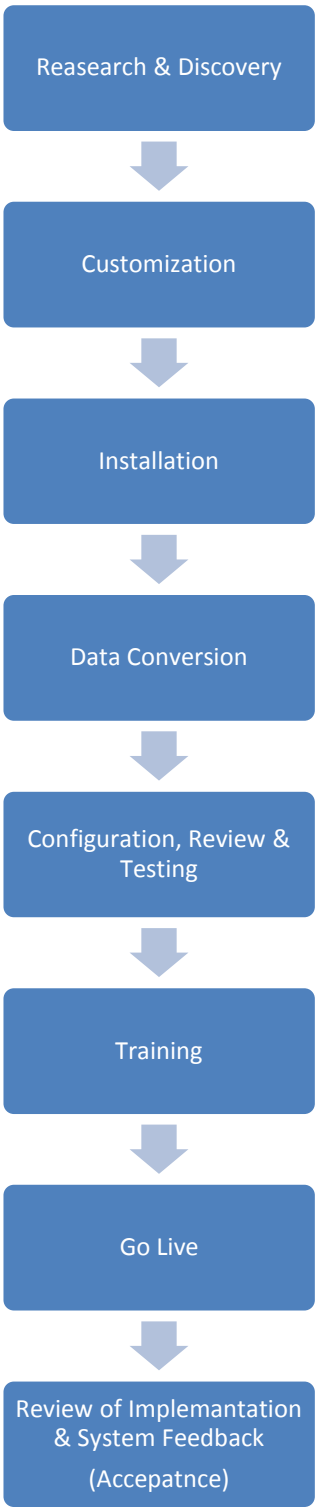
- The number of the Training Laptops not being enough in some of the sessions,
- Venue problems,
- Punctuality of the training attendants leading to training starting time delays and limited time for hands on sessions,
- Computer Literacy of the training Participants,
- Power Cut-off,
- some of the required participants sending representatives who were new to the system leading to delays as some of the time had to be used to introduce them to the System before conducting the DUT to them,
- Another challenge would the number of the participants being larger than that expected thus leading to the division of the training sessions and the extension of the training period.

Time Lines

Setting up a system is a pivotal process that is often downplayed in the grand scheme of transitioning. A common blunder is underestimating how much time is required to implement the new system and get employees well acquainted with it for daily functions.

To ensure implementation success, PSMI should speak to MiHR Business Partner about the average amount of time typically devoted to implementing the system. The provided timeframe should then be used as a guideline to develop a timeline for implementation steps. Most systems take about six to eight weeks to implement, if all steps are given proper attention.

Phases


Reasearch & Discovery
Customization
Installation
Data Conversion
Configuration, Review & Testing
Training
Go Live
Review of Implemantation & System Feedback
(Accepatnce)

1. ***Research and Discovery Phase***
   The first phase of implementation involves research and much discovery. During this week to two-week period, all business processes should be audited and top managers and Hospital professionals should decide what must be done to automate the desired processes.

2. ***Customization***
   During this phase MiHR team will code the system according to the requirements that have been provided by PSMI. This process could take a week depending on the Scope of Requirements.

3. ***Installation Phase***
   The installation phase should not take long, certainly no more than a few days. This phase may require the expertise of a consultant or in-house IT professional, or may require a compilation of their work. Some products may require specific skill sets and knowledge for proper installation, and should be discussed with the vendor to avoid wasting time.

4. ***Data Conversion Phase***
   Data conversion can take days or weeks for completion, depending on the ease of data conversion in the new system, the compatibility of old systems with new, and how much data needs to be manually entered. If all information must be entered manually, certain employees should be assigned these specific tasks. Regular tasks are best handled by other employees and managers during this time.

5. ***Configuration, Review, and Testing Phase***
   At some point before, during, or after the data conversion phase, the Hospital Management Information System dashboards should be configured to best fit the needs of PSMI. After formulas have been entered and configuration is completed, certain groups of managers, or/and employees should be assigned to review and test the system.

   This process may take a week or more, depending on the feedback provided and any tweaks that need doing.

6. ***Employee Training Phase***
   At the beginning of the training phase, a meeting should be scheduled to do an organization-wide roll-out of the new system. Training may take a week, depending on the intuitiveness of the system and the magnitude of the changes within the organization. As employees start to understand and use the HRIS, their feedback should be evaluated to improve comprehension and processes within the PSMI.

7. ***Go-Live Phase***

   The go-live phase typically occurs after the training phase, although a subsequent training phase may be required if the go-live phase is not as successful as anticipated. As the go-live phase begins, employees, managers, and Hospital professionals usually understand the system well enough so that this phase need not last more than a week. During this phase, HMIS will officially start being used for real processes within the PSMI.

8. ***Review of Implementation and System Feedback***

   After the implementation has been successfully completed, the system's efficacy should be discussed. Any feedback regarding system improvements should be noted and completed, if relevant. Smaller training sessions should be scheduled to update employees on changes. However, this phase should not take any longer than a few days, if the rest of the implementation process has been properly executed.

		WK 1	WK 2	WK 3	WK 4	WK 5	WK 6	WK 7	WK 8
Phase 1									
Activities •Stakeholder/ Management Audit • Client Knowledge Transfer •System/ Analytics Review •Primary/ Secondary Research •Competitive analysis	**Deliverables** •Scope of Work •Technical & Design Requirements •Tech Recommendations •Information Architecture •Project Timeline								
Phase 2, 3, ,4, 5									
Activities •SEO Copy & Content Integration •Creative/UI Concepting •Frontend/CMS Development •Prototype Theming/Skinning	**Deliverables** •Asset Library •Creative/UI Concepts •Themed Prototype/ Site								
Activities •Completion of Core development •Proofing & Revisions	**Deliverables** •Final Prototype/system								
Phase 6									
Activities Training									
Phase 7 & 8									
Activities •Analytics Integration • Push System Live/Hard Launch •System Map Submission	**Deliverables** •Live Site or File Handoff •System Feedback								

Conclusion

We hope you have enjoyed the comprehensive tour of the MIHR Hospital Management Information System and have seen how the system can aid your organization in implementing best practice. We are available to answer any questions or queries that you make have and look forward to partnering with your organization.