**HMIS**

**System Writeup**

**System Name**

HMIS – Health Management Information System

**Modules**

**Registration module**

***Patient Register***

Receptionist register patient from this point. Patient is registered and sent to doctor, through consultation or follow up

* Allows new and existing patient registration.
* New Patient – A patient whose records are not in the system, and they have to be entered.
* Existing Patient – Apatient whose records are already in the system.

**Clinician module**

***Consultations***

Doctor view consultation list and attends to outpatients from the consultation list.

Doctor service to outpatient include:

* General examination
* Clinical notes
* Assigning diagnosis
* Assigning and view lab test
* Assigning and view radiology
* Assign medical prescriptions
* Assign and view procedures
* Admitting to and send patient to ward

***Follow up***

Patients attending for follow up are accessed and attended from this list

Doctor service to follow up patient include:

* General examination
* Clinical notes
* Assigning diagnosis
* Assign medical prescriptions

***Inpatients***

Doctor view inpatients list and attends to outpatients from the inpatients list

Doctor service to inpatient include:

* General examination
* Clinical notes
* Assigning diagnosis
* Assigning and view lab test
* Assigning and view radiology
* Assign medical prescriptions
* Assign and view procedures
* Discharge patient

**Nursing module**

***Outpatients***

Nurse view outpatient list and attends to outpatients from the outpatient list.

Nurse service to outpatients include:

* Collect triage and vital signs
* Submit signs to doctor

Main service from nurse to outpatient is to collect triage and vital signs, and submit to doctor.

***Inpatients***

Nurse view inpatients list and attends to inpatients from the inpatients list. Nurse services to inpatients include:

* Dressing
* Adding consumables
* Observation
* Drug administration
* Filling nurse chart
* Filling progress notes
* Filling care plan

***Outsiders***

Nurse view outsider list and attends to outsiders from the outsider list.

Nurse service to outsiders include:

* Collect triage and vital signs
* Submit signs to doctor

**Laboratory module**

***Outpatients***

Lab personnel view outpatients and attend to outpatients through outpatient list

Lab service to outpatients include:

* Entering and verifying test results

***Inpatients***

Lab personnel view inpatients and attend to inpatients through inpatient list

Lab service to inpatients include:

* Entering and verifying test results

***Outsiders***

Lab personnel view outsiders and attend to outsiders through outsiders list

Lab service to outsiders include:

* Entering and verifying test results

***Patients Results***

Enable lab personnel to view and print patient’s lab test results for a particular date range.

**Radiology module**

***Outpatients***

Radiologist view outpatients and attend to outpatients through outpatient list

Radiology service to outpatients include:

* Entering and verifying radiology results

***Inpatients***

Radiologist view inpatients and attend to inpatients through inpatient list

Radiology service to inpatients include:

* Entering and verifying radiology results

***Outsiders***

Radiologist view outsiders and attend to outsiders through outsiders list

Radiology service to outsiders include:

* Entering and verifying radiology results

**Pharmacy module**

***Outpatients***

Pharmacist view outpatients and attend to outpatients through outpatients list

Pharmacist services to outpatients include:

* Dispensing medicine prescribed in medical prescriptions

***Inpatients***

Pharmacist view inpatients and attend to inpatients through inpatients list

Pharmacist services to outpatients include:

* Dispensing medicine prescribed in medical prescriptions

***Pharmacy Inventory***

This is used to control inventory in the pharmacy. Inventory control in pharmacy include the following:

* Manual update of Pharmacy stock
* Requesting medicine from store
* Receiving medicine from store
* Requesting medicine from another internal pharmacy
* Receiving medicine from another internal pharmacy

***Pharmacy Sales Point***

This allow medicine to be sold to walk in customers, in a given pharmacy.

**Cashier module**

***Cash collections***

Allows collection of cash payments from different services. All cash payments have to be done by the cashier before respective products and services being administered. Cash collections include:

* Collection from reception
* Collection from lab investigation
* Collection from Radiology
* Collection from Medication
* Collection from Procedure
* Collections from inpatients

***Patient Direct Invoicing***

These are invoices sent directly to patients. These patients are mainly inpatients, whose payments are done after administering services.

Patient direct invoice is generated during assignment ad administration of service, and patient can pay partially or in full. An inpatient can only be discharged if and only if invoices are cleared.

***Patient Insurance Invoicing***

These are invoices sent to the health insurer of the patient, upon service assignment and administration.

***Patient transfer/ Referral***

Involves transferring patient to an external health facility, through referral plan. Service can be accessed through the referral list, which is received from doctors. Cashier prints and approve referral plan for a selected patient.

***Patient discharge***

Involves releasing an inpatient. Inpatient can only be released if all outstanding payments have been cleared.

***Deceased processing***

Access a deceased patient and release the deceased from the system. A deceased patient can be released if outstanding payments have been cleared.

***Patient Report***

Used to generate medical report of a particular patient, upon request.

**Store module**

***Inventory***

Involves the following:

* Inquiring items
* Processing internal and external orders

**Procurement module**

***Supplier management***

Create and update suppliers’ records. A supplier supplies items, upon special agreement between the supplier and the institution. The agreement is configured in supplier price listing.

***Order processing***

Order processing include processing of Local Purchase Order (LPO). LPO processing involves

* Create new LPO
* Edit existing LPO
* Save LPO

***Item management***

An item is any thing that can be acquired and used directly in business operation. Item management include:

* Creating new item
* Editing existing item

All medicines are acquired as items and later transferred to pharmacy and acquire medicinal properties. An item may have a corresponding medicine quantity coefficient that is used to determine the ratio between the specified item and corresponding medicine. This ratio is used in making transaction between stores and pharmacies.

***Procurement Reports***

Procurement reports include:

* LPO Report
* GRN Report

**Admin module**

All the systems, identity, access and service configurations are performed in the admin module.

***Medical Operations***

These are all the medical service types which are performed to patients. They include:

* Diagnosis type
* Lab Test type
* Lab test type ranges
* Procedure type
* Radiology type
* Medicine type
* Minor procedures
* Patient consumables

***Insurance management***

Used to register health insurer and corresponding insurance plans for each insures. They include:

* Insurance Provider
* Insurance Plan

***Pricing***

Determine the pricing plan for each payment plan, either cash or insurance. Each Service type can be configured to have different payment plan and a corresponding price. These prices, a part from the cash plan, can be activated or deactivated, by specifying coverage as either covered or not covered. The cash plan is activated by default and can not be deactivated.

The pricing plans include:

* Registration plan
* Consultation plan
* Lab test plan
* Medical procedure plan
* Radiology plan
* Medicine plan
* Ward plan

***Personnel Management***

Special groups of users should have access to special functions within the system, and to access these services, these users have to be registered explicitly, to access the services. After registering the user, using the normal user registration, the user is assigned a special role, which automatically register the user in that particular role register. For example, to register a clinician (*Doctor*), the clinician has to be first be registered as a normal user, then assigned the clinician role. Afterwards, his/her name will appear in the clinician register. You can now navigate to the clinician register and configure the doctor accordingly.

In personnel management, the following groups are considered:

* Management
* Clinician/Doctor
* Pharmacist
* Nurse
* Cashier
* Store Person

***Medical units’ management***

Medical units are the physical areas in which medical services are rendered, or medical items are administered. They include:

* Clinics
* Pharmacies
* Store
* Theatre
* Wards
* External medical providers

***Identity and Access Management***

This involved user registration, authentication and authorization. The system employs the role-based authentication system, whereby, a role is assigned to privileges and users assigned to these roles.

This sub module includes:

* User registration
* Role registration
* Role access management

***Company Settings***

This involves setting up different parameters for the institution to be used in the system.

***Reports***

The admin reports include:

* Consultation Report
* Procedure Report
* Doctor to Radiology Report
* Doctor to Laboratory Report

**Human Resource Module**

***Employee management***

Register employees

***Payroll management***

Create and approve payroll

***Asset Register***

Register assets, such as furniture, computers etc.

**Management & Report module**

Includes the following

* Management dashboard
* Payroll Report
* General Reports
* Laboratory Reports
* Pharmacy Reports
* Store Reports
* Procurement Reports
* Admin Reports

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