CARESPHERE HMIS

# User Manual

Hospital Management System — end-to-end guide for hospital staff

Version 1.0 · October 2026

Web address: https://carephere.organcomplex.co.tz

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# About this manual

CareSphere is a web-based hospital management system (HMIS) set up for a Tanzanian hospital. It covers the whole patient journey, from registration at the front desk to discharge and the final bill. Everything runs in a web browser at **https://carephere.organcomplex.co.tz**; nothing needs installing.

This manual is for hospital staff: receptionists, doctors, nurses, lab technicians, pharmacists, billing and cashier staff, managers, and administrators. Each chapter covers one department. Chapters give the menu path first, then numbered steps.

**Local settings used throughout:**

| Setting | Value |
|---|---|
| Currency | Tanzanian Shilling, shown as TSh 12,500.00 |
| Mobile numbers | Tanzanian format: +255 7XX XXX XXX (also accepts 07XX XXX XXX) |
| Patient ID documents | NIDA (National ID), Passport, Voter ID, Driving Licence, TIN Certificate, Birth Certificate |
| Address | Region (31 Tanzanian regions); postal code optional |
| Supported browsers | Google Chrome, Microsoft Edge or Firefox, current version |

**How a patient moves through the hospital:** the diagram below shows the usual outpatient and inpatient routes. Each box is a chapter in this manual.

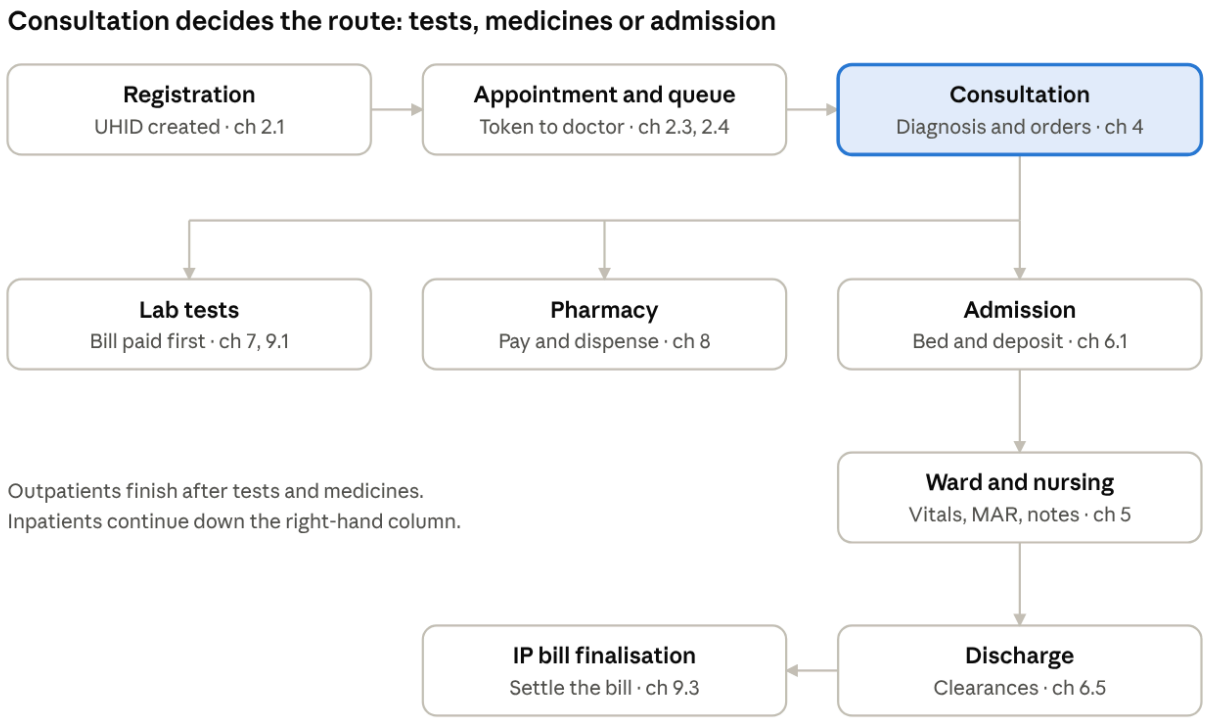



Figure: How a patient moves through the hospital

**Conventions: Bold** words are buttons, menu items or field names exactly as they appear on screen. "Menu → Item" means: open the menu section in the left sidebar, then click the item. What you see in the sidebar depends on your role (chapter 1).

**Screenshots** were taken from the live system on 30 October 2026 with demo accounts. Patient rows are blurred on purpose. Your menus may differ slightly, depending on your role.

# 1. Login & User Roles

Every user signs in with a personal account. The role chosen at sign-in decides which menus and actions they see.

## Sign in

1. Open **https://carephere.organcomplex.co.tz** in the browser.
2. Enter **Email Address or Username** and **Password**, then click **Sign In**. Tick **Remember me** only on your own computer.
3. If two-step verification is switched on for your account, enter the 6-digit code from your authenticator app or SMS.
4. **Select facility**: choose the hospital or branch you are working in. With only one facility, this step is skipped.
5. **Select role**: if you hold more than one role (for example Doctor and Management), choose the one you are working as now.
6. **Select station**: clinical and desk staff choose their workstation (for example OPD Reception or Ward 3). Admins skip this step.
7. Your role's home screen opens, with your role's menu in the left sidebar.

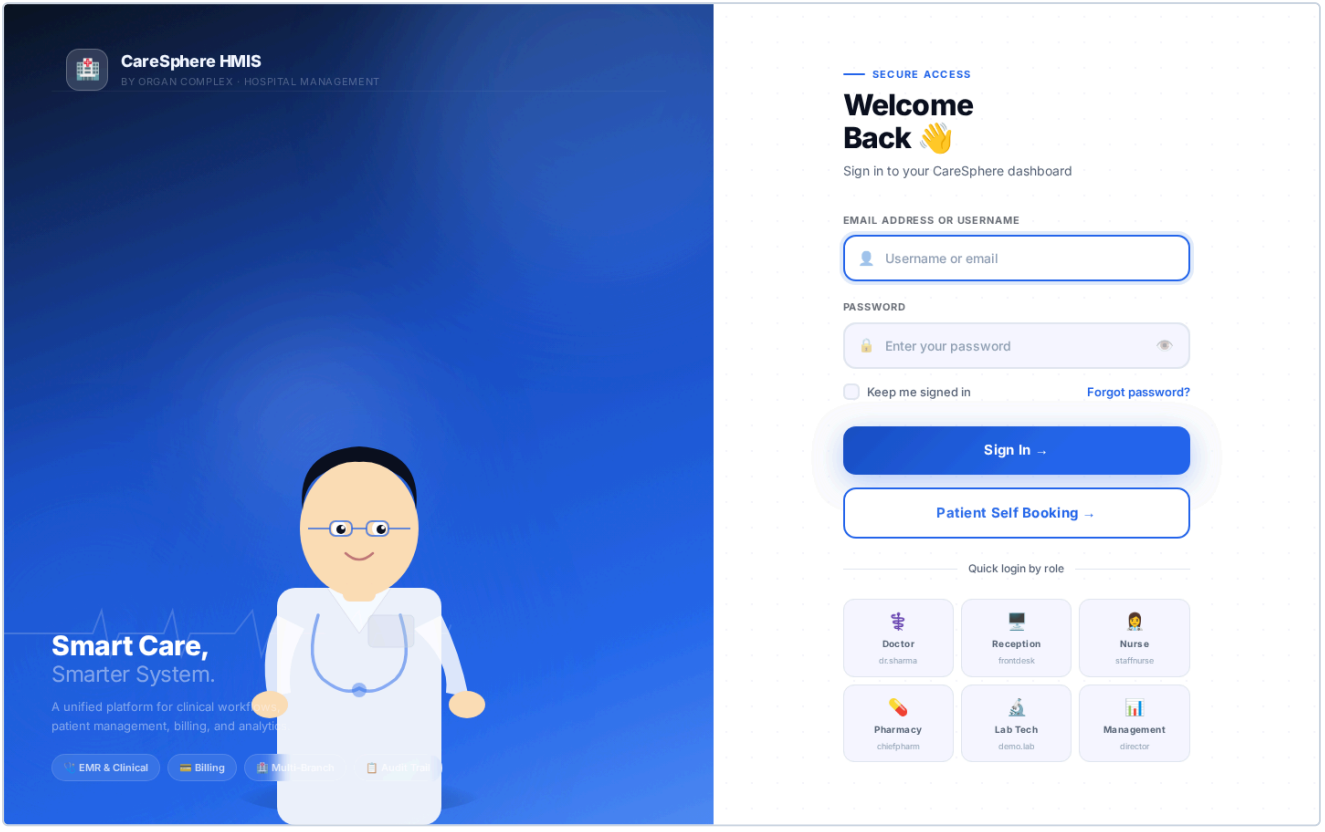



Figure: Sign-in page

## Switch role or facility, and sign out

- **Switch role:** click the role chip in the top bar (it shows your current role, for example "Doctor") and pick another of your roles. The sidebar changes at once.
- **Switch facility:** use the hospital name drop-down in the top bar.
- **Switch station:** click the station chip in the top bar and pick another of your assigned desks.
- **Language:** use the language switcher in the top bar.
- **Sign out:** click the **Sign out** button at the bottom of the left sidebar. Always sign out on a shared computer.

## Password and account rules

| Rule | Setting |
|---|---|
| Wrong password 5 times in a row | Account locks for 30 minutes, then unlocks by itself |
| No activity on screen | Signed out automatically after 120 minutes (an admin can set 15, 30, 60, 120 or 480) |
| Forgotten password | Click **Forgot password?** on the sign-in page, or ask an admin to reset it (chapter 12) |
| Deactivated account | Signed out with the message "Your account has been deactivated"; contact the administrator |

## Roles

A user can hold several roles. Each role has its own menu and permissions. The main roles:

| Area | Role | What it is for |
|---|---|---|
| Administration | Super Admin | Everything, across all facilities, including setup and security |
| Administration | Admin | Everything within the facility: users, masters, tariffs, settings |
| Administration | Management | Dashboards, KPIs and reports; read-only on clinical work |
| Administration | BI Dashboard Viewer | Analytics dashboards only |
| Reception | Front Desk | Patient registration, appointments, queue, OP billing |
| Reception | Admission Desk / ADT | Admissions, bed allocation, transfers, discharge |

| Area | Role | What it is for |
|---|---|---|
| Clinical | Doctor | Consultations, orders, prescriptions, discharge summaries |
| Nursing | Nurse, Senior Nurse, Ward In-charge, Nursing Supervisor | Ward work, vitals, medication, nursing notes |
| Nursing | Maternity, NICU, ICU, Paediatrics Nurse | The same, for that specialty unit |
| Laboratory | Lab Technician, Pathologist | Samples, results; the pathologist verifies reports |
| Radiology | Radiology Technician, Radiologist | Imaging orders and reports |
| Pharmacy | Pharmacy In-charge | Stock, purchasing, approvals, dispensing, pharmacy admin, and patient booking |
| Pharmacy | Dispensing Pharmacist | Dispensing and taking payment for prescriptions only |
| Pharmacy | Pharmacist, Store Manager, Store Admin | Pharmacy and general stores |
| Billing | Finance, IPD Billing, Insurance / TPA Executive | Billing, finalisation, deposits, insurance claims |
| Support | HR Manager, Purchase Manager, CSSD, Dietitian, Kitchen, Housekeeping, Linen, Biomedical Engineer, Blood Bank Technician | Their own department screens |

An admin gives roles to users in **Admin & Setup → User Management** (chapter 12).

# 2. Reception

Reception registers each patient once, which gives them a permanent hospital number (UHID), then books their visit and places them in the doctor's queue. Roles: **Front Desk**, **Admission Desk**, Admin.

## 2.1 Patient registration (new outpatient)

Menu: **Patients → Register Patient (OPD)**

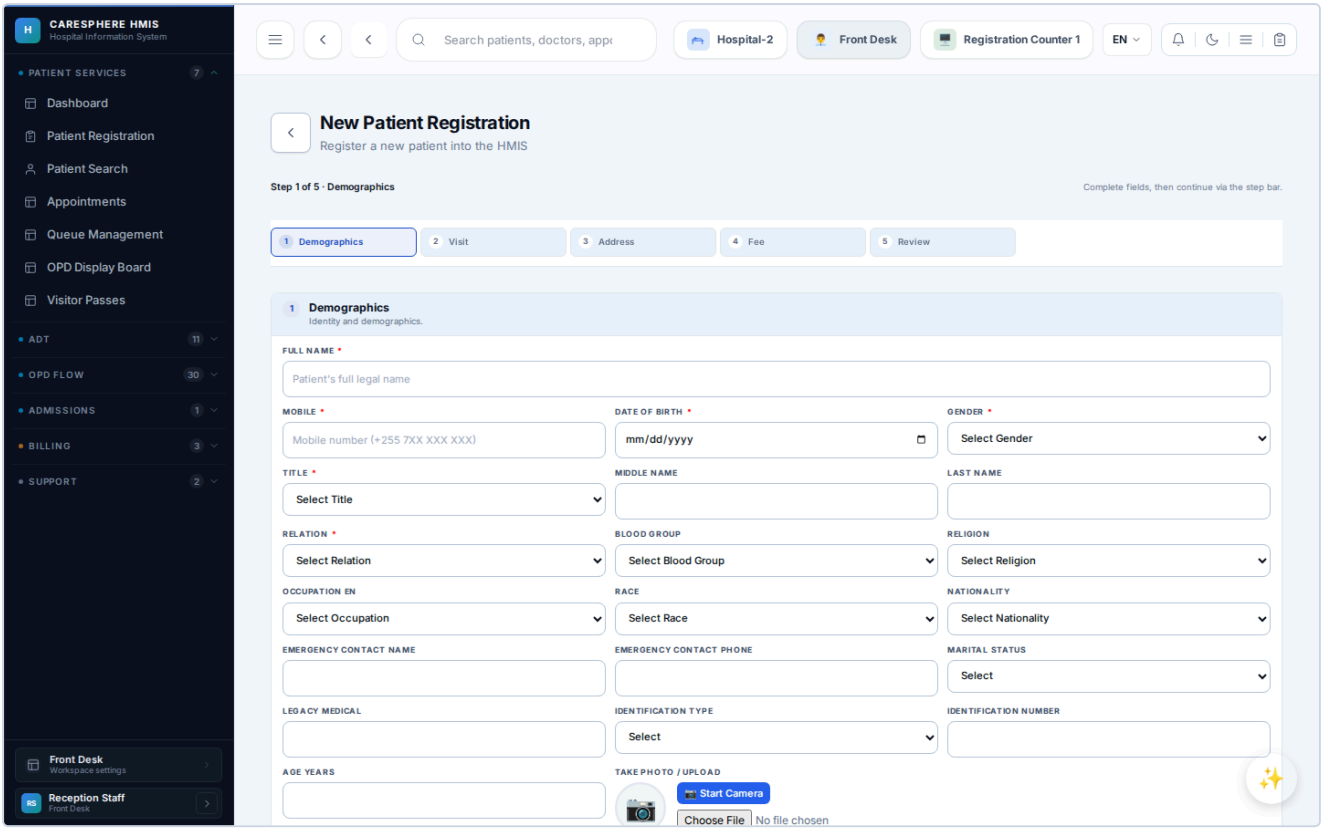



Figure: New Patient Registration, step 1 of 5: Demographics

1. On **Registration Type**, choose **Non Entitled** for a normal civilian patient. (**Entitled** is for service-persons and their dependants and adds a Service Details section.)
2. **Demographics:** enter Title, First / Middle / Last name, Gender, and Date of birth (or tick that the date is unknown and enter the age in years). Enter Mobile in Tanzanian format, for example **+255 712 345 678** or **0712 345 678**.
3. Add the optional details as needed: Relation, Blood group, Marital status, Religion, Occupation, Nationality (defaults to Tanzanian), and the emergency contact name and phone.
4. **Identification:** choose the ID type (NIDA, Passport, Voter ID, Driving Licence, TIN Certificate, Birth Certificate) and enter its number.
5. **Address:** enter the street address and choose the **Region**. Postal code is optional.
6. **Current visit details:** choose the payer (cash, corporate or insurance) and the bill category.

7. **Registration fee:** the fee from the tariff is filled in and can be edited. With an amount above 0, choose the payment mode and it is collected when you register.
8. **Visit Booking (optional):** pick Department, Doctor and Slot, then click **Add Visit** to book the OPD visit now. You can also register now and book later.
9. Check the **Review** panel and click **Register Patient & Generate UHID**.
10. On the success screen, use **Print registration form & receipt**, **Reprint ID Card** or **Print Workbench**, or **Register another patient**.

Before registering, always search the patient in **Patient Search** by name or mobile. The system does not warn about duplicates, so a returning patient registered twice ends up with two UHIDs.

## 2.2 Emergency registration

Menu: **OPD Flow → Emergency Registration**

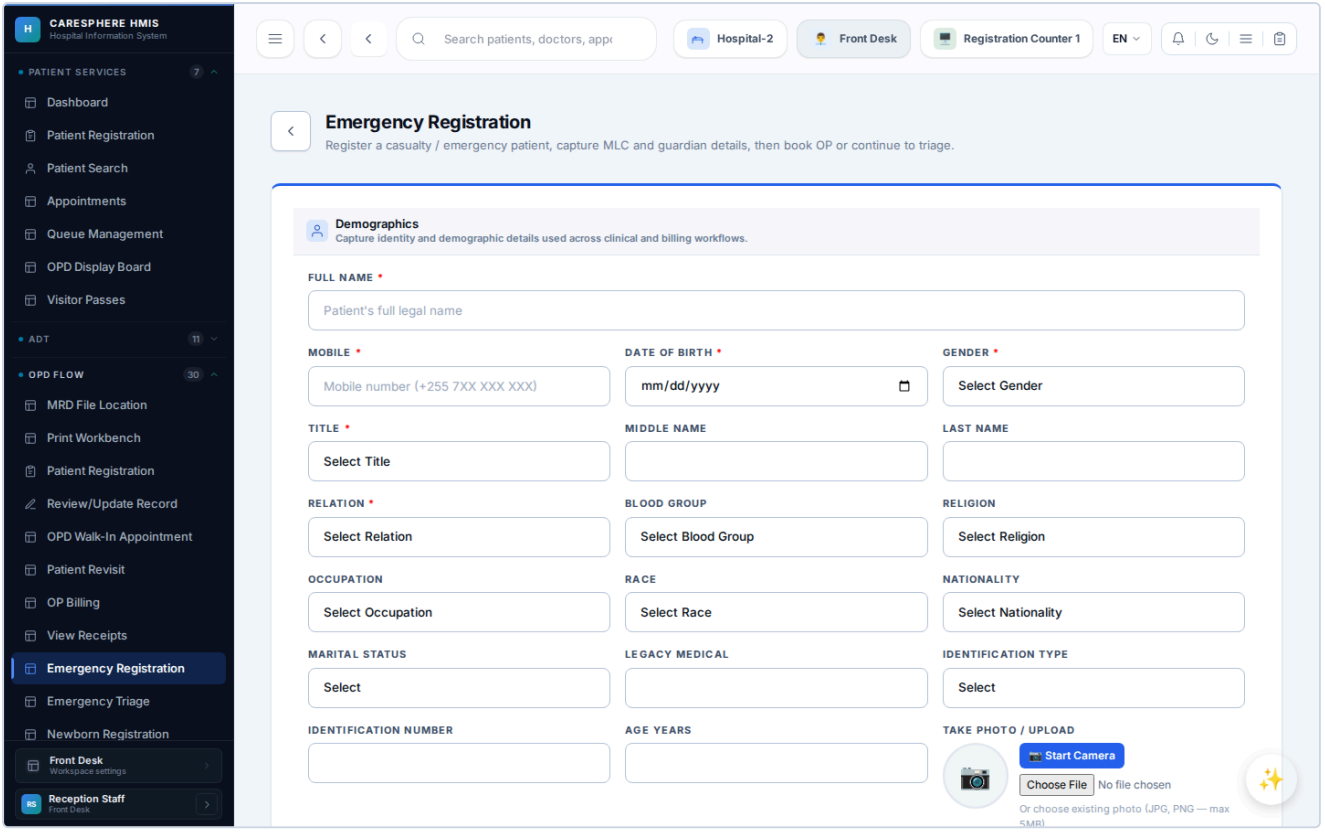



Figure: Emergency Registration

Use this for casualty patients who need care before full paperwork. Only the essentials are required; complete the record later from **Review/Update Record**.

1. Enter the patient's name (or a temporary name if unknown), gender, approximate age, and mobile if available.
2. **MLC / Brought By:** record whether it is a medico-legal case, and who brought the patient and how they arrived.

3. **Guardian / Next of Kin:** this contact is required for emergency patients.
4. Choose how to save:
    - **Register Only**: creates the UHID; the patient goes to triage.
    - **Save & Book OP**: also books an emergency OPD visit. Select Department / Doctor / Slot and click **Add Visit** first.
    - **Save & Admit (IP)**: registers and opens the admission (chapter 6).
5. Continue with **OPD Flow → Emergency Triage** to record the triage category and vitals.

## 2.3 Appointments

Menu: **Patients → Appointments** (calendar) and **Book Appointment**

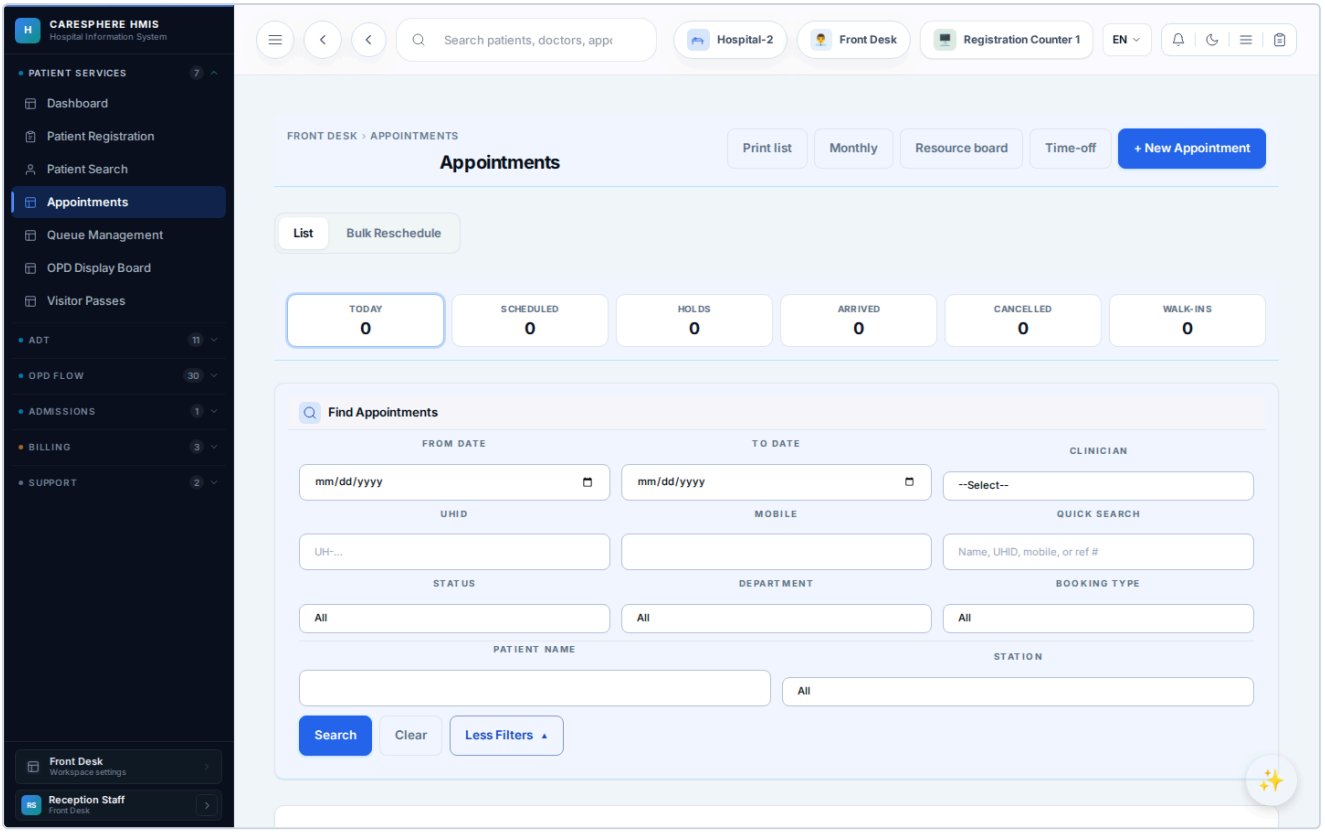



Figure: Appointments list with today's counts and filters

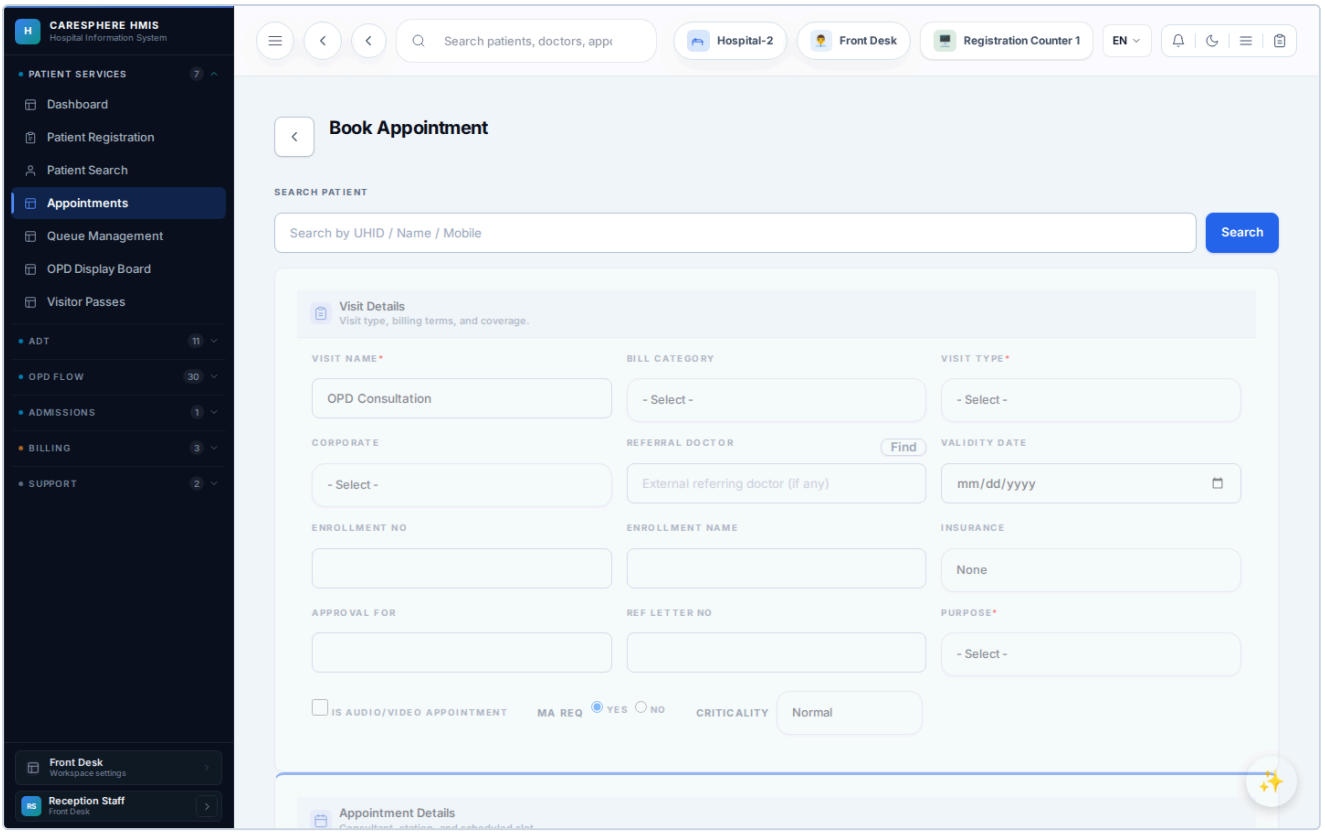



Figure: Book Appointment form

1. Click **Book Appointment** (or **Quick book** on the calendar) and search the patient by name, UHID or mobile.
2. Choose the department, doctor, visit type and purpose, then the date and time slot. Free slots come from the doctor's schedule (chapter 4).
3. Set the bill category, and the corporate or insurance details if the patient is not paying cash. Tick **Walk-in** for patients who are already at the desk. Tick **Video** for a teleconsultation.
4. Click **Save**. The patient receives a reminder if messaging is set up.

On the calendar, open an appointment to **Mark arrived**, **Reschedule**, **Cancel**, **Resend reminder** or **Collect payment**. Recurring bookings can be cancelled as a series. Patients can also book themselves at the self-service kiosk.

## 2.4 Queue

Menu: **Patients → Queue Management**; the waiting-area screen is **OPD Display Board**

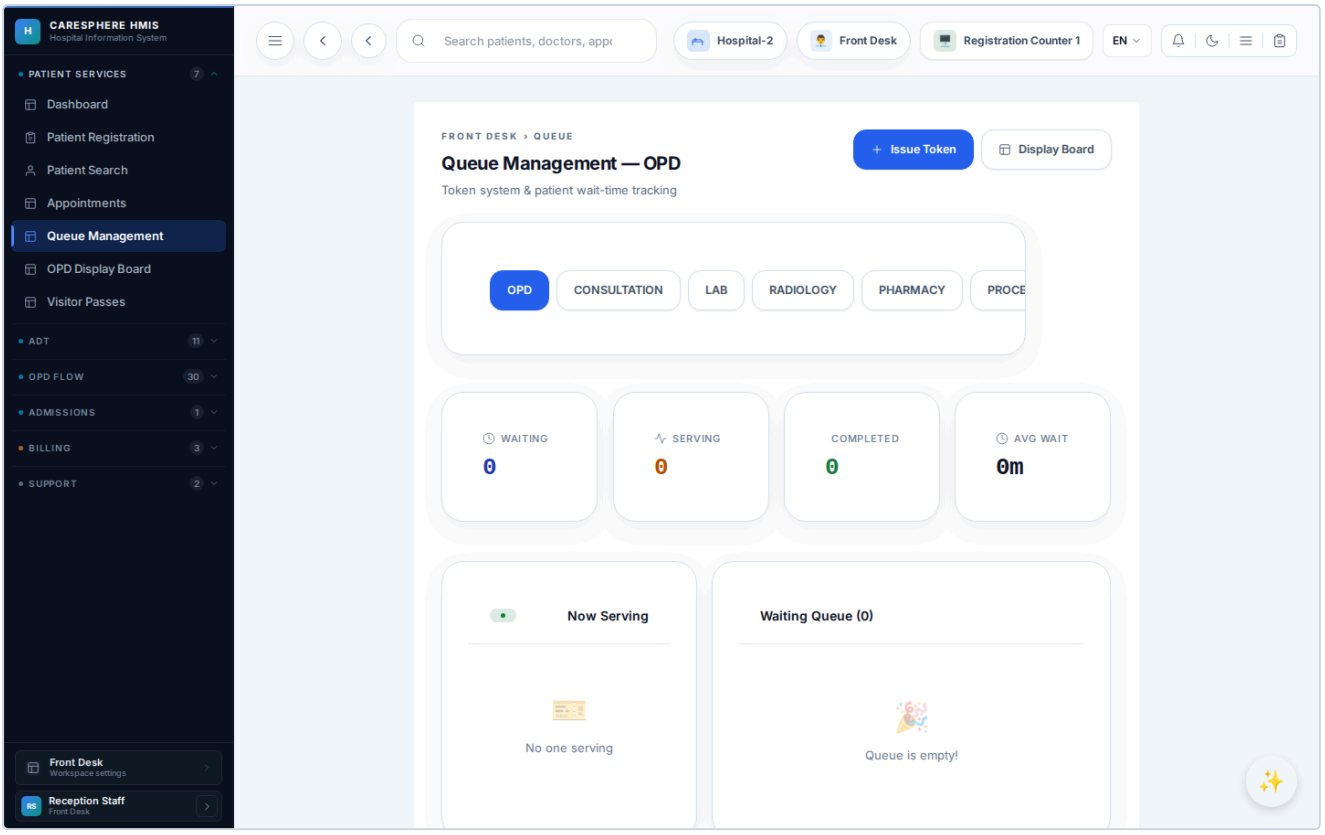



Figure: Queue Management

When a patient is marked arrived, they get a token in their doctor's queue.

| Button | What it does |
|---|---|
| **Call** | Calls the token. It shows and is announced on the OPD Display Board |
| **Serve** | Marks the patient as being seen |
| **Start Consultation** | Opens the consultation screen for the doctor (chapter 4) |
| **Complete** | Ends the visit and removes the token from the queue |
| **Skip** | Moves a patient who is not present to the end of the queue |

Doctors see their own list under **My Queue**. Open **OPD Display Board** on a TV in the waiting area.

# 3. Patient Management

Every patient has one electronic record (EMR), found by name, UHID or mobile, which holds all their visits, results, medicines and bills.

## 3.1 Patient search

Menu: **Patients → Patient Search**

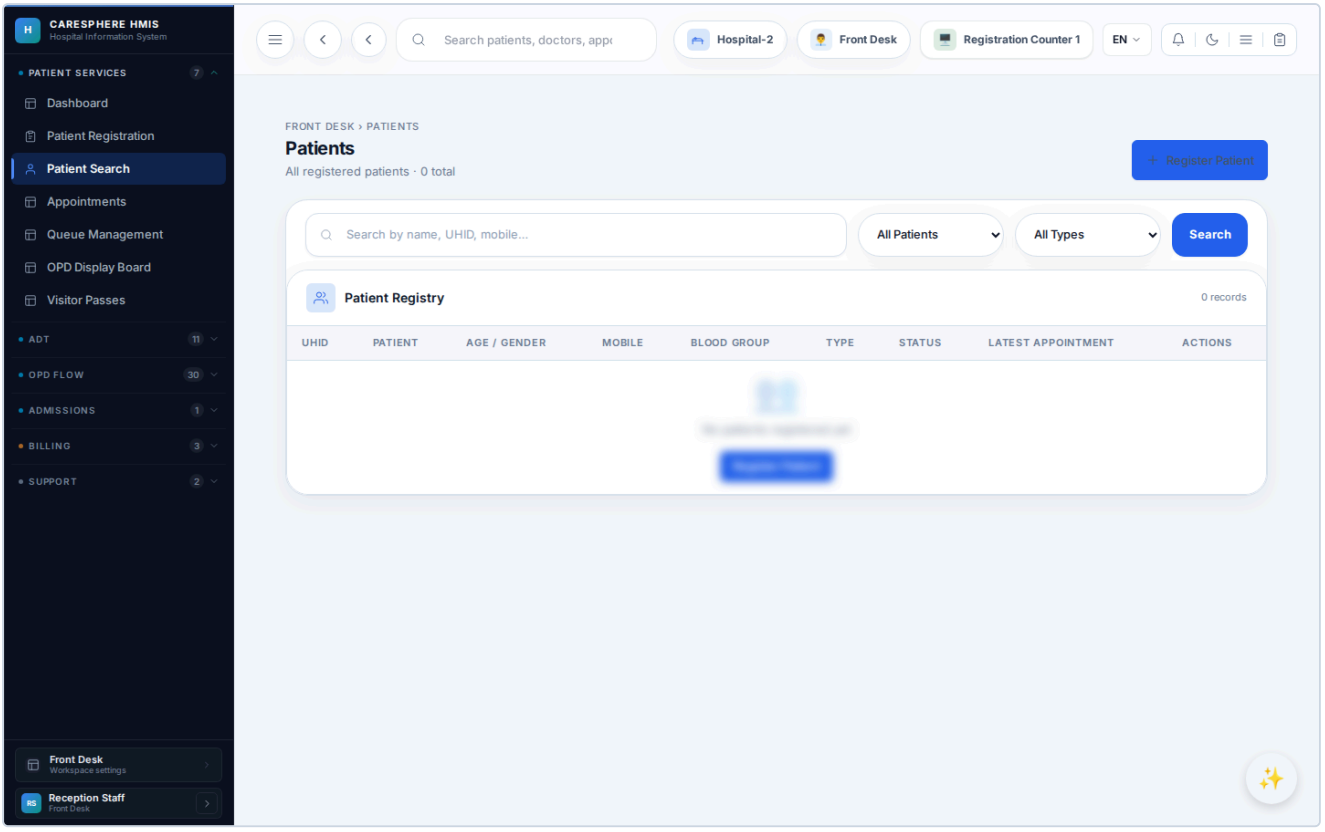



Figure: Patient Search

1. Type a name, UHID or mobile number in **Search by name, UHID, mobile…**. Results appear as you type.
2. Click the patient to open their record.
3. To correct personal details (name, mobile, address, ID), use **Edit** on the record or **OPD Flow → Review/Update Record**.
4. To print the patient ID card or labels, use **Print Workbench**.

## 3.2 The patient record

The record opens on tabs. Each role sees the tabs it needs: a doctor sees the clinical tabs, a lab technician sees Summary and Lab Results.

| Tab | What it shows |
|---|---|
| Summary | Demographics, allergies, alerts, current visit or admission, latest vitals |
| Consultation | Past consultations with diagnosis and notes |
| Orders | Lab, radiology and procedure orders, with their status |
| Lab Results | Each test with status, report date and results |
| Radiology Results | Each study with status, release date and impression |
| Procedures | Ordered and scheduled procedures |
| Medications | Prescriptions and medicines given |
| Documents | Uploaded files: referral letters, consent forms, old reports |
| Billing | The patient's bills and payments |
| Follow-up | Planned follow-up visits |
| History | Past medical, surgical, family and social history |

## 3.3 Clinical summary

Menu: **Patients → Clinical Summary**

Gives a one-page overview of a patient for handover or a quick review.

1. Search for the patient, or open it from the patient record.
2. The page shows an AI-written summary of the patient's recent care, with cards for recent vitals, recent lab results and upcoming follow-ups.
3. Type a question in the box (for example "What changed since the last visit?") to get a focused answer.

The AI summary is an aid only. Always check it against the record before acting on it.

## 3.4 Medical records (MRD)

Menu: **MRD → Patient Medical Records** (Medical Records Department)

The Medical Records Department looks after the official patient file:

- **Patient Medical Records:** find a patient's complete file and its history.
- **File locations:** track where a paper file is: in the records room or issued to a ward or clinic.
- **Coding:** assign diagnosis codes after discharge, for statistics and insurance.
- **Deficiencies:** list discharged files missing a signature, summary or form, so they can be completed.

- **Certificates:** issue medical, fitness and death certificates.
- **Archives:** archive old files, and retrieve them when needed.
- **Upload Documents** (OPD Flow menu): scan and attach paper documents to the patient record.

# 4. Doctor / Clinical

The doctor sees the queue, opens a consultation, and records vitals, diagnosis, orders and medicines on one screen. Orders flow on their own to the lab, radiology and pharmacy. Role: **Doctor**.

## 4.1 Doctor dashboard

Menu: **Home** → **Dashboard** (or **OPD & Consultation** → **Dashboard**)

The dashboard is the doctor's home screen, with today's patients and pending work. Click a patient to open their record or start their consultation.

## 4.2 Consultation

Menu: **OPD & Consultation** → **Consultations / EMR**, or **Start Consultation** from the queue

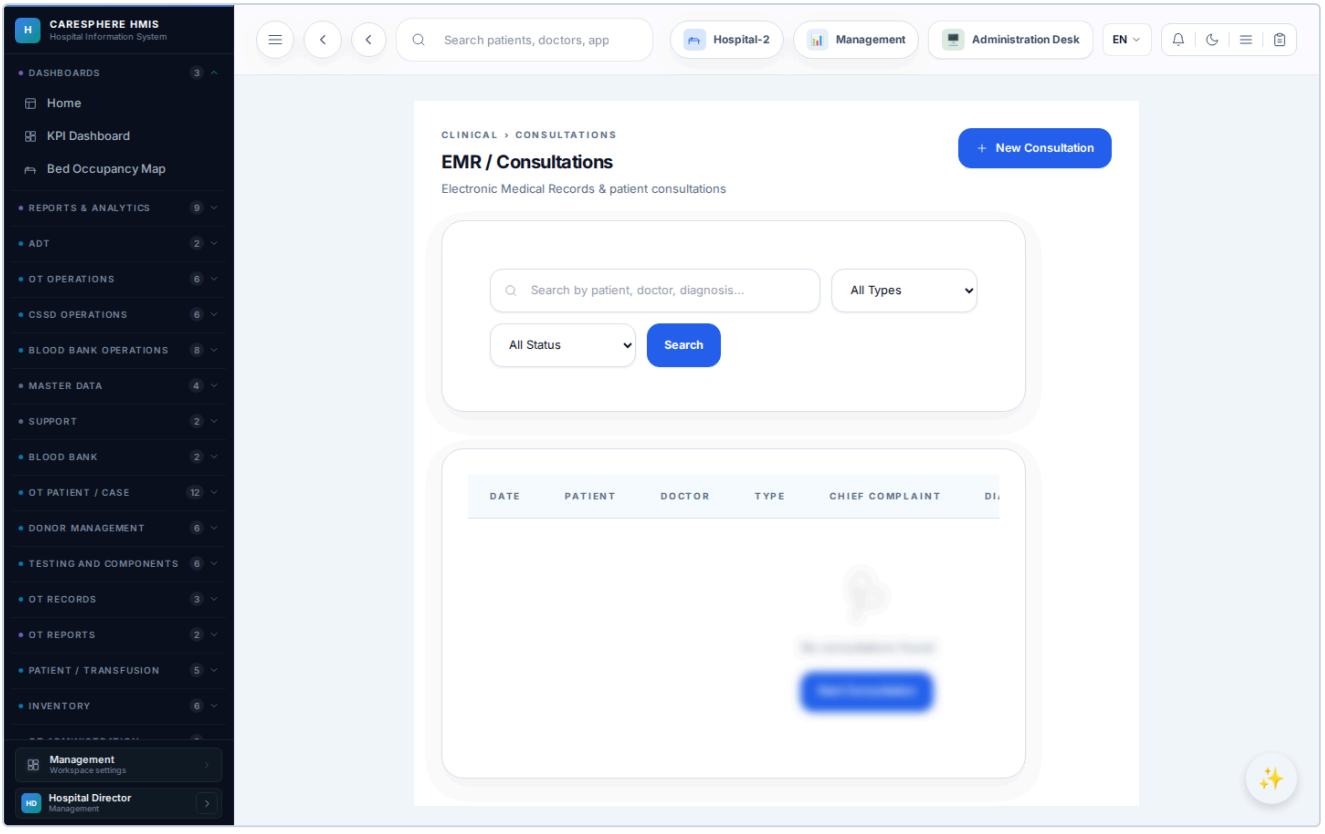



Figure: Consultations list

1. Open the patient from **My Queue** and click **Start Consultation**. Patient and Doctor are filled in.
2. **Vitals:** enter Blood Pressure, Pulse Rate, Temperature, $SpO_2$, Respiratory Rate, Weight and Height. BMI is calculated.
3. **Consultation Details:** type the presenting complaint and symptoms, examination findings, and the confirmed diagnosis.

4. **History & Background:** past medical, surgical, family, drug and allergy history.
5. **Clinical Coding:** search a diagnosis by words (for example "Fever") and pick the ICD-10 code (for example I21.9). **Browse SNOMED** is available for detailed terms.
6. **Orders & Prescription:**
    - Click ➕ **Place Order** for lab tests, radiology, procedures or referrals. They go to that department's worklist at once.
    - Under the medicines grid, **Select medicine**, then set Dose, Frequency, Duration and Instructions for each drug. The system warns about drug interactions and allergies.
    - Click **Save Orders**.
7. Click **Save Consultation**. Use **Print** for the prescription and consultation note.
8. To book the next visit, add a **Follow-up** from the patient record.

The consultation screen has an AI assistant panel that can suggest differential diagnoses and summarise history. Use it as support only.

## 4.3 Prescription

Menu: **OPD & Consultation → Prescriptions**

- Every medicine saved in a consultation becomes a prescription and appears in the pharmacy's **Prescription Queue** (chapter 8).
- The Prescriptions list shows each prescription with patient, doctor, date, medicines and status (pending, partly dispensed, dispensed). Filter by date, or choose **All Dates**.
- Open a prescription to see each drug, the batch given, and to **Print** it.
- To change a prescription, edit the consultation's medicines before the pharmacy dispenses them.

## 4.4 Doctor schedule

Menu: **OPD & Consultation → Doctor Schedule**

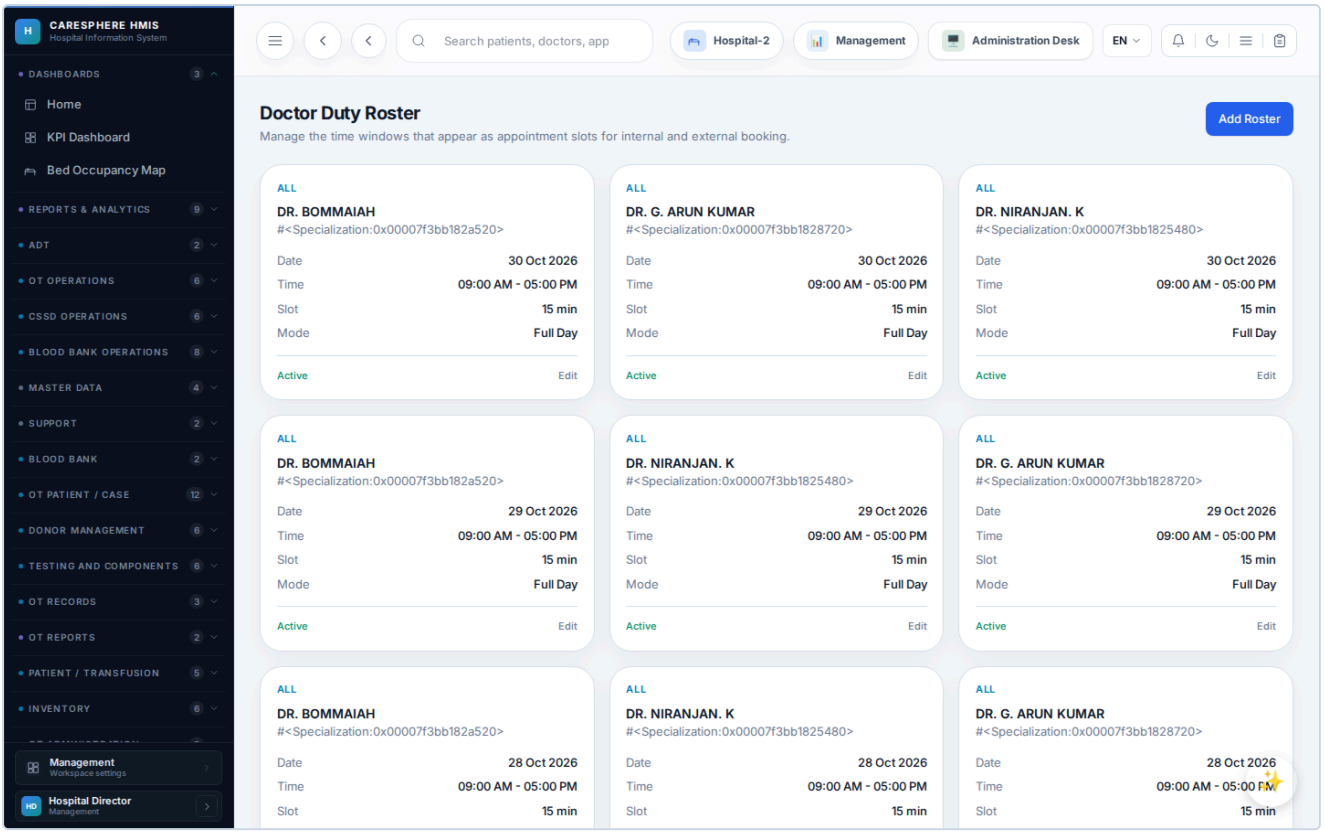



Figure: Doctor Schedule (duty roster)

The schedule creates the appointment slots that reception books into.

1. Click **Add Roster**.
2. Choose the **Doctor** and the **Roster date**, and use **Repeat On** to repeat it on chosen weekdays.
3. Set the **Start time**, **End time** and **Slot minutes** (for example 15 minutes per patient).
4. Choose the **Schedule mode** (**Full day, Morning, Evening or Custom) and the Booking scope (All, Internal or External: whether the slots are for staff booking, outside or online booking, or both**).
5. Tick **Active** and save. Untick **Active** to block a day when the doctor is away.

Nurses' duty rosters are under **IPD & Wards → Nurse Schedule** in the same way.

## 4.5 Teleconsultation

Menu: **Patients → Teleconsultations**

1. Book an appointment with **Video** ticked (chapter 2.3). The teleconsultation appears in the list with its scheduled time.
2. Open it and **Copy** the **Meeting Link** to send to the patient, if it was not sent automatically.
3. Confirm the patient's **Recording Consent**, then join the call when it shows **Ready to Start**.

4. During the call, record the Chief Complaint, Clinical Notes, Diagnosis and Instructions for Patient.
5. Click **End Session & Record Notes**. If the session does not happen, use **Cancel Session** and give a reason.

# 5. Nursing

Nurses work from the ward they are assigned to. They record vitals, give medicines against the medication chart (MAR), write notes, request ward stock, and hand over each shift. Specialty units (maternity, labour room, NICU) have their own boards. Roles: **Nurse** and the specialty nurse roles.

## 5.1 Nursing dashboard

Menu: **Nursing** → **Nursing Dashboard**

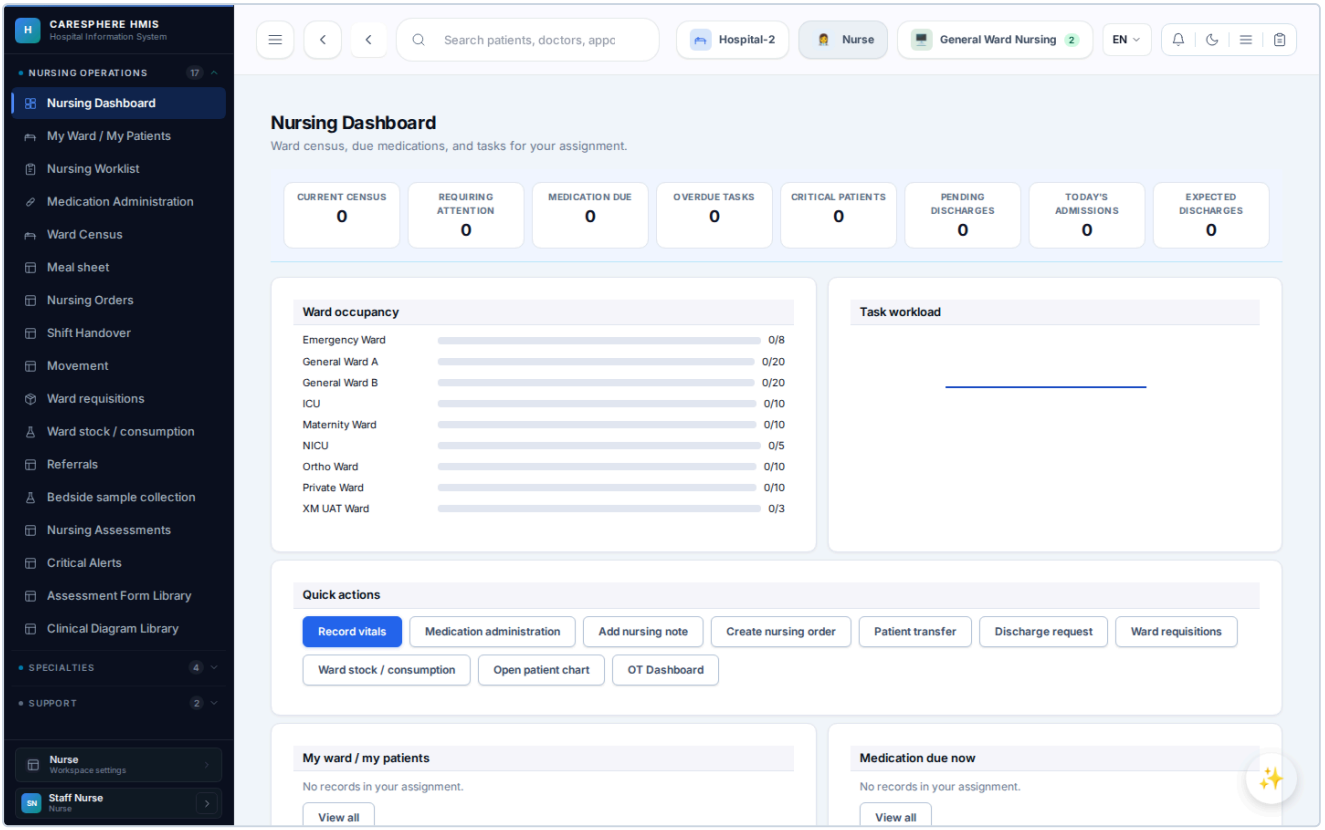



Figure: Nursing Dashboard with KPIs, ward occupancy and quick actions

The dashboard shows the ward census, medicines due, and tasks for your assignment, with nursing KPIs and **Quick actions** at the top. From a patient row, the actions are:

| Action | Use it to |
|---|---|
| **Record vitals** | Enter temperature, pulse, BP, respiration, $SpO_2$, pain score, intake and output |
| **Medication administration** | Open the MAR and record each dose |
| **Add nursing note** | Write a shift or event note |
| **Create nursing order** | Request a nursing task (dressing, catheter care, positioning) |
| **Patient transfer** | Start a bed or ward transfer (chapter 6) |

| Action | Use it to |
|---|---|
| **Discharge request** | Tell the doctor and billing that discharge is being prepared |
| **Open patient chart / Open full EMR** | See the full record |

## 5.2 Ward work

**Ward census** (Nursing → Ward census) shows every bed in your wards with its status: occupied, vacant, reserved, cleaning or blocked.

**Giving medicines (MAR):**

1. Open **Medication administration** for the patient. Doses due now are highlighted.
2. Check the patient, drug, dose, route and time.
3. Click **Administer**, then mark the dose **Given** or **Held**. A held dose needs a reason, for example "patient nil by mouth".
4. Click **Record Administration**. The dose is signed with your name and time.

**Ward requisitions** (Nursing → Ward requisitions): to get medicines or supplies for the ward from the store or pharmacy, click **New**, add the items and quantities, and submit. Track the request until it is issued.

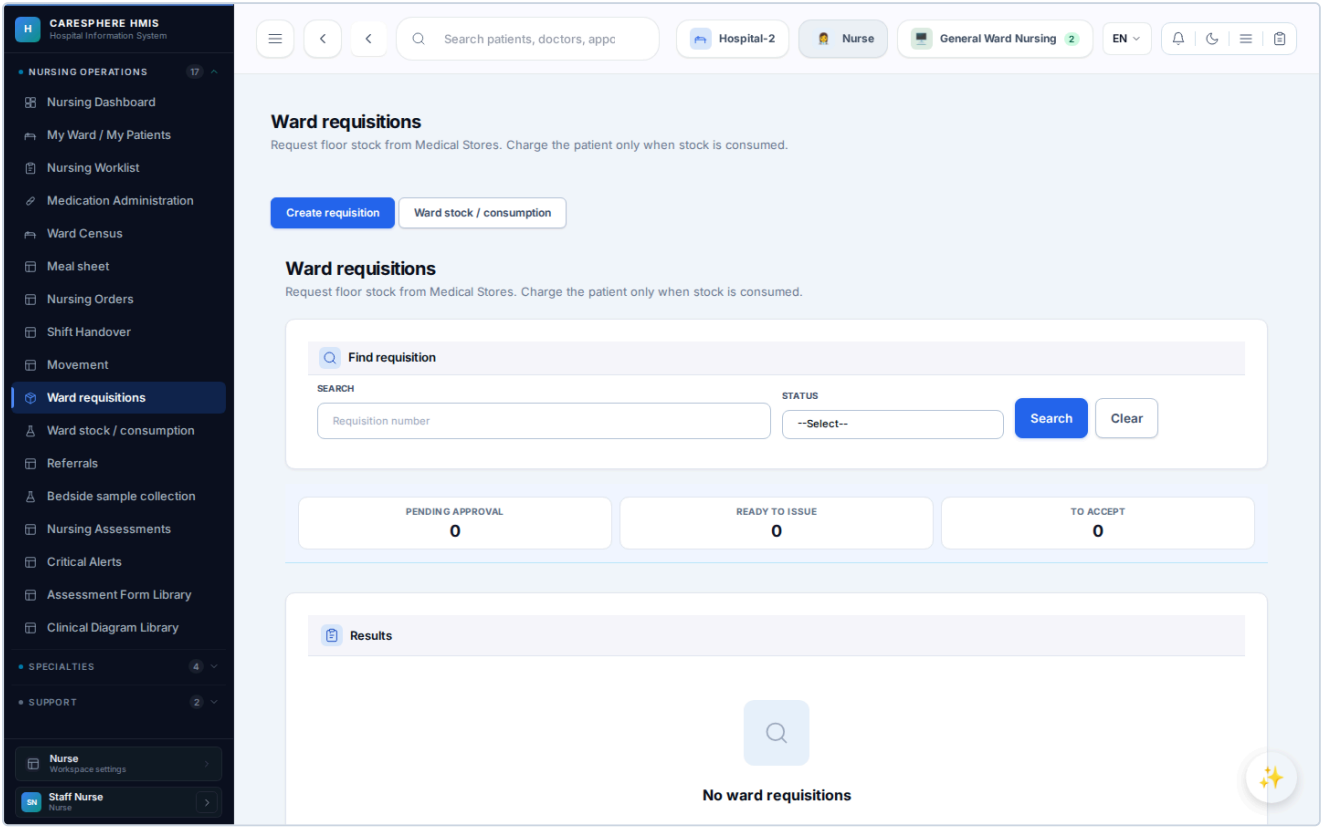



Figure: Ward requisitions

**Bedside sample collection:** collect samples for lab orders at the bedside and mark them collected, so the lab can receive them (chapter 7).

**Shift handover:** use **Handovers** to write an SBAR handover (Situation, Background, Assessment, Recommendation) for each patient before the shift ends.

**Meal sheet:** record each meal as **Record served** or **Record refused**. **Print today's meal sheet** for the kitchen.

## 5.3 Maternity / ANC

Menu: **Nursing** → **Maternity & ANC** (also **ANC Worklist**, **High-Risk**, **Postnatal**)

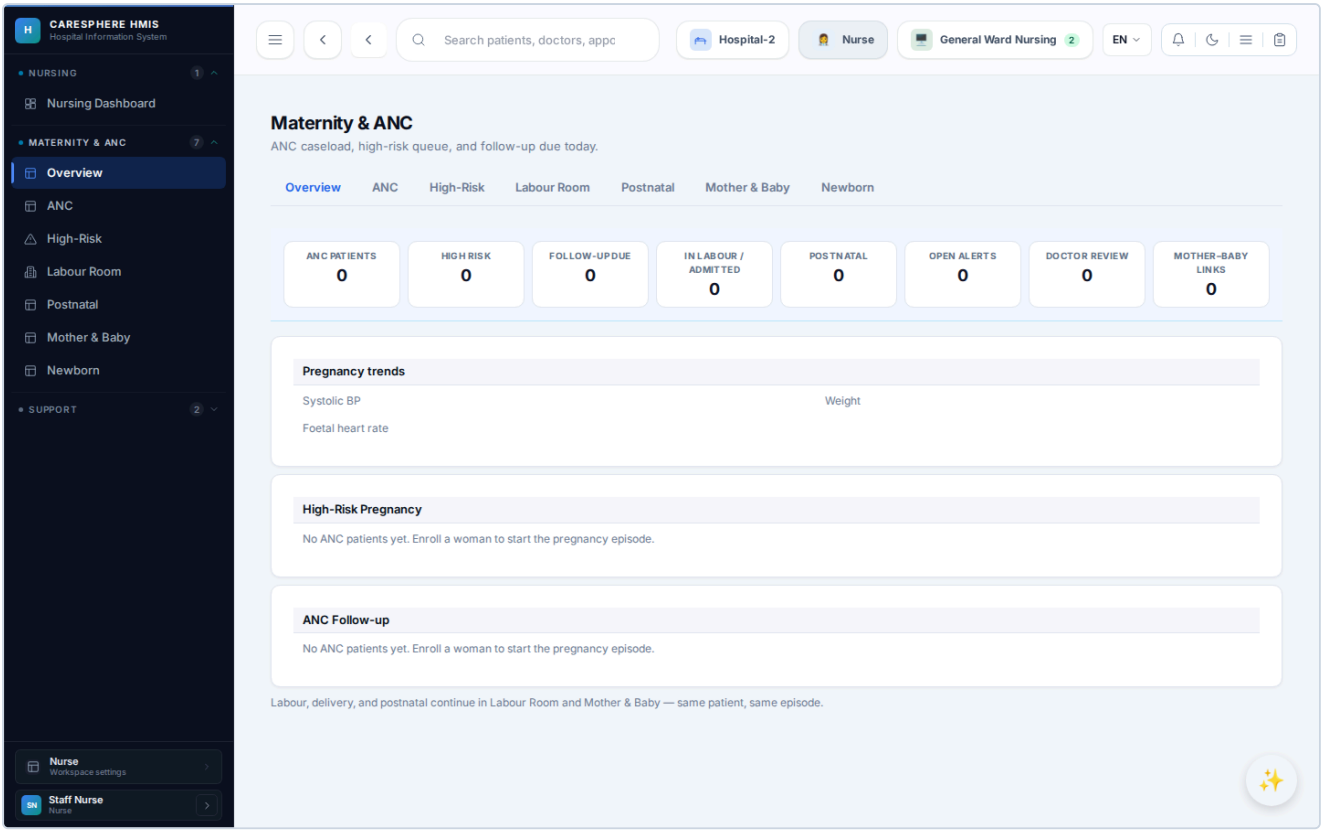



Figure: Maternity & ANC

1. **Enrol** a pregnant woman: create a pregnancy episode and enter the LMP. The system calculates the EDD and the gestational age.
2. At each antenatal visit, open her from the **ANC Worklist** and start an **ANC Assessment**.
3. Her record has tabs: Overview, ANC Visits, Assessments, Maternal vitals, Foetal monitoring (foetal heart, movement, fundal height, presentation), Investigations, Medications, Referrals, Notes, Follow-up and History.
4. Women flagged high-risk appear in the **High-Risk** queue for closer follow-up.
5. After delivery, the same pregnancy episode continues as **Postnatal**: delivery details, newborn, and the mother–baby link.

## 5.4 Labour room

Menu: **Nursing → Labour Room**

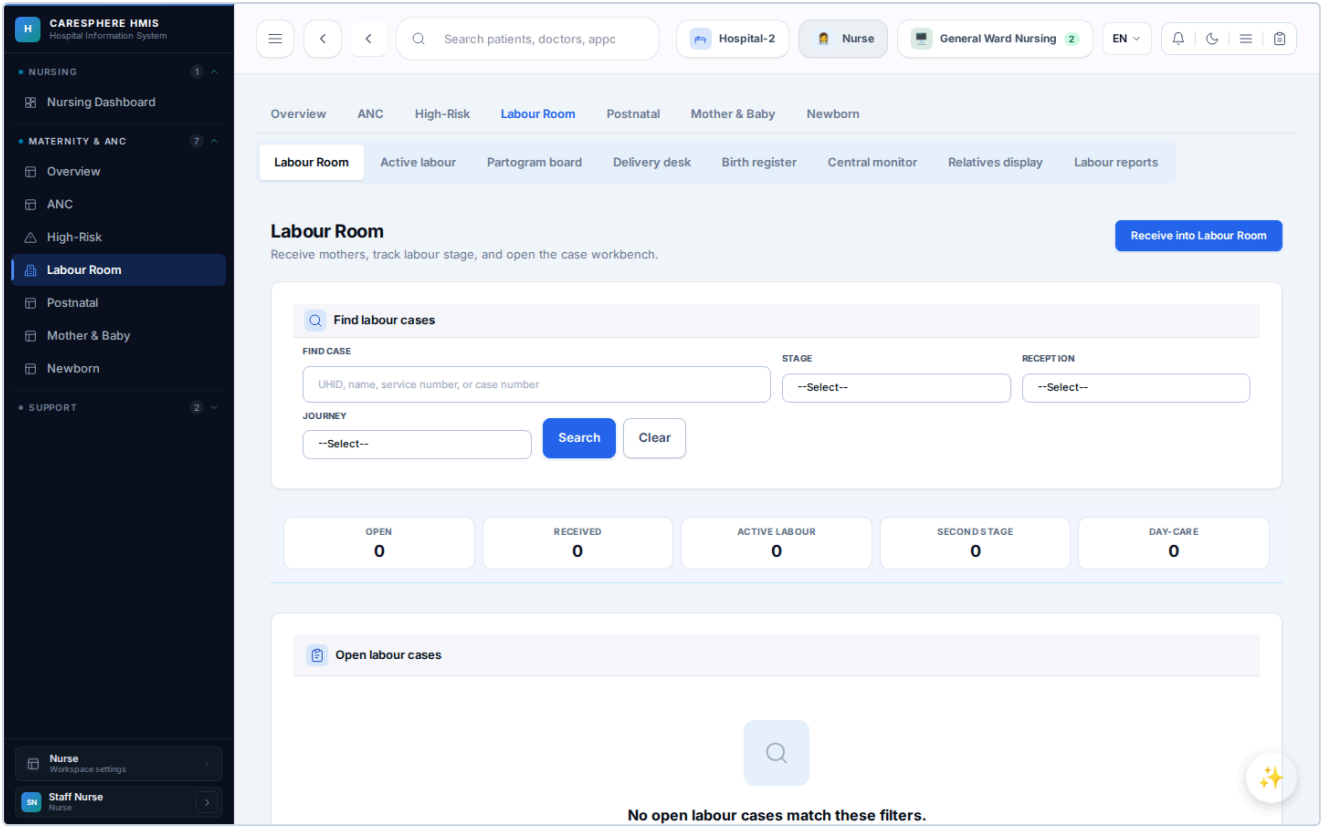



Figure: Labour Room board

1. **Receive into Labour Room:** find the mother, choose how she arrived (reception source), and open a labour room case.
2. The **Labour Room** board shows every mother and her labour stage. Open a case to work on it.
3. Record observations on the **Partogram**. The graph plots cervical dilation and contractions against WHO-style alert and action lines.
4. Use the order packs for urgent needs: Urgent laboratory, Radiology, Emergency OT, Urgent blood, Anaesthetist note, Prescribe, and Medication administration. A **Labour alert** can inform the duty doctors, stores, anaesthesia and paediatrics at once.
5. Record the delivery, with one entry per neonate for twins or more. Each birth goes into the **Birth register**.
6. **Central monitor** shows live vitals for all labouring mothers. **Labour reports** gives delivery statistics.

## 5.5 NICU

Menu: **Nursing → NICU monitor** (and the NICU board)

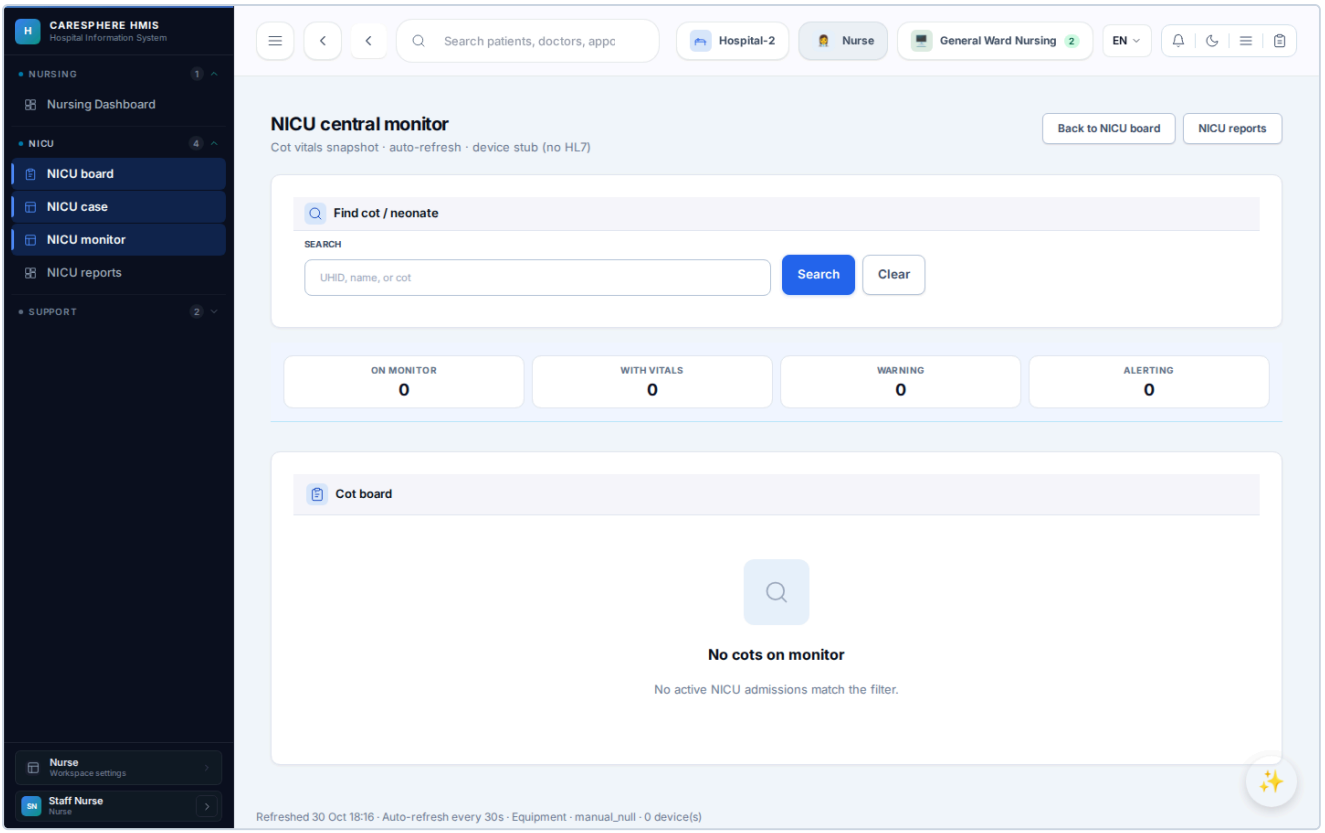



Figure: NICU central monitor

- The **NICU board** lists every neonate with cot number, acuity, and the link to the mother.
- Open a case to record observations and use the order packs: Urgent lab, Urgent radiology, Referral, Blood request, Prescribe, MAR and Clinical chart.
- The **NICU central monitor** shows a vitals snapshot of every cot and refreshes itself.
- **NICU reports** gives unit statistics.

ICU and Paediatrics have similar boards: **ICU Charts** and **Paediatrics board**.

# 6. Inpatient (IPD)

An inpatient stay runs from admission, with a bed and a deposit, through transfers, to a discharge that is cleared by nursing, doctors and billing. Roles: **Admission Desk / ADT**, **Doctor**, **Nurse**, **IPD Billing**.

## 6.1 Admission

Menu: **IPD & Wards → Admissions**, or **Admit** from a consultation or emergency visit

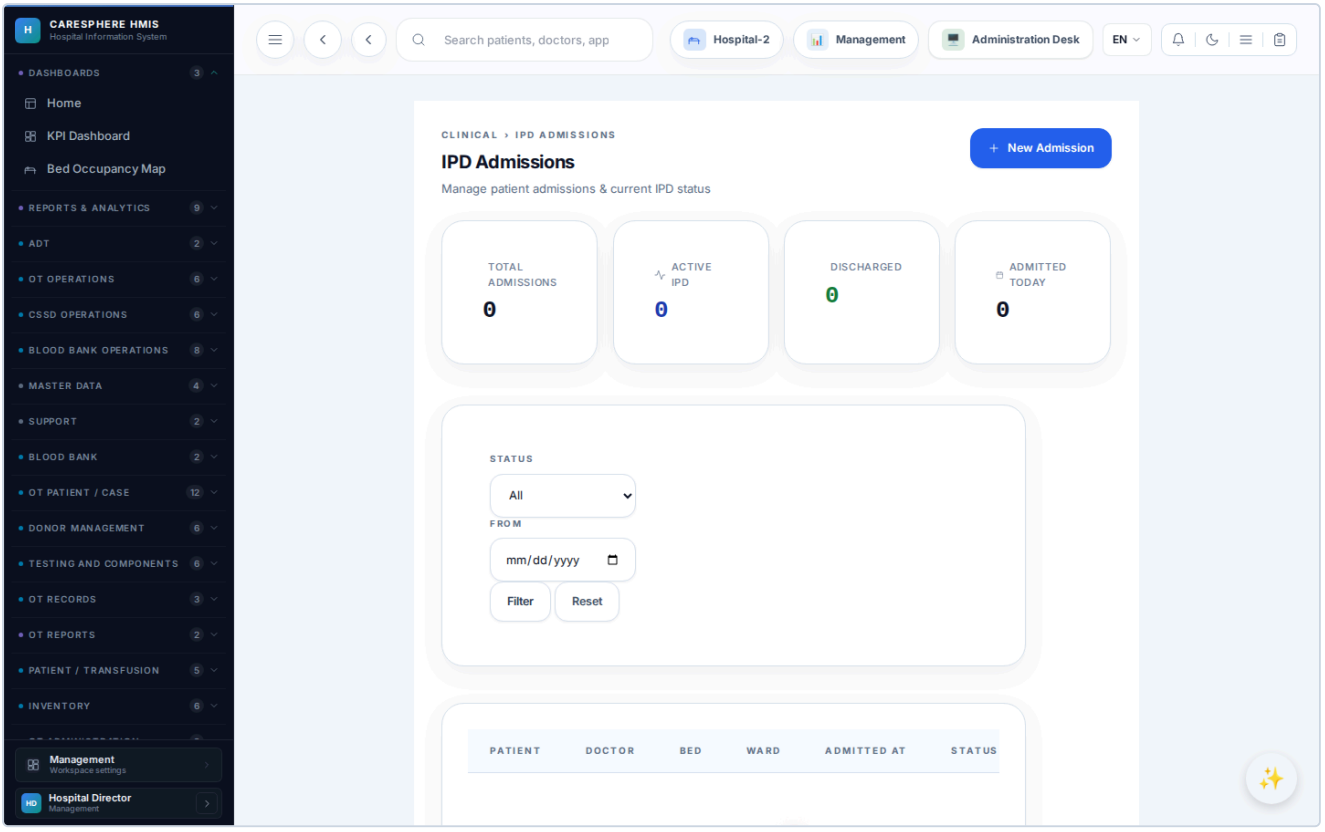



Figure: IPD Admissions

1. Click **New admission** and search the patient. When admitted from a consultation or emergency, the patient and doctor are filled in.
2. **Admission Type:** choose Planned, Emergency or Referred, and the urgency level.
3. **Clinical Details:** choose the **Attending Doctor** and enter the **Admission Reason / Chief Complaint**.
4. **Bed Assignment:** pick a ward and an **Available** bed.
5. **Payer:** for corporate or insurance patients, choose the corporate, TPA and insurance plan. Set the credit limit and any discount.
6. Enter the **Initial Deposit (TSh)** if the patient is paying one, and save. The deposit receipt prints, and the bed becomes occupied.

The admission page then shows Admission Details, Care Plan, Clinical Pathways, IPD Charges, Interim Billing, the risk score and days admitted. Use **Admission Workbench** (ADT menu) to see all current admissions in one list.

## 6.2 Bed management and bed map

Menu: **IPD & Wards → Bed Management**; **Home → Bed Occupancy Map**

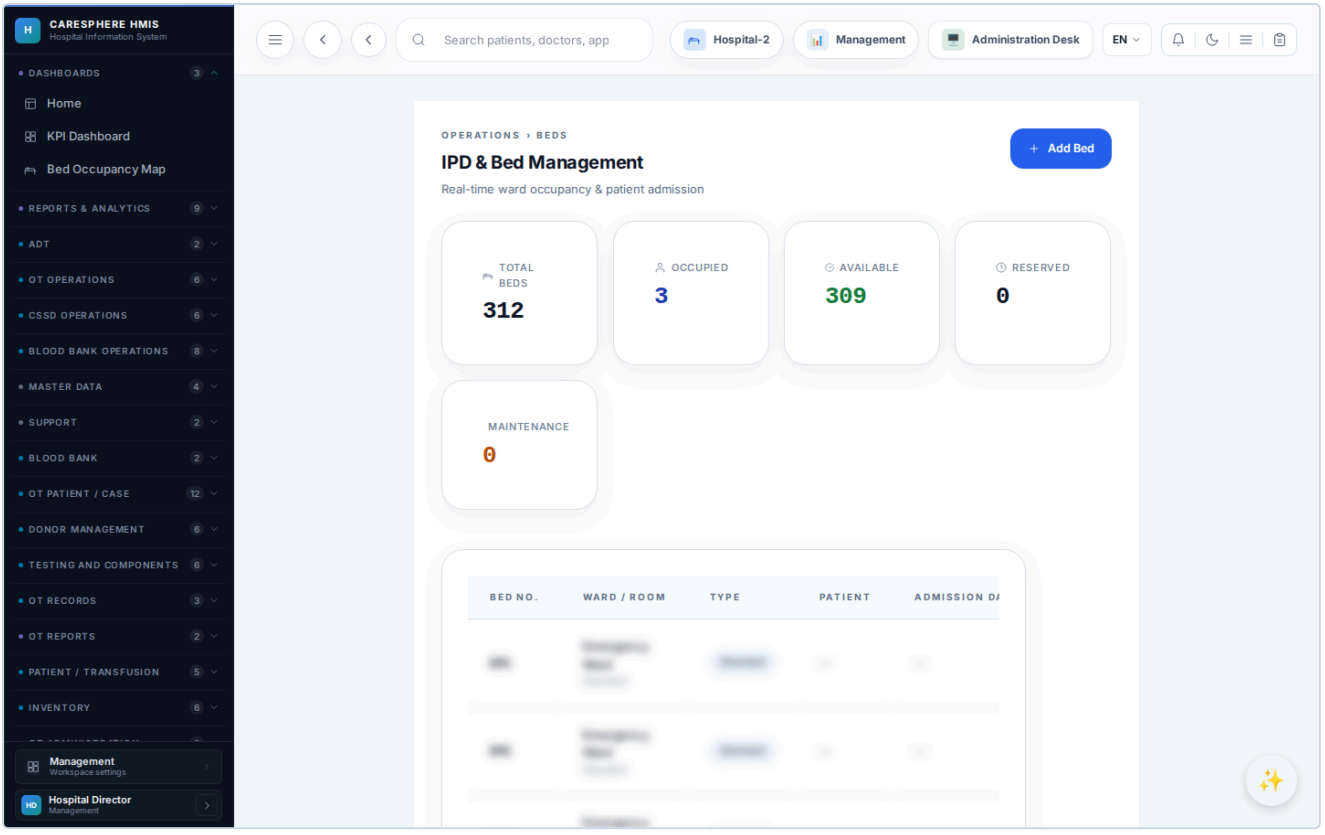



Figure: Bed Management

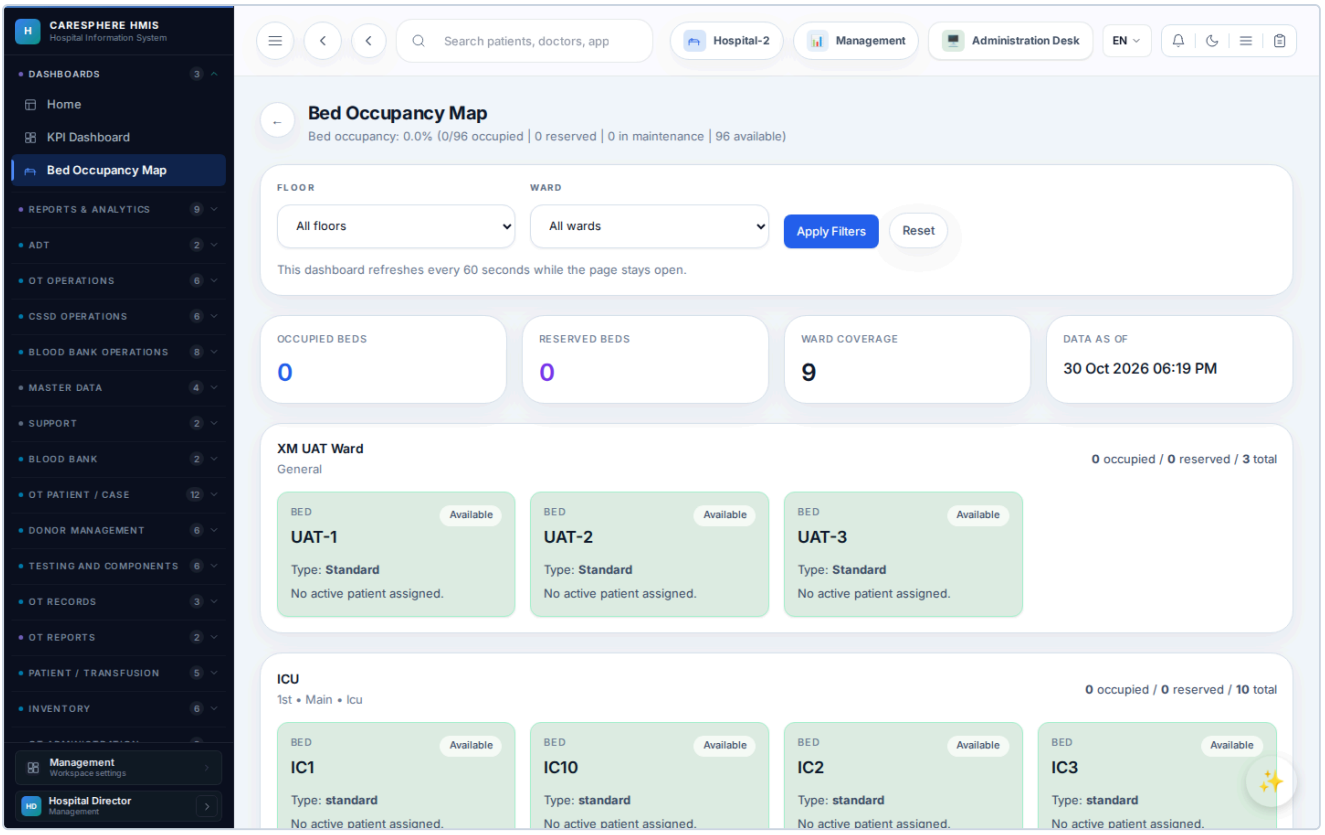



Figure: Bed Occupancy Map

- **Bed Management** lists every bed by ward or room, type and status, with the patient and admission date. Row actions: **Assign**, **Transfer**, **Discharge**, **Edit**. Admins use **Add Bed** to set up new beds.
- A bed is **Available**, **Occupied**, **Reserved** or under **Maintenance**. The map also shows beds on hold, being cleaned, or blocked.
- The **Bed Occupancy Map** shows every ward as a grid of coloured beds, so free beds are easy to spot. Click a bed to see who is in it.

## 6.3 Transfers

Menu: **IPD & Wards → Bed Transfers** (ADT: **Transfers**)

1. Click **Start bed transfer** (or **Transfer** on a bed row). Choose the new ward and bed, and give the reason. For a mother and newborn, tick to move them together.
2. The transfer is **In transit**: the old bed is released and the new one is held.
3. The receiving ward clicks **Acknowledge & complete** when the patient arrives. The transfer then shows **Completed**.
4. To change the treating doctor instead, use **Doctor Transfer**.

**Patient Movement List** shows every move with time, from, to, doctor and reason.

## 6.4 Reservations

Menu: **ADT → Bed Reservations**

Hold a bed for a planned admission or an escort:

1. Click **New**, choose the patient, ward and bed, and the hold expiry time.
2. The bed shows as **Reserved** until it is used.
3. When the patient is admitted into that bed, the reservation is used up automatically. Otherwise it **Expires**, or you **Cancel** it.

**Attendant Bed Allocation** (OPD Flow menu) gives a relative or attendant a bed or visitor pass. **Attendant Bed Evacuation** releases it.

## 6.5 Discharge

Menu: **ADT → Discharges**, and **IPD & Wards → Discharge Summary**

1. **Advise discharge:** the doctor advises discharge from the admission. A discharge workflow opens with status **Advised**.
2. **Discharge summary:** the doctor clicks **Author summary** and completes it: chief complaint, history, examination, primary and secondary diagnosis, procedures performed, investigations, hospital course, treatment, medicines on admission and at discharge, condition at discharge, activity restrictions, follow-up date, tests and instructions. A template can be chosen, and **Preview summary** shows the result.
3. **Clearances:** the status becomes **Clearing**. Each department clears its stage: **Nursing Clearance**, **Medical Clearance** and **Head of Institution**, as set up for the hospital. Each one clicks **Clear stage** and completes its checklist items.
4. **Billing:** the finance strip on the discharge screen shows the bill. IPD Billing finalises it (chapter 9) and collects the balance or adjusts the deposit.
5. **Finalize discharge:** when all stages are cleared, click **Finalize discharge**. The bed is released for cleaning and the admission closes. Senior staff can use **Finalize with override** in an emergency; the override is recorded.
6. **Print summary** for the patient.

**Leave / Out-pass** records a patient leaving the ward for a time without being discharged.

# 7. Laboratory

Every lab test follows the same path: ordered by the doctor, collected, received in the lab, processed, entered, verified, and released to the patient's chart. Roles: **Lab Technician** (collect, receive, enter results) and **Pathologist** (verify and release).

1. **Order:** the doctor orders the test (chapter 4). It appears in Sample Collection.
2. **Collect:** the sample is drawn and labelled with a barcode.
3. **Receive:** the lab accepts the sample, or rejects it with a reason.
4. **Process:** the test runs on the analyser or by hand.
5. **Enter results:** the technician enters the results and sends them for verification.
6. **Verify:** the pathologist reviews, validates and releases the report.
7. **Report:** the doctor sees it in the chart, and it can be printed or sent.

## 7.1 Investigations

Menu: **Diagnostics → Lab Investigations**; **Diagnostics → Lab Dashboard**

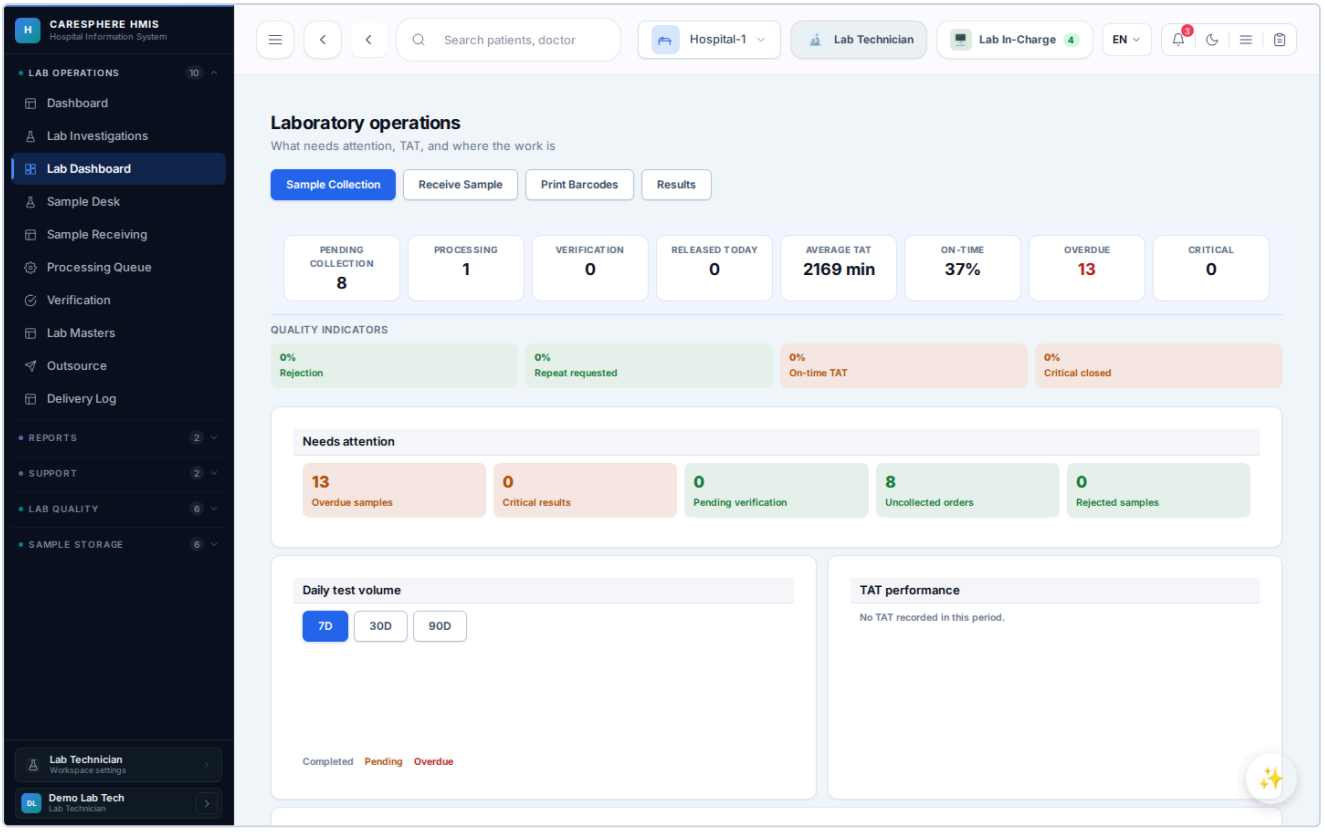



Figure: Lab Dashboard (Laboratory operations)

- **Lab Investigations** lists every ordered test with patient, test, status and dates. Search by patient, UHID or test.
- The **Lab Dashboard** ("Laboratory operations") shows what needs attention (critical results, pending verification), turnaround time (TAT), daily test volume, workload by lab section, and quality indicators.
- OPD patients pay for lab tests at OP Billing before collection; **Validate Bills** shows which test orders are paid.

## 7.2 Sample collection

Menu: **Lab** → **Sample Collection** (wards: **Bedside sample collection**)

1. Find the patient. Samples are grouped by the doctor's lab order.
2. Read the **Collection instructions** (tube type, fasting, volume).
3. Click **Collect**, then **Scan Barcode** on a pre-printed label or **Generate** a new one, then **Print Label** (or **Print All Labels**).
4. Click **Confirm Collection**. The sample is now on its way to the lab.

**Receive Sample** (Lab → Sample Receiving): scan the sample ID, then **Accept** it, or **Reject** it with a reason (for example haemolysed or wrong tube). A rejected sample must be collected again.

## 7.3 Results

Menu: **Lab** → **Processing Queue**, then **Lab** → **Results**

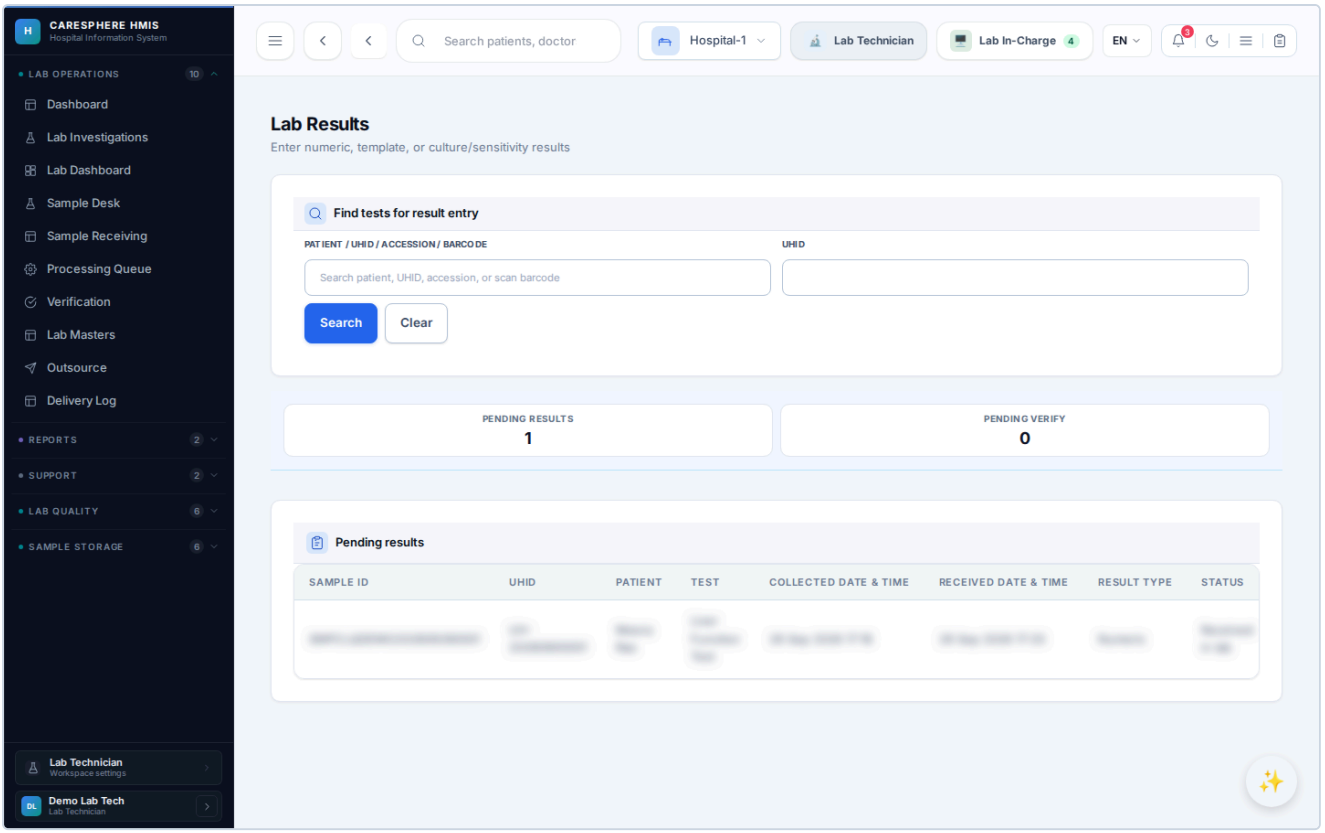



Figure: Lab Results

1. In the **Processing Queue**, click **Start Processing** for accepted samples. Use **Export worklist** and **Import inbox** for analysers that exchange files.
2. In **Lab Results**, find the test and click **Enter Results**. There are three kinds of entry:
    - **Result Entry:** numeric results with units and reference ranges; values outside the range are flagged.
    - **Template report:** a formatted narrative report, for example a smear or histopathology.
    - **Culture and sensitivity:** the organism and the antibiotic sensitivities.
3. **Patient result history** shows earlier results for comparison. You are warned when a result differs a lot from the previous one.
4. **Critical values:** a critical result must be acknowledged ("I have reviewed the critical value(s) and notified the clinician"). Log the call to the doctor before release.
5. Click **Save Draft** to continue later, or **Send to Verification**. Preliminary results show in the chart straight away.
6. **Outsourced tests** (Lab → Outsource) are sent to an outside lab. Enter the vendor's result here, then validate it.

## 7.4 Verification

Menu: **Lab → Verification**

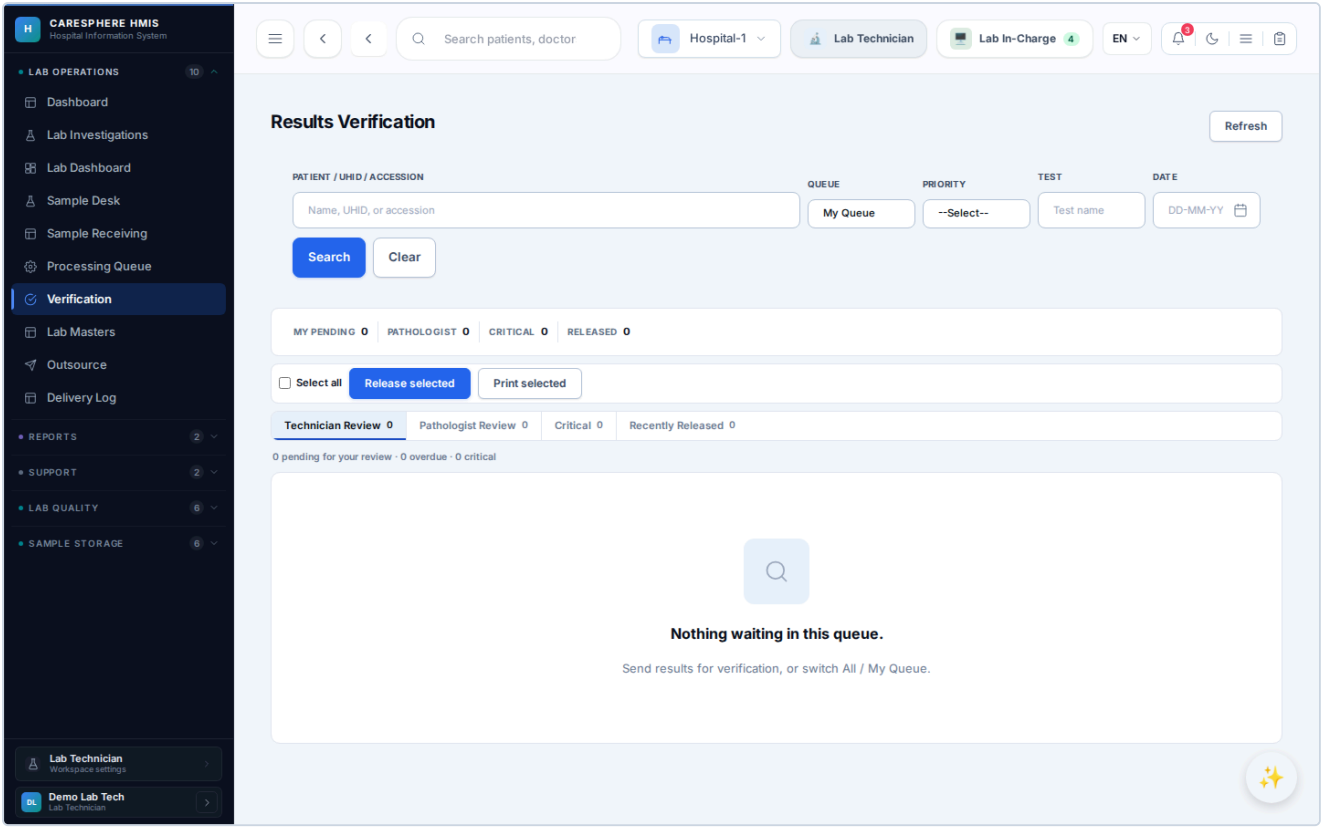



Figure: Verification

1. The pathologist opens the **Verification** list of results waiting for review.
2. Click **Review & Verify**, check the values, flags, history and any critical-call log, and **Preview Report**.
3. Click **Validate Results**, or **Validate and dispatch** to release the report to the chart and the patient.
4. If something is wrong, use **Request repeat** to send the test back, or **Cancel test**.
5. Released reports can be printed, downloaded as PDF, or batch-printed. A released report can be amended later; the amendment is recorded.

The lab also manages quality control runs (**QC runs**), sample storage and retrieval, barcode printing, analyser setup, and lab masters (tests, panels, reference ranges, report templates).

# 8. Pharmacy

Prescriptions written by doctors arrive in the pharmacy's Prescription Queue. The pharmacist takes payment, dispenses, and stock is reduced by batch. The bill then appears in Billing & Payment. Roles: **Pharmacy In-charge** (stock, purchasing, approvals, dispensing, admin, and patient booking), **Dispensing Pharmacist** (dispensing and payment only), **Pharmacist**, **Store Manager**.

A separate pharmacy-only application on the same data is available for pharmacy staff at **http://135.181.33.22:3060**. It has the same screens, and only the two pharmacy roles can sign in to it.

## 8.1 Prescription queue (dispense and collect payment)

Menu: **Pharmacy → Prescription Queue**

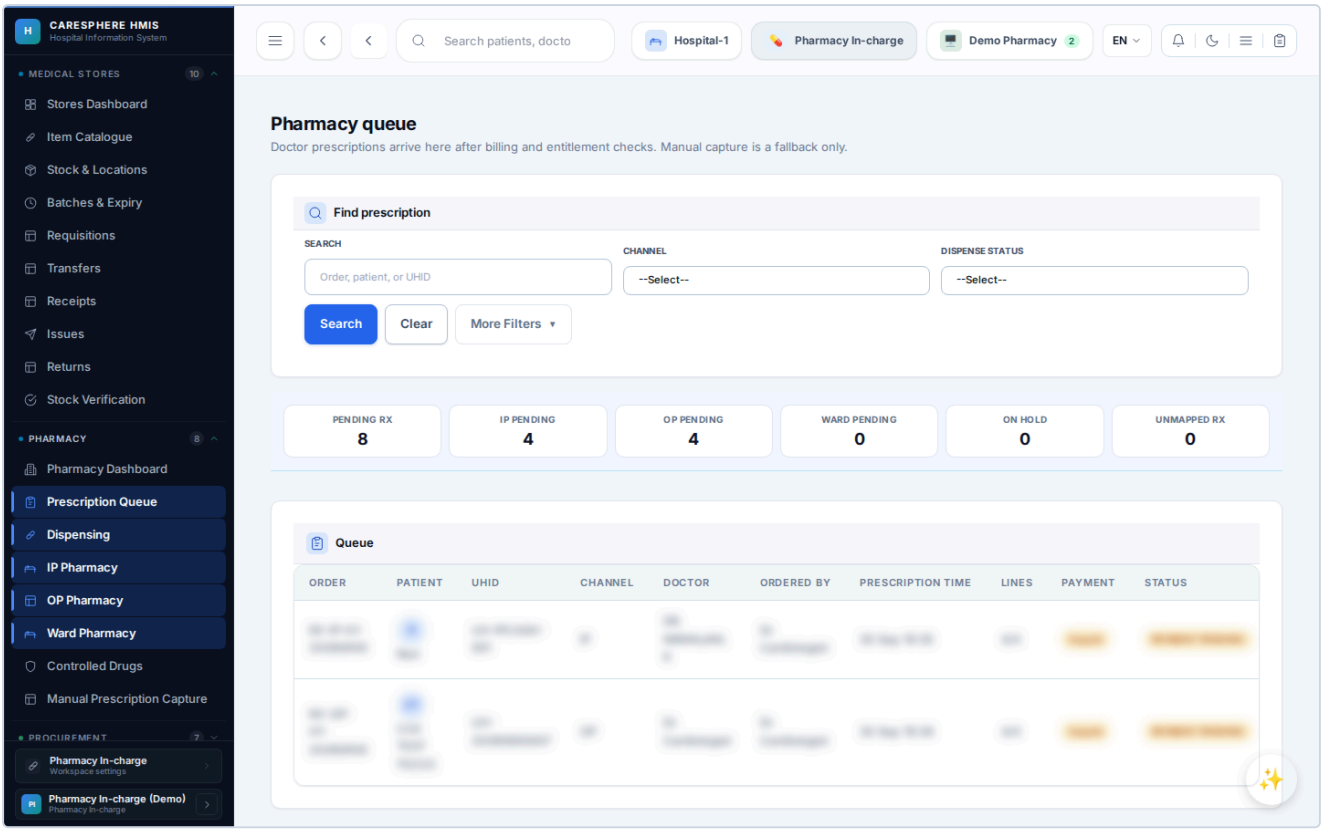



Figure: Prescription Queue: pending counts by channel and the order list

1. The queue lists every open prescription: today's, plus older ones not yet dispensed. Filter by OP, IP or Ward, or by payment status. Use **All dates** to see everything.
2. Click the order to open it. Each medicine shows the quantity prescribed, the stock available, and the batch picked by earliest expiry first (FEFO).
3. Click **Fill** to confirm the quantities. Change a batch or quantity if needed, for example a partial supply.

4. **Outpatients:** click **Collect Payment**, choose the payment mode (cash, card, mobile money), and confirm. A receipt is produced.
5. **Inpatients:** use **Create IP Bill**. The medicines are charged to the admission bill instead of being paid at the counter.
6. Click **Dispense**. Stock is reduced from the chosen batches, and the prescription becomes dispensed (or partly dispensed).
7. Print the receipt and medicine labels for the patient.

For a handwritten prescription from outside, use **Manual Prescription Capture**. **Drug Interactions** checks a combination of medicines.

## 8.2 Medicine stock

Menu: **Pharmacy → Medicine Stock**

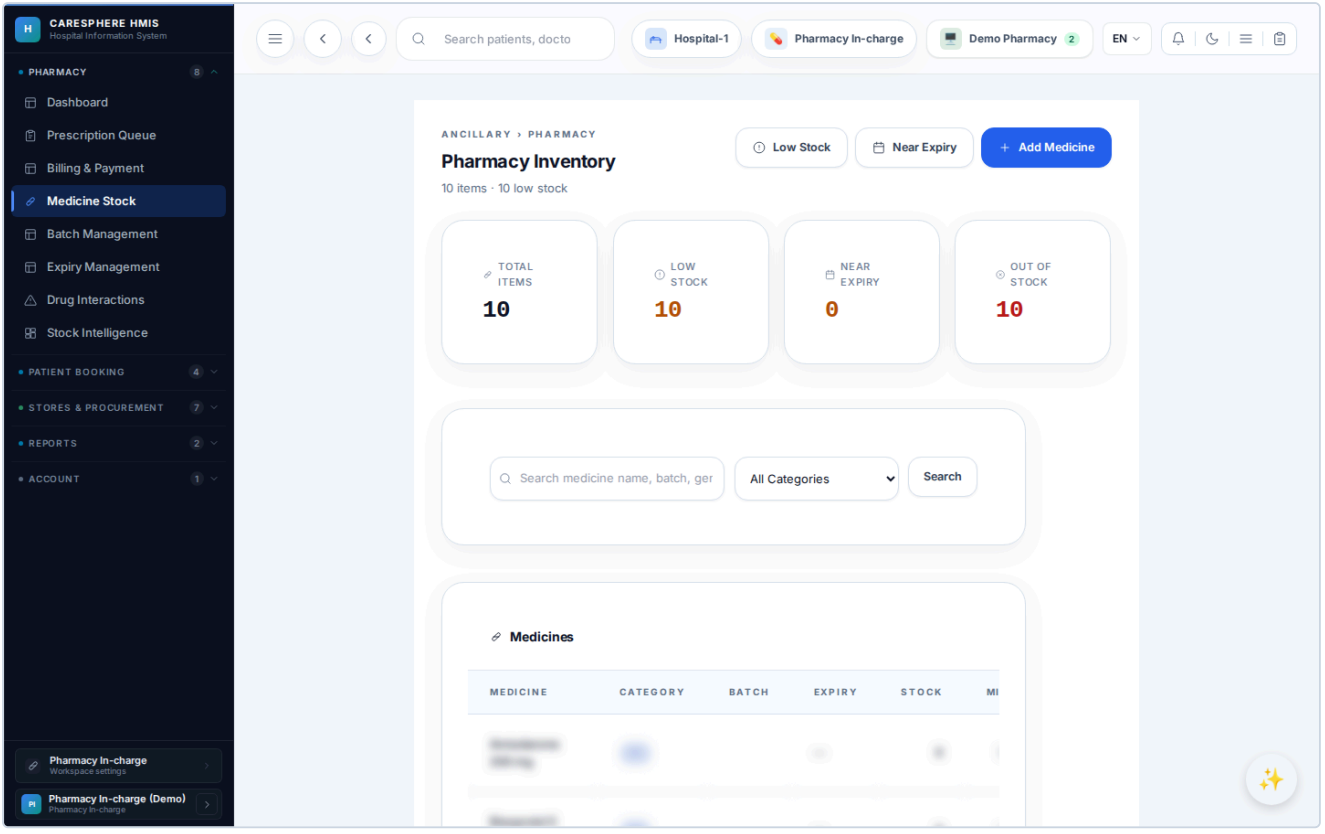



Figure: Medicine Stock

- Lists every medicine with category, stock quantity, reorder level, purchase rate, sale rate, and expiry.
- Filters show **Low stock** and **Out of stock** items. **Controlled Drugs** lists scheduled medicines separately.
- Pharmacy In-charge and Store Manager can add medicines and edit rates. The Dispensing Pharmacist can only view stock.

- **Stock Intelligence** shows fast and slow movers and suggested reorders.
- **Restocking:** raise a **Purchase Indent**, which is approved into a **Purchase Order** to a **Supplier** (or **Vendor**). Record the delivery as a **Goods Received Note**; this adds the batches to stock.

## 8.3 Batches

Menu: **Pharmacy → Batch Management**

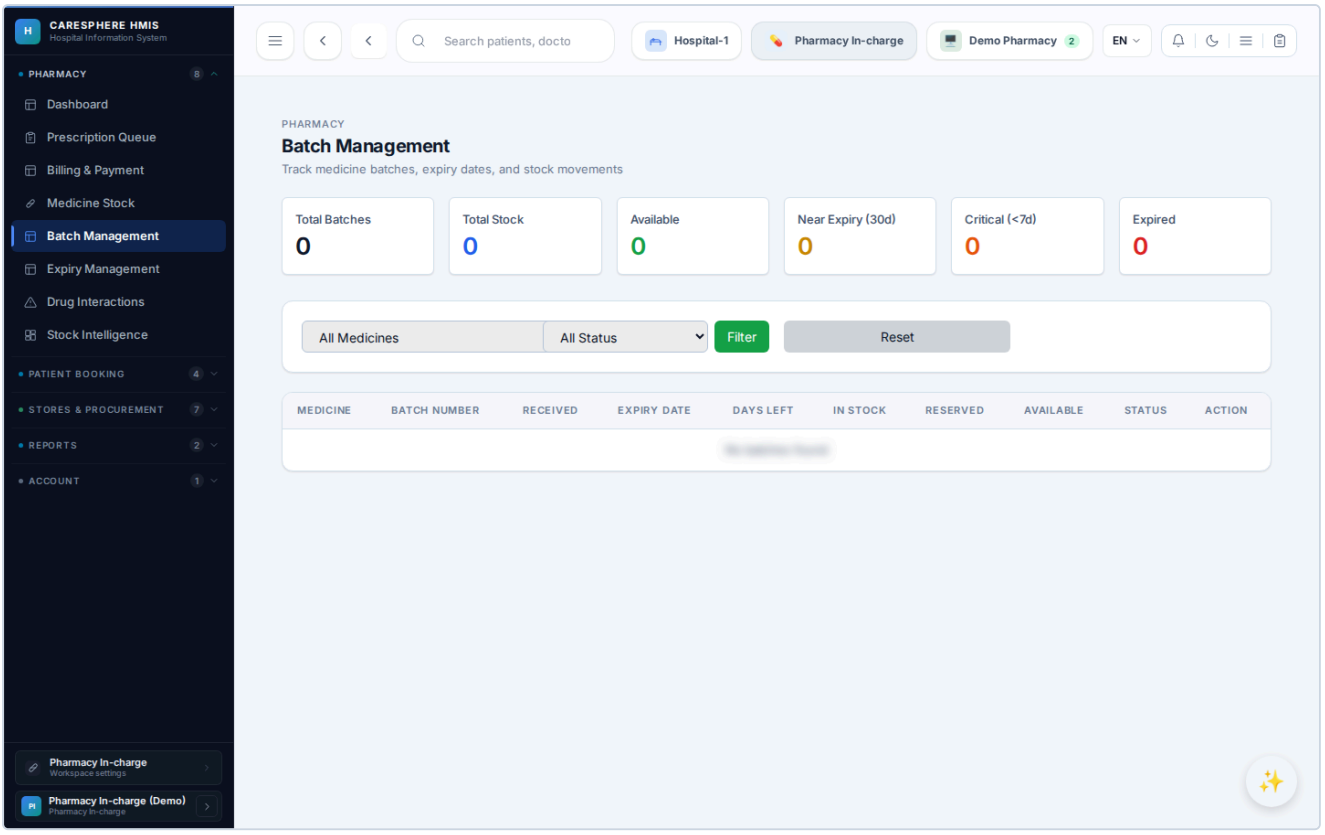



Figure: Batch Management

Each delivery of a medicine is a batch with a batch number, expiry date, quantity, and purchase and sale rates. Dispensing always takes from the batch that expires first. Open a batch to see its movement history: received, dispensed, transferred, returned.

## 8.4 Expiry

Menu: **Pharmacy → Expiry Management**

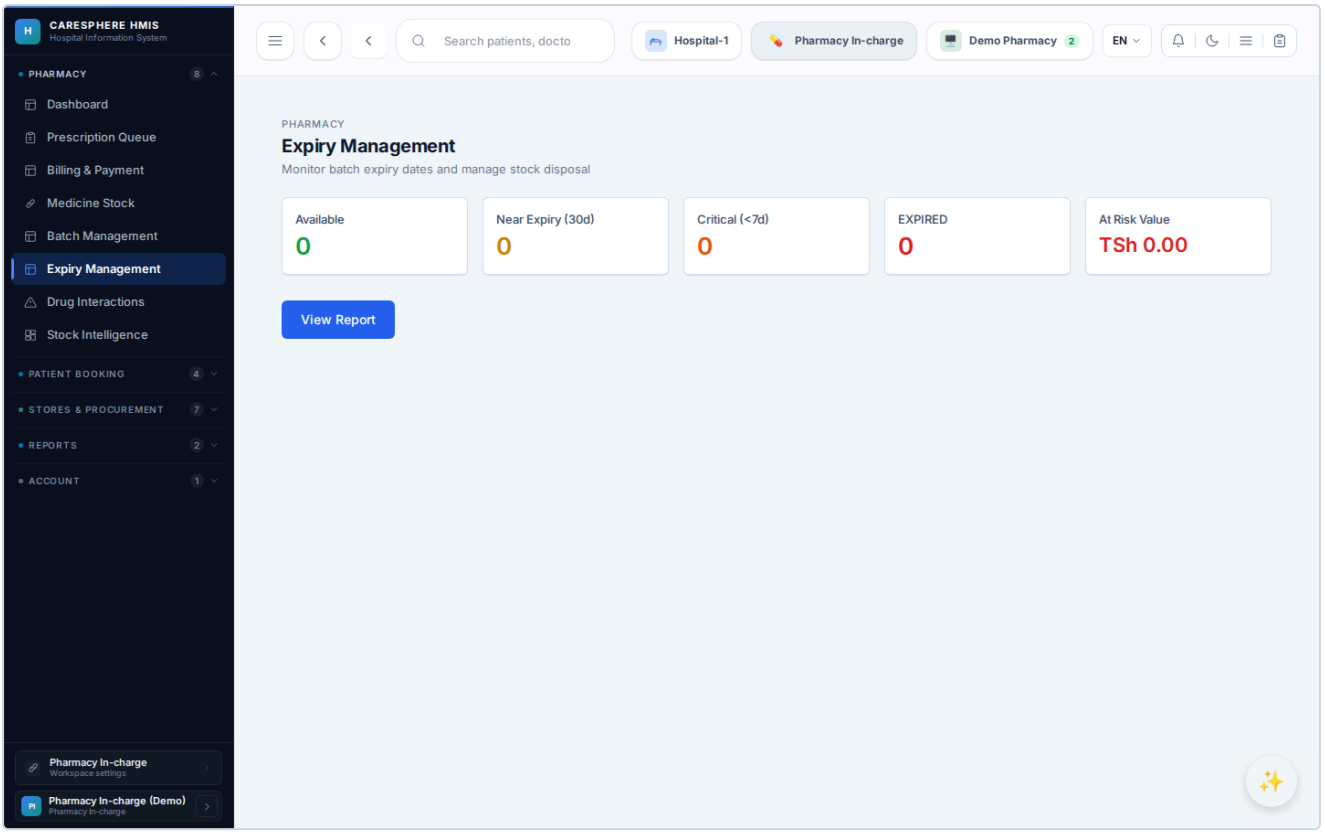



Figure: Expiry Management

- Lists batches that have expired or will expire soon (for example within 1, 3 or 6 months), with quantity and value.
- Remove expired stock from use and record its return to the supplier or its disposal.
- **Pharmacy Analytics** (Reports) includes an expiry timeline.

## 8.5 Billing / payment

Menu: **Pharmacy → Billing & Payment**

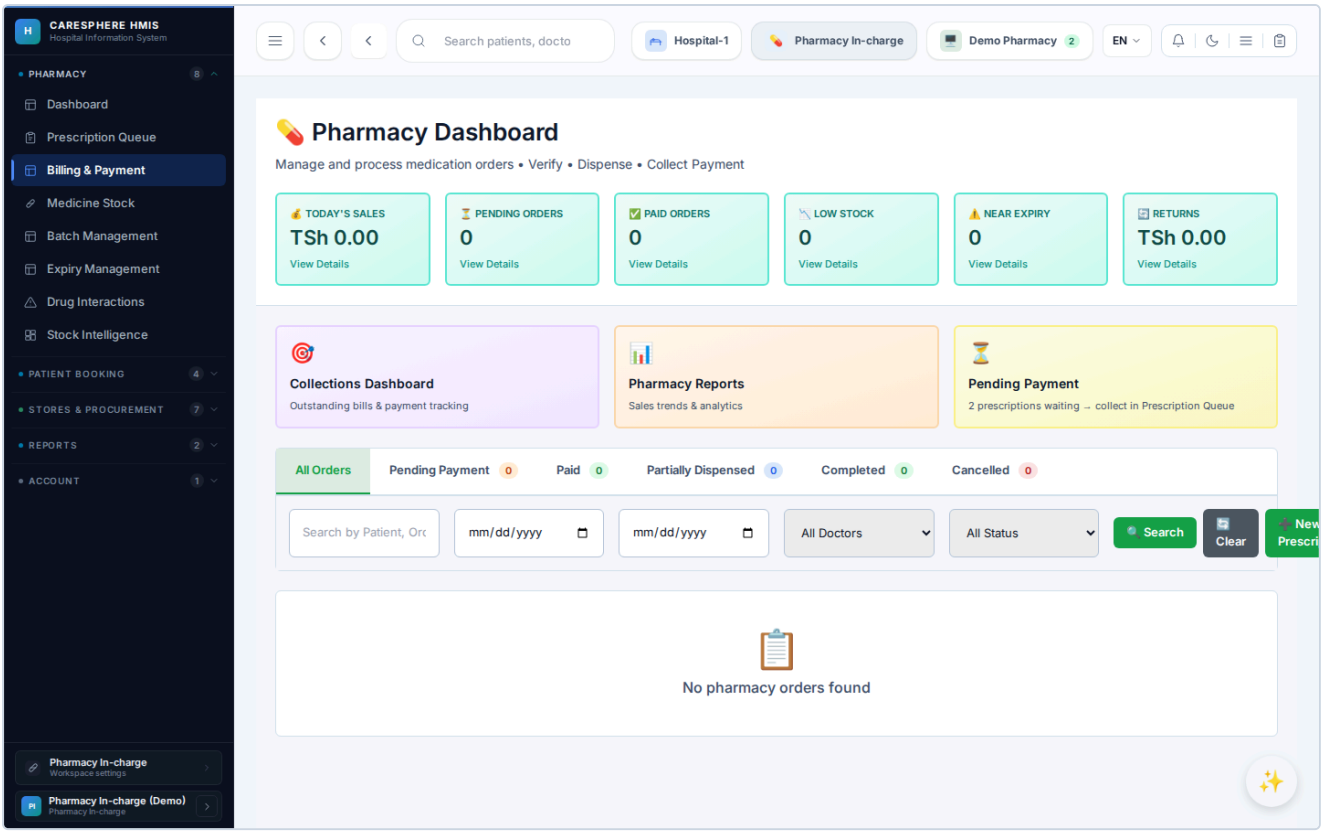



Figure: Pharmacy Billing & Payment

- Shows today's pharmacy sales, and a **Pending Payment** card with the number of prescriptions waiting. Click it to go to the Prescription Queue and collect.
- Lists every pharmacy bill with number, patient, amount (in TSh) and status. Bills paid at the Prescription Queue show **Order** (open the prescription) and **Receipt** (reprint).
- Refunds and cancellations follow the hospital's approval rules (chapter 9).

# 9. Billing

Outpatients pay at OP Billing before they receive a service. Inpatients run an open bill that collects every charge during the stay. That bill is settled against deposits and finalised at discharge. All amounts are in Tanzanian Shillings (TSh). Roles: **Front Desk** (OP billing), **IPD Billing**, **Finance**, **Insurance / TPA Executive**.

## 9.1 OP billing

Menu: **OPD Flow → OP Billing**

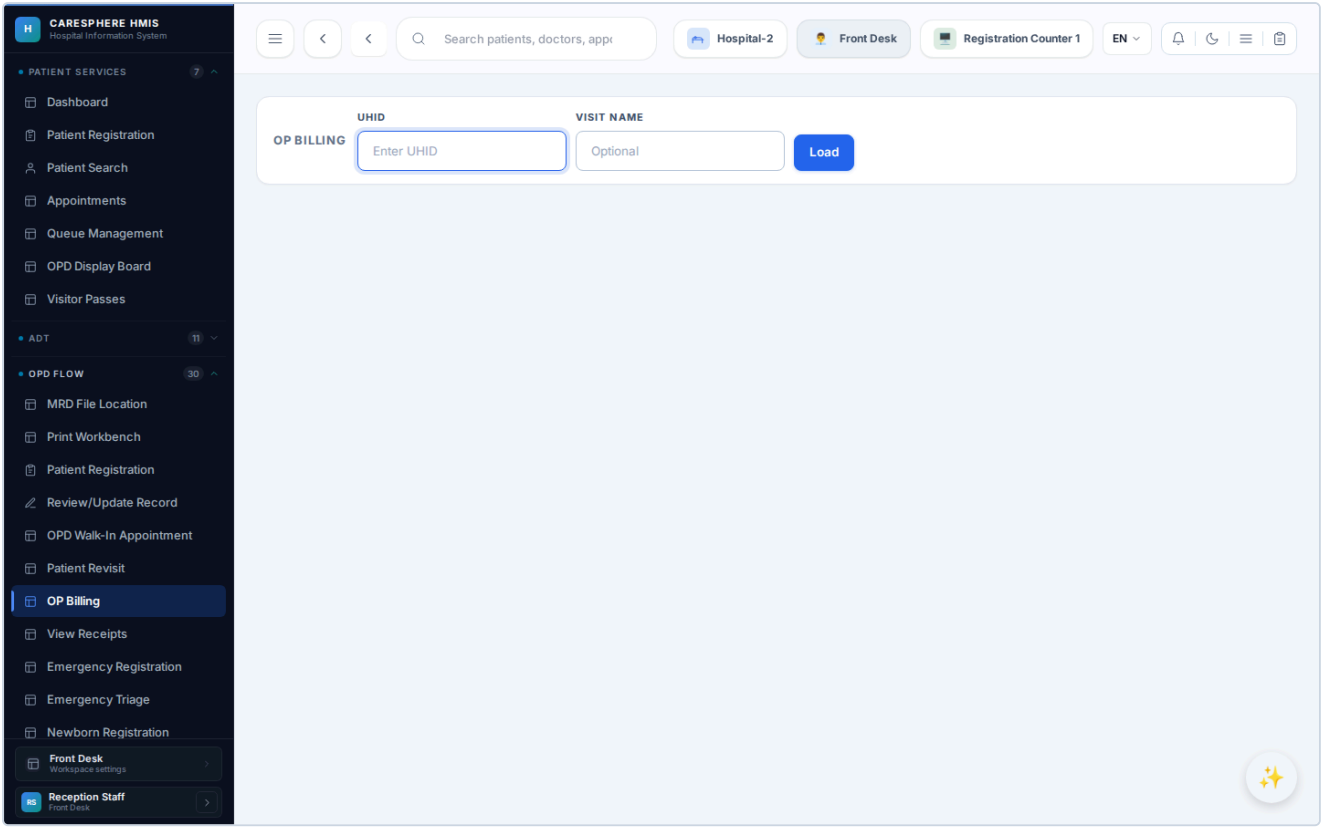



Figure: OP Billing

1. Search the patient by UHID, name or mobile. **Pending Billable Services** lists orders not yet paid, such as the consultation and lab tests. Click **Fill** to add them.
2. To add other services, search by name or code (for example an X-ray or an OP package) and click **Add**.
3. Check **Services in this bill**: quantity, rate and amount for each line.
4. A discount above your limit needs approval: click **Send for Discount Approval**. A supervisor approves it in **OP Discount Approvals**.
5. Click **Bill & Payment**, enter the payment (cash, card, mobile money, or several modes at once), and click **Confirm Bill & Payment**. Use **Generate Bill** instead to bill now and collect later; the bill

then shows under **Pending Bills**.

6. Print the receipt. The patient's orders are now released to the lab, radiology or pharmacy.

**Clear & start over** empties the bill if you made a mistake before saving.

## 9.2 IP billing

Menu: **Billing → IP Billing Workbench**; **Billing → Financial Command Center**

- The **Financial Command Center** is the billing home page: today's collections, open inpatient bills, deposits held, and items waiting for approval.
- The **IP Billing Workbench** lists every current admission with its running total, deposit and balance. Open one to see all its charges.
- **Charge Posting:** most charges post on their own (bed days, pharmacy issues, lab and radiology). Add any others here: search the service, set the quantity, and post.
- **Interim / Final Bills:** print an interim bill at any time, so the family knows the amount so far.
- **Packages:** apply a fixed-price package (for example a delivery package). Charges inside the package stop adding to the bill.
- **Conversions:** change the patient category or the main payer mid-stay, for example from cash to insurance. Open charges are re-priced.
- **Payer Stack / Corporate:** split the bill between insurance, a corporate and the patient.

## 9.3 Finalisation

Menu: **Billing → IP Bill Finalisation**

1. When discharge is advised (chapter 6.5), open the admission in **IP Bill Finalisation**.
2. Review the charge lines by category. Correct, add or remove lines (removals may need approval).
3. Check bed allocation days and any package or payer split.
4. **Bill preview** shows the final bill. Apply the deposits; the balance due, or the refund owed, is calculated.
5. Collect the balance or record the refund, then finalise. Discharge billing clears the billing stage of the discharge.
6. A finalised bill can only be cancelled through **Cancellations**, with a reason and approval.

## 9.4 Deposits

Menu: **Billing → Deposits & Advances**

- **New:** take a deposit or advance for a patient or admission, with the payment mode. A receipt prints.
- **Adjust:** apply a deposit to a bill (also done at finalisation).
- **Refund:** return an unused deposit, with a reason. A refund may need approval.
- The list shows each deposit with amount, used amount and balance.

## 9.5 Receipts

Menu: **OPD Flow → View Receipts**

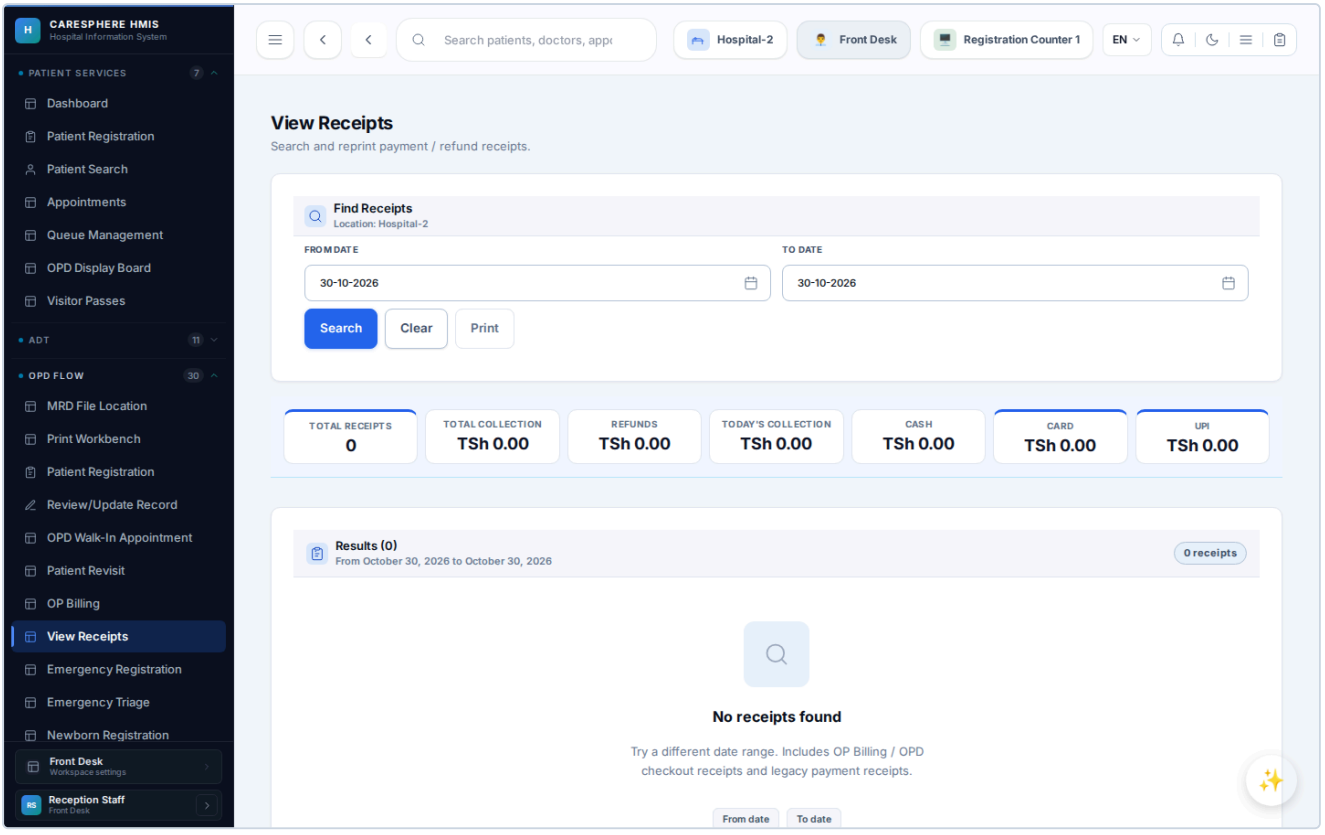



Figure: View Receipts

Search receipts by patient, receipt number or date, then open one to **Print** a copy. Cashiers close each shift in **Billing → Shift Closing** (Cashier sessions):

1. Click **Close shift**.
2. Count the cash and enter the amounts per payment mode.
3. Any difference from the system total is shown as a variance. A supervisor uses **Acknowledge variance** to accept it.
4. **Print** the cashier shift close slip.

## 9.6 Tariff

Menu: **Admin & Setup → Tariff Master** (Service / Rate Master)

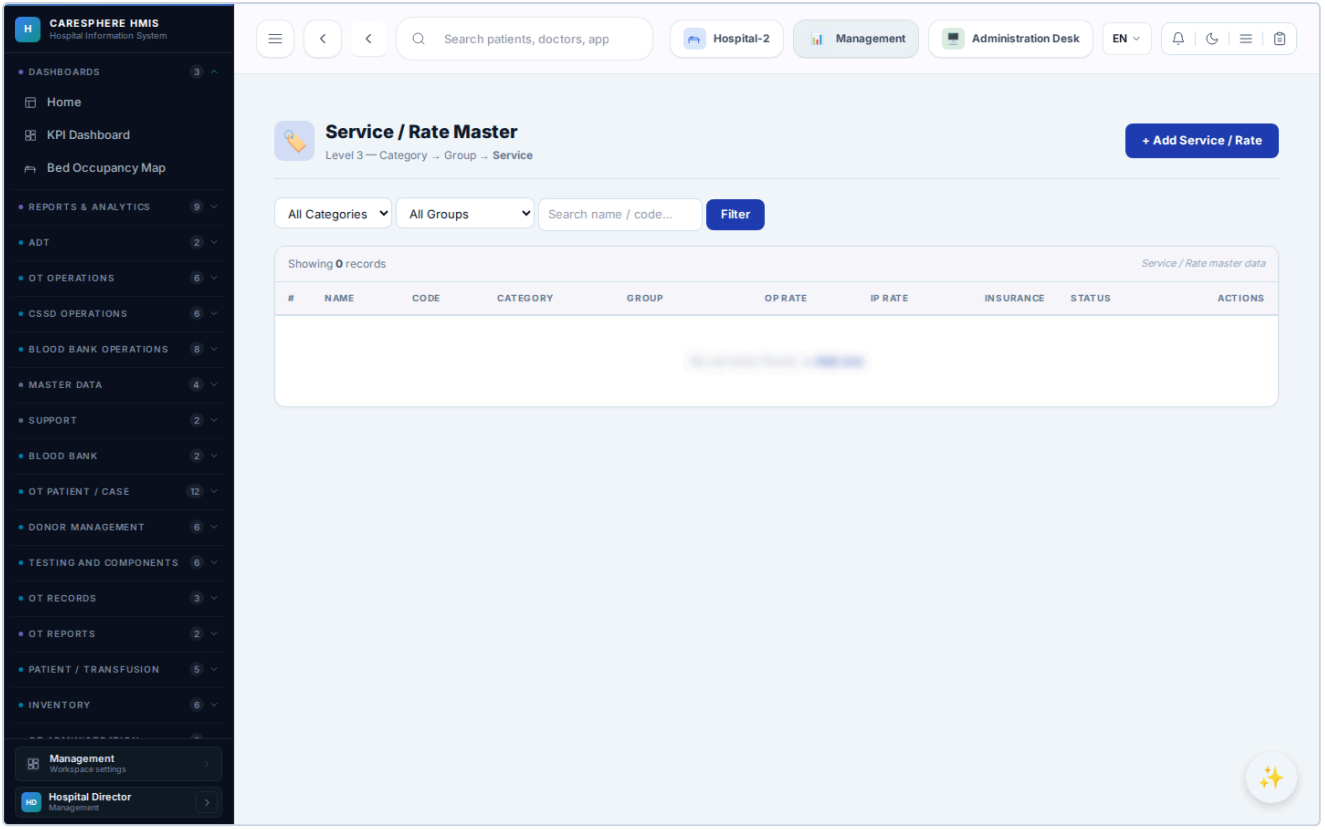



Figure: Tariff Master (Service / Rate Master)

- Every billable service has a code, name, category, group, **OP Rate**, **IP Rate**, **Insurance** rate, and status.
- Use **Filter** to find services. **+ Add Service / Rate** creates a new one, and ✏️ **Edit** changes a rate.
- Rate changes apply to new bills only; existing bills keep their rates.
- Corporate and insurance rates can differ per payer (Corporate Accounts, Insurance Plans). Doctor consultation fees are set in **Doctor rates**.

# 10. HR / Payroll

CareSphere keeps the hospital's staff register and a monthly payroll record for each staff member. Role: **HR Manager**, Admin.

## 10.1 Staff

Menu: **Admin & Setup → Staff Members**

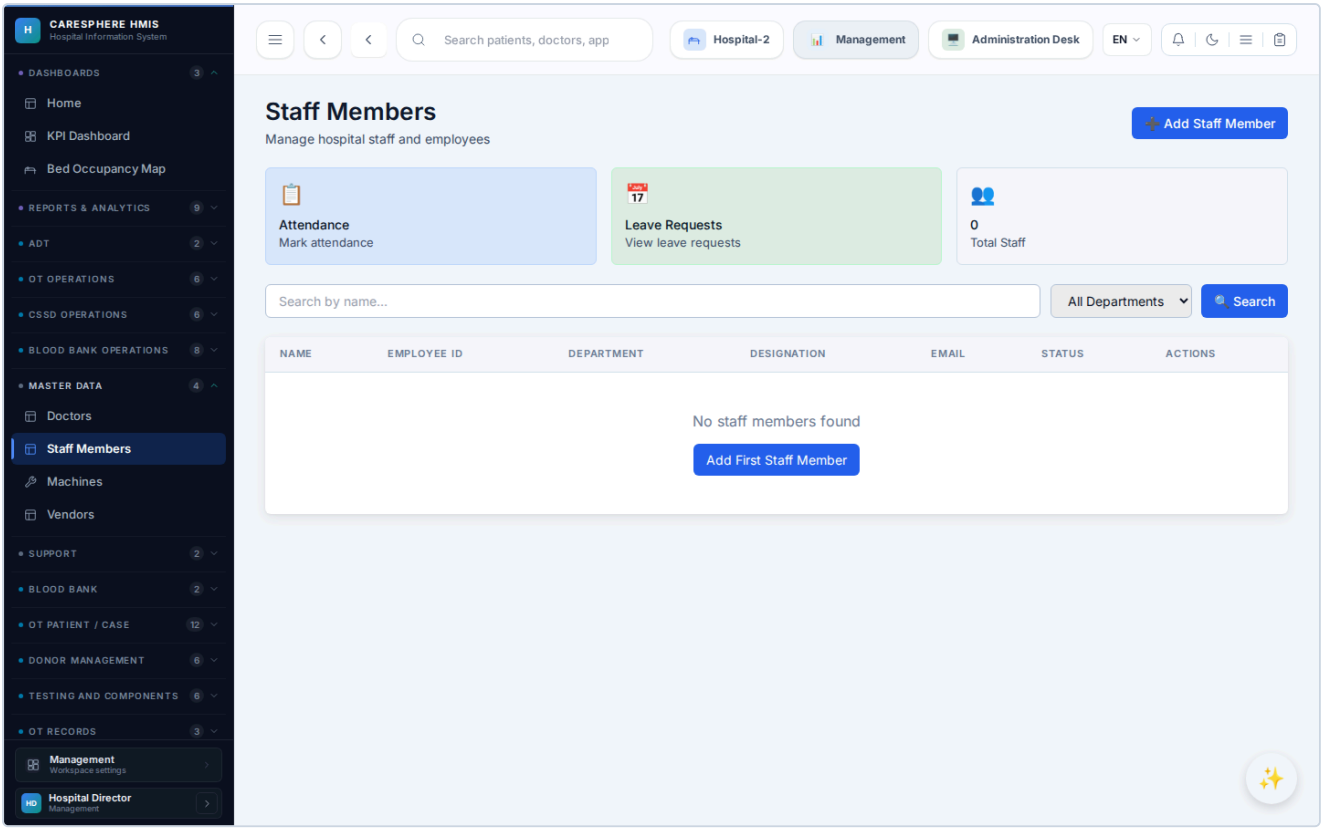



Figure: Staff Members

1. The list shows **Total Staff** and each staff member with Employee ID, Name, Department, Designation, Email and Status. Search by name or filter by department.
2. Click **New** to add a staff member: Employee ID, Name, Email, Phone, Department, Designation, Date of joining, and **Active**.
3. Under **Salary Details**, enter the basic salary, housing allowance (shown as HRA) and other allowances. These fill the payroll record.
4. Untick **Active** when someone leaves. Their record is kept.

Staff members are separate from user accounts. To let a staff member sign in, also create a user in **User Management** (chapter 12). Doctors are set up in **Admin & Setup → Doctors**.

## 10.2 Payroll

Menu: **Admin & Setup → Payroll**

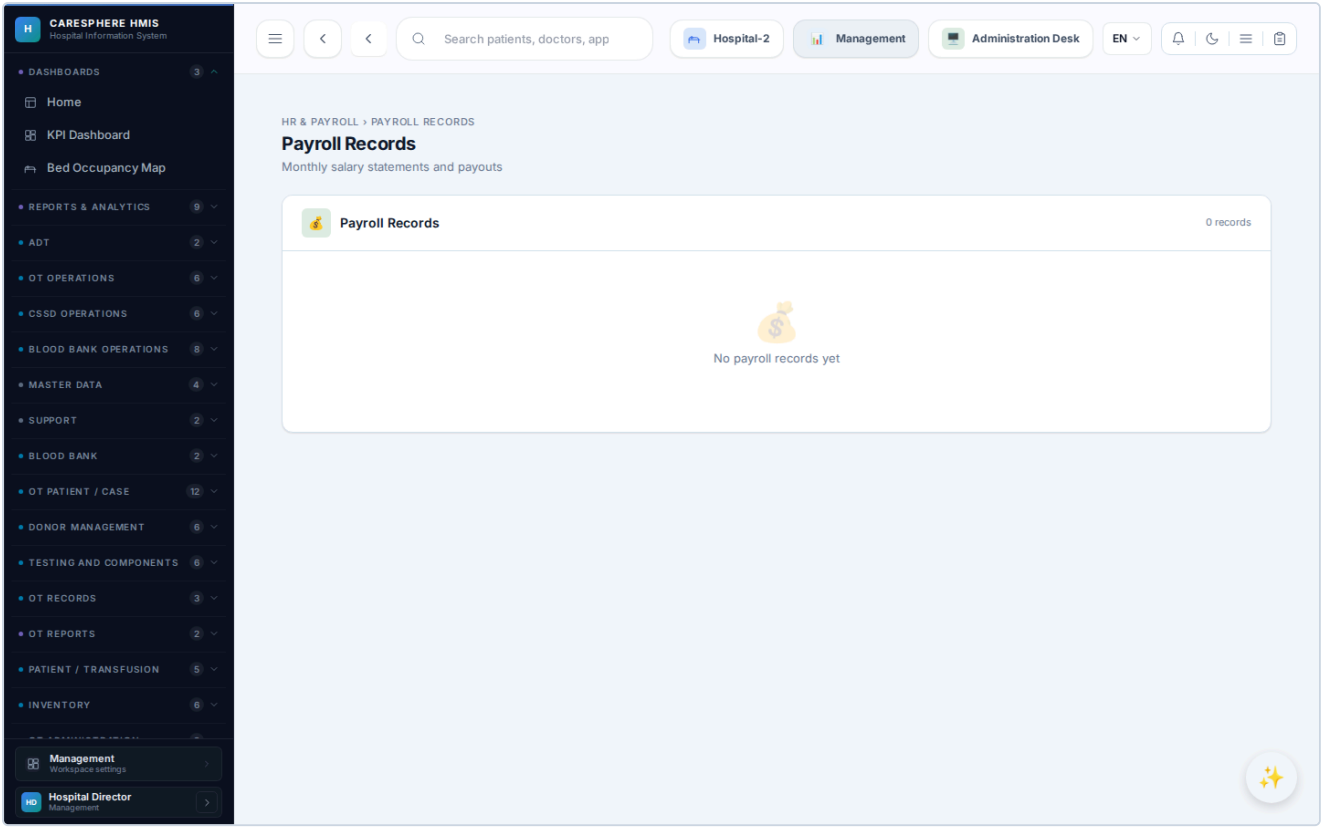



Figure: Payroll Records

1. Click **New Record** and choose the **Staff Member**, **Month** and year.
2. Enter the attendance figures: working days, present days and leave days.
3. Enter the earnings in TSh: Basic Salary, HRA, Other Allowances.
4. Enter the deductions in TSh. The form's fields are labelled PF Employee, ESI Employee, TDS and Other Deductions. For Tanzania, enter NSSF in **PF Employee**, PAYE in **TDS**, and anything else in **Other Deductions**.
5. Choose the **Payment Mode** and the status: **Draft**, then **Approved**, then **Paid**. Click **Save**. Net pay is calculated.
6. Use **View** to see and print a record. **Edit** corrects a record that is not yet paid.

## 10.3 Available HR functions

| Function | Where |
|---|---|
| Staff register | Admin & Setup → Staff Members |
| Monthly payroll record | Admin & Setup → Payroll |

| Function | Where |
|---|---|
| Doctor and nurse duty rosters | OPD & Consultation → Doctor Schedule; IPD & Wards → Nurse Schedule (chapter 4.4) |
| Staff notifications | Notifications: **View**, **Mark Read** |
| HR analytics | Reports & Analytics → HR Analytics |

For a full HR and payroll system, the group's separate HRMS product can be connected; an HR sync link already exists for employees, attendance and leave.

# 11. Reports & Analytics

CareSphere has operational reports, which are filtered lists you can print or export, and BI dashboards, which are charts and KPIs for managers. Roles: **Management**, **BI Dashboard Viewer**, Admin, and department heads for their own area.

## 11.1 Operational reports

Menu: **Reports & Analytics** → **Critical Reports** (Reports dashboard)

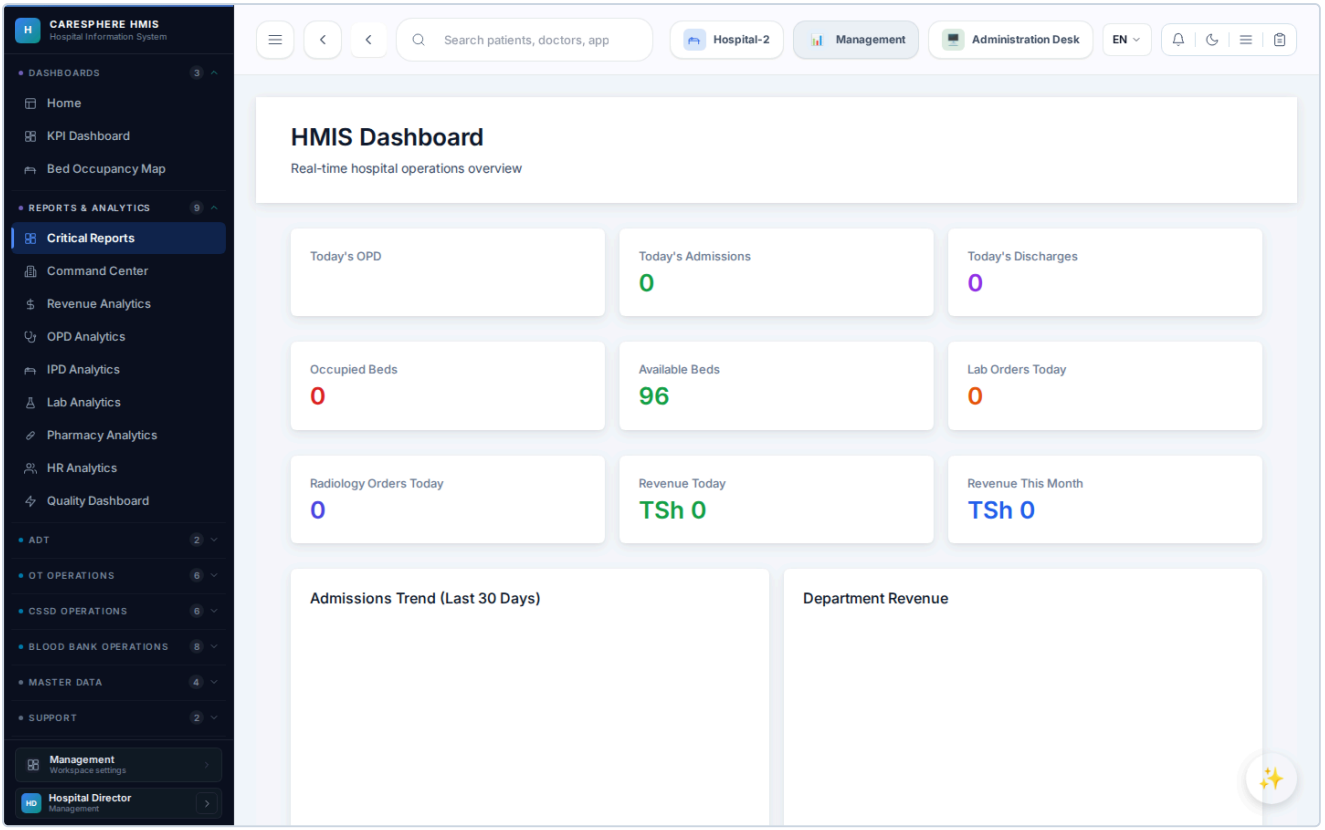



Figure: Reports dashboard

The dashboard shows today's figures: Revenue Today, Revenue This Month, Available and Occupied Beds, Lab Orders Today and Radiology Orders Today. Choose **From Date** and **To Date**, then open a report:

| Report | What it lists |
|---|---|
| Daily Collection Report | Money collected by date, cashier and payment mode |
| Department Wise Revenue | Revenue per department |
| Doctor Wise Report | Patients seen and revenue per doctor |
| OPD Patient Report | Outpatient visits |
| Admission Report | Admissions and discharges |

| Report | What it lists |
|---|---|
| Bed Occupancy Report | Bed use by ward |
| Lab Investigation Report | Lab tests ordered and completed |
| Radiology Report | Imaging orders and reports |
| Pharmacy Sales Report | Medicine sales |
| Revenue Dashboard | Revenue trends |

Other reports: **Collection Report** (Reports & Analytics), **Appointment Report** (Appointments), **ADT Reports** (admissions, discharges, transfers), and **Stores Reports** (stock). Most lists can be printed or exported to Excel/CSV.

## 11.2 BI dashboards

Menu: **Reports & Analytics**

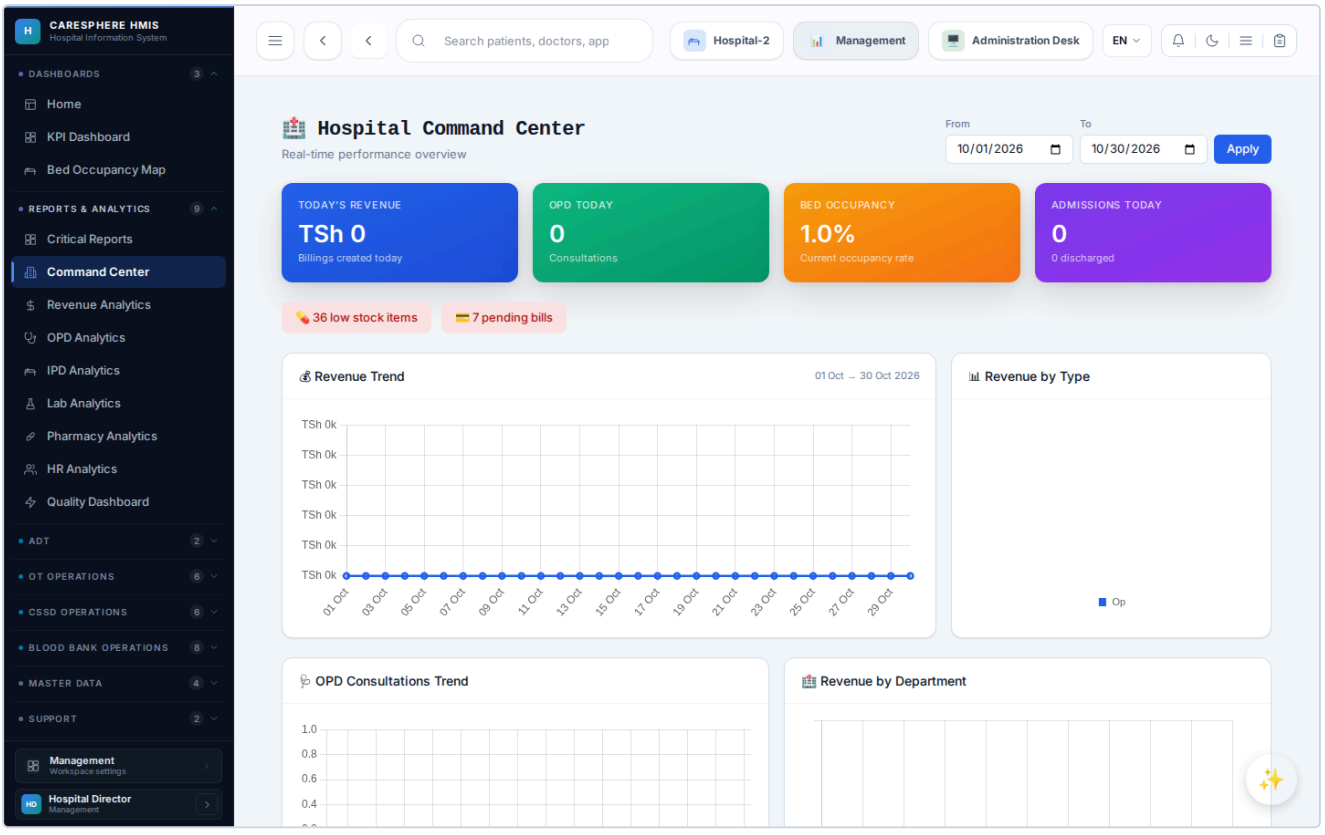



Figure: Command Center

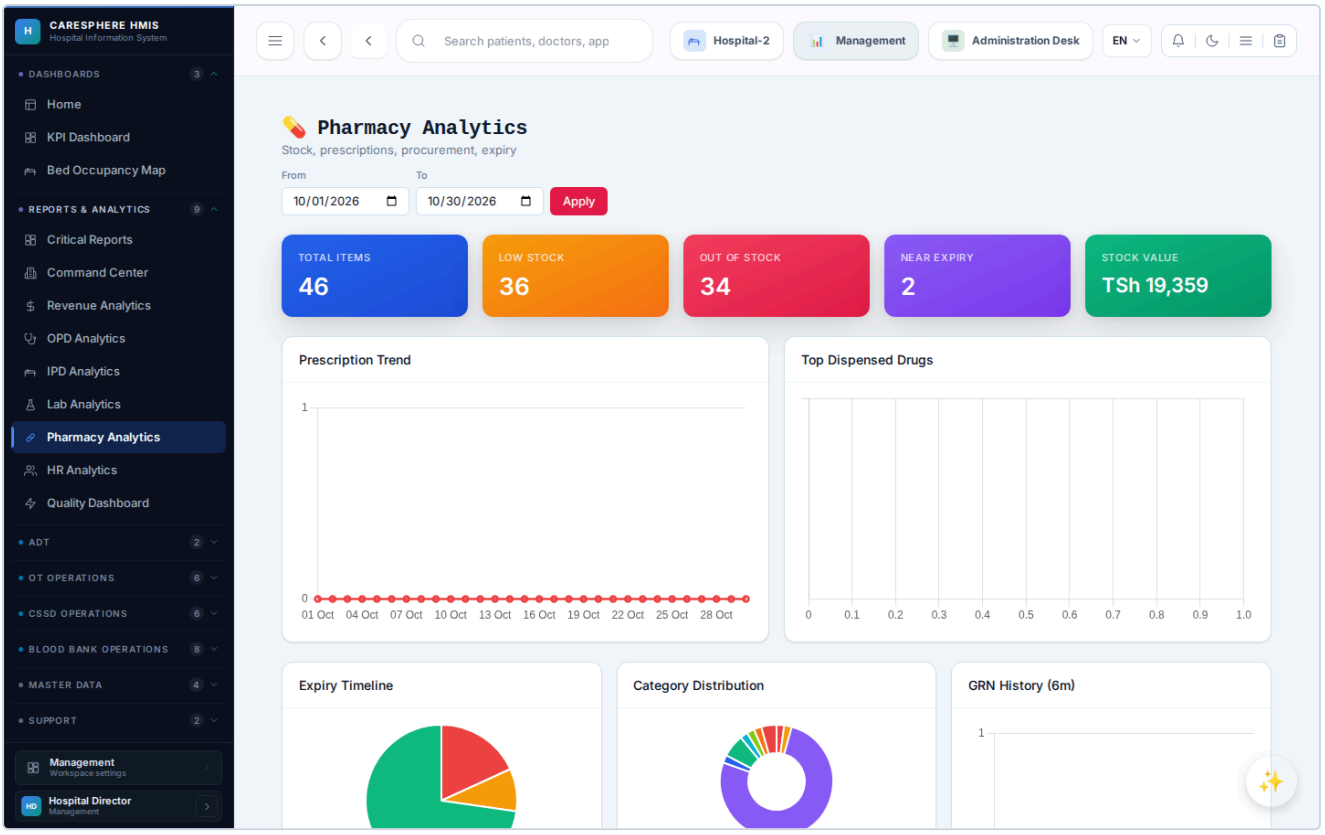



Figure: Pharmacy Analytics

| Dashboard | Shows |
|---|---|
| Command Center | One-page view of the whole hospital |
| Revenue Analytics | Revenue by day, department, payer |
| OPD Analytics | Visits, waiting times, doctors |
| IPD Analytics | Admissions, occupancy, length of stay |
| Lab Analytics | Test volume and turnaround time |
| Pharmacy Analytics | Stock value, top medicines, stock by category, expiry timeline, goods received |
| HR Analytics | Staff numbers by department |
| Quality Dashboard / Quality Indicators | Hospital quality measures; incident reports |
| KPI Dashboard (Home) | Management KPIs |

Choose the date range at the top of each dashboard; the default is the last 30 days. Hover over a chart to see its values.

**AI Assistant** (Home menu) answers questions about hospital data in plain language, for example "How many admissions this week?". It shows only data your role is allowed to see.

# 12. Administration

Admins create user accounts, give each user one or more roles and workstations, and keep the hospital's master data and settings up to date. Roles: **Admin**, **Super Admin**.

## 12.1 Users

Menu: **Admin & Setup → User Management**

The **Staff Accounts** list shows Total Users, filters by role, and **All** / **Inactive**. Each user shows contact, department, roles and status.

**Add a user:**

1. Click **Add User**.
2. **Personal Information:** Name, Email, Phone (+255…), Department, Designation. For a doctor, link the matching **Doctor** record.
3. **Login Credentials:** Username, Password and Password confirmation. Give the password to the user privately and ask them to change it.
4. **Role Assignment:** select one or more roles. **Permission Preview** shows what those roles will be able to open.
5. Tick **Active Account** and save.
6. Open the user again and use **Workstation Assignment** to give them their desks (stations). Mark one as **Primary**.

**Manage a user:**

| Task | How |
|---|---|
| Reset a password | **Edit** the user, enter a new password and confirmation, save |
| Unlock after 5 failed sign-ins | **Unlock** in the list, or **Unlock Account** on the user |
| Disable an account (staff leaving) | Untick **Active Account**. The account is kept for the audit trail; never delete it |
| Turn on two-step verification | **Edit** the user → **Start 2FA Setup** → the user scans the code with an authenticator app → **Confirm and Enable 2FA** |
| Lost phone | **Admin Disable 2FA**, or **Generate New Backup Codes** and **Download PDF** |

## 12.2 Roles / permissions

Menu: **Admin & Setup → Roles Master** (Roles & Permissions)

- **Roles Master** lists every role with its **Accessible Modules**.
- **Permission Matrix** shows which role can read, create, edit or approve in each module.
- Each role's sidebar menu is set in the menu configuration. Changes to roles, permissions or menus are made by the system administrator (Super Admin), because a mistake can lock staff out of their screens.
- A user with several roles works in one role at a time and switches with the role chip (chapter 1).

## 12.3 Configuration

Menu: **Settings** (Admin) and **Admin & Setup**

| Area | What you set |
|---|---|
| Hospital settings | Hospital name, code, type, address, phone, email |
| Currency | Base and default currency (TZS), symbol "TSh", and supported currencies (TZS, USD) |
| Date, time, time zone | Date format, time format, time zone |
| Registration fee | Fee charged at new patient registration (TSh) |
| Email / SMTP | The mail server used for notifications |
| HL7 / Integration | Links to lab analysers and other systems |
| System info | Active users, total patients and beds, background jobs, server time |
| Masters (**All Masters**, **Master Setup**) | Departments, wards and beds, specialisations, visit types, document types, lab tests, units, and other lists used in drop-downs |
| Stations | Workstations (desks, wards, counters) that users are assigned to |
| Tariff Master | Service rates (chapter 9.6) |
| Doctors | Doctor profiles, specialisation and consultation fees |
| Hospital Branding | Logo and colours on screens and prints |
| Document Templates | Layout of printed forms, receipts and reports |

Change settings outside working hours where possible, and note what you changed. The audit log records every change.

# 13. Backup / Security

Patient data is protected by personal logins, role-based access, automatic sign-out, an audit trail, and regular backups run by the hospital's IT team.

## 13.1 Backup

**Backup routine (IT / system administrator):**

1. Every night, take a full PostgreSQL dump of the CareSphere database and archive the uploaded files folder.
2. Keep the last 14 to 30 nightly copies on the server.
3. Every week, copy the newest backup to storage outside the server (another server or cloud storage).
4. Every month, restore a backup to a test database to prove it works.
5. Before any software update, take an extra backup.

To **restore**, the IT team restores the chosen dump into the database and restarts the application. Data entered after that backup is lost, which is why backups must run every night.

## 13.2 Security

| Control | How it works |
|---|---|
| Encrypted connection | The site uses HTTPS (padlock in the browser) |
| Personal accounts | Every user has their own login. Never share passwords or sign in for someone else |
| Roles | Users see only the menus and data their role allows (chapter 1) |
| Account lock | 5 wrong passwords lock the account for 30 minutes |
| Automatic sign-out | After 120 minutes without activity (configurable) |
| Two-step verification | Available per user with an authenticator app (chapter 12.1). Recommended for admins and finance |
| Deactivation | Leavers are deactivated the same day and are signed out at once |
| Rate limiting | Repeated rapid requests, such as password guessing, are slowed down automatically |
| Audit trail | **Admin & Setup** → **Audit Logs** records who did what and when, including sign-ins, session timeouts, changes to patient and billing records, and critical actions. Filter by user or record type |

**Every user should:**

- Sign out or lock the screen when leaving the computer.
- Use a password of at least 8 characters that is not used anywhere else.
- Not write passwords down near the computer.
- Look up only the patients they are treating. Changes to records are logged with your name.
- Report a suspected misuse or lost password to the administrator at once.

# 14. Troubleshooting

Most problems are fixed by checking the role you are working in, refreshing the page, or signing in again. If the problem stays, note the time, the page address and what you clicked, and report it to the IT team.

| Problem | Likely cause | What to do |
|---|---|---|
| "Invalid email or password" | Wrong username or password, or Caps Lock is on | Check Caps Lock and retype. Use the username or email exactly as created |
| "Your account is locked" | 5 wrong passwords in a row | Wait 30 minutes, or ask an admin to **Unlock** it |
| "Your account has been deactivated" | The account was switched off | Contact the administrator |
| Signed out in the middle of work | No activity for 120 minutes | Sign in again. Unsaved entries on the open form are lost, so save regularly |
| A menu item or button is missing | You are in the wrong role, or your role does not have that permission | Check the role chip in the top bar and switch role. If still missing, ask an admin |
| "Access denied" / "You are not authorized" | Your role cannot open that page | Switch to the right role, or ask an admin to review your roles |
| Asked to choose a facility or station again | The session changed facility, or the station was not set | Choose your facility and station; work then continues |
| Mobile number rejected | Not in Tanzanian format | Enter +255 7XX XXX XXX, 07XX XXX XXX or 7XX XXX XXX. Mobile numbers must start with 6 or 7 after the code |
| Patient not found | Spelling, or the patient is registered under another number | Search by mobile or UHID instead of name; try part of the name |
| No free appointment slots | No doctor schedule for that date | Add a roster in **Doctor Schedule** (chapter 4.4), or book as a walk-in |
| Lab test not in Sample Collection | The order may not be billed or paid yet | Collect payment at OP Billing (chapter 9.1) |
| Prescription not in the Prescription Queue | It was saved on an earlier date and filtered out, or already dispensed | Tick **All dates**, or check its status in Prescriptions |
| "Insufficient stock" when dispensing | No stock in an unexpired batch | Check Medicine Stock and Expiry; receive stock (Goods Received) or supply part of it |
| Bed shows occupied after discharge | The discharge was not finalised | Complete all clearances and **Finalize discharge** (chapter 6.5) |

| Problem | Likely cause | What to do |
|---|---|---|
| Amounts show 0 on a dashboard | No data in the chosen date range | Widen the date range |
| Page is blank or unstyled | Old copy cached by the browser | Press Ctrl + F5 to reload; clear the browser cache |
| "We're sorry, but something went wrong" | An application error | Note the time and page address and report it to IT. Do not repeat a payment until IT confirms whether it was saved |
| Printout cut off or wrong size | Printer settings | In the print dialog choose the right paper size (A4 or receipt) and scale "Fit to page" |

**Before calling IT, have ready:** your username, the role you were in, the page address (from the browser bar), the time, the patient UHID if relevant, and a screenshot of the error.