Sage Solution for Healthcare
powered by MIMSYS
Sage Solution for Healthcare, powered by MIMSys, provides organisations with the best technical architecture and modules combined with robust security and tight integration across all departments.

**Modules**

**System Manager**

The Sage Solution for Healthcare System Manager parameterises the billing codes setup, master setup, medical business setup, patient master index, and reports. The System Manager provides maintenance and usage of codes wherever possible and the system supports configuration for International Standard Codes.

The patient master index has sub-modules for patient registration and current visit/encounters. The Registration system is capable of capturing a comprehensive set of demographic and personal details for each patient. The hospital can nominate mandatory fields and optional fields within the user interface. Demographics stored for all patients are available throughout the system to authorised users, ensuring single entry and multiple usages of the same records.

Automatic generation of Unique Hospital Identification Numbers with controls, prevent the same number from being allocated to more than one patient. Maintenance of integrity of the patient Medical Record Numbers through validation logic at the time of creation with a facility for checking new patient data against existing patient data for similar names, Date of birth and other pertinent data minimise the possibility of duplication of patient records.

OP visit and encounters is created for every visit of the patient for OP consultation. The visit type, the department being visited, the physician and the payer’s details are captured.
Patient Appointment

This module is linked with the patient registration system and assists receptionists in tracing doctor’s availability and scheduling patients’ appointments accordingly. Further, it helps in tracking appointments and available slots. Scheduling the patients can be done via the provided calendar.

The Patient Appointment module supports a “waiting list” concept for effective slot management. If a patient doesn’t show up after being allocated a slot, a patient in the waiting list can be allocated to that slot. The system easily shuffles the patients and constantly displays information on the slot status.

Also, the waiting list patient is eligible for a slot if an appointment ends before the expected time. This Patient Appointment module also integrates with Queue Management System and Doctors Desktop. It has the facility to define appointment types such as New, Follow-ups or non-patient appointments. Additional SMS Functionality can be integrated for patient reminders.

Electronic Health Record (EHR)

MIMSYS Electronic Health Record (EHR) helps the physician in handling all his day to day activities like viewing the list of appointments, capturing diagnoses for patients, online ordering of investigation procedures, drugs etc. Doctors can record and view the patients’ medical details for both OP & IP and review diagnostic results online.

The Comprehensive OP and IP EHR specialties help doctors capture data at a discrete element level with integrated ENM Coding. Doctors can record and view patient medical details through Mobile Apps (IOS, Android), which act as technology enablers - providing doctors with a 360 degree view of their patients. The EHR is an electronic record of patient health information generated by one or more encounters in any care delivery process. The information includes patient demographics, progress notes, problems, medication, vital signs, medical history, immunizations, laboratory data and radiology reports.

The System follows the SOAP process (Subjective, Objective, Assessment, Plan). As part of Subjective, the doctor can view and record the chief complaints, family history, social history, allergies, history of present illness with all HPI Elements captured at a discrete level along with a review of systems. The Physical Examination for specialty specific or general systemic can be captured and recorded at a discrete level. As a part of the Assessment, there is a facility to record the initial and final diagnosis with primary and multiple secondary diagnosis using Standard coding terminologies like ICD 10.

The EHR automates and streamlines the clinician’s workflow. The EHR has the ability to generate a complete record of a clinical patient encounter. EHR helps the doctors to improve the quality of care, reduces medical errors, allows fast access to information and improves workflow and productivity.

Admission, Transfer and Discharge (ATD)

The ATD module tracks all the Admissions, Transfers and Discharges in a hospital. It handles the creation of beds and allocating them to patients. It also supports the facilities like admitting a baby to the mother’s bed and linking the mother’s and baby’s inpatient numbers. The system has extensive bed management capabilities including maintenance of different wards, bed types, bed classes and the ability to reserve beds for patient escort.

Sage Solution for Healthcare allows transferring patients from bed to bed and from one ward to another and tracks a patient’s movements during their stay. There is a provision to reserve more than one bed while transferring the patients: this situation typically arises during a moment of the patient to and fro from ICU to the Ward and back.

A comprehensive discharge management process includes discharge care plan with required necessary nursing interventions, a nursing discharge checklist, patient discharge checklist that captures the complete discharge information including details for wounds, dressings, tubes and special equipment sent home with patients along with patient teaching requirements.
The system allows discharge instructions to be generated with a link to the pharmacy system for any medication. The system also facilitates the scheduling of follow up appointments at the time of discharge.

The discharge process starts from pre-discharge wherein alerts are generated, notifying the care providers to plan the necessary discharge process. The system captures the essential details such as the discharge diagnosis, doctor responsible for discharge, date and time of discharge, condition of patient and reason for discharge (Normal, Discharge against Medical Advice, Absconded, and Expired) which are pre-coded.

**Nursing Station & Assessment**

The Nursing Station module can define multiple nursing stations and assign patients in specific rooms to care-providers. The nurses can follow clinical pathways and assist in providing patients the proper care process as per best practices.

The Nursing Station has the facility to send discharge requests to the ADT with the expected time of discharge, schedule follow-up appointments for the discharge cases. Ability to record patient vital signs, nurse notes and assessments. Nurses can check the patient’s schedules for surgical operations by the doctors and prepare the patient for the operation and transfer to the operation theatre on the scheduled date and time.

Nurses can view diagnostic results from a graphical nurse’s interface. The nurses can manage EMR based on uni-dose.

**Nursing Protocols (Integrated Care Plan)**

Sage Solution for Healthcare Integrated Care Plan provides a rich graphical interface for nurses to know the patient medical administration plan defined by the doctor and overall care goal to achieve for the patient.

Nursing care plans give nurses a way to track patients’ progress and provide appropriate treatment. Nurses rely on care plans for quick access to patient’s history, diagnosis, and treatment plan. The nursing care plan is an essential part of patient care. It consolidates a patient’s present diagnosis, physical assessment, treatment, history, and medical records into a clear plan of action. It also automates the workflow for the patient care planning process and helps reduce the time required to create and document patient care interventions. The Care Plan offers a holistic approach to patient care and continues to evolve until the patient is discharged.

The care-providers based on the admitting orders, doctors diagnosis and goals set by the doctors for problems and conditions can configure expected outcomes within targeted time intervals and record interventions, define expected outcomes with actual outcomes statuses. The care-providers can use clinical guidelines along with initial assessment forms and clinical management principals as a part of clinical pathways.

Graphical Interactive Interface lists all the patients assigned to the care-provider, providing them with colour-coded icon driven statuses, reminders and alerts for clinical processes from admission orders to discharge. Care-providers can view admitting orders from doctors, initial assessments such as age and specific problems, integrated care plan configured, allergies and risks, record outcome for goals, record and analyse scheduled vitals, impart patient education, record pre-configured and dynamic care-provider assessment forms. They also have the ability to view notifications from doctors, perform EMAR process for medication, view diagnostic results and status, send notification to doctors, request for referrals, in case of surgeries record required pre-operative, inter- and post-operative notes. They can manage the discharge process from a single user friendly screen.
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**Care Provider Forms**

The System can configure care provider assessment and care forms for various activities such as delivery records with specific forms for immediately new born assessment, new born feeding charts, new born examination, immediate post natal examination, new born flow sheets, artificial feeding and birth notification etc.

Other care-provider forms include delivery room admissions, adult pressure scores, risk assessment, critical care assessments, glasgow comma scale, neonatal/infant Braden Q scale and S BAR form. Specialty forms such as blood transfusion sheet, diabetic worksheet, wound pressure score management, paediatric humpty dumpty screen, neurological observation record, dialysis nursing record, ambulatory chemotherapy record, intake output chart, nutritional assessment, conscious sedation records etc.

**Triage & Emergency**

The Triage Application prioritises the incoming patients based on urgency of care and identifies those who cannot wait to be seen. The triage nurse conducts assessments and enters patient information into the system. Based on the information, the system assigns the patient a triage acuity level.

**Laboratory**

The Laboratory module is tightly integrated with the other modules of MIMSYS and can receive requests for the tests from the modules like Provider Desktop manager, Nursing Station and Operation Room.

Lab Information System follows 21 CFR Part 11 compliance and adheres the CAP check list for laboratory practices.

Lab Information System is built to enhance laboratory workflow to achieve turnaround time for reporting. MIMSYS Lab Information system also interfaces with all brands of Clinical Lab Equipment bi-directionally.

**Radiology**

The Radiology module offers a comprehensive system to cater for all the requirements of the Radiology Department. It provides for scheduling of appointments for examinations, examination processing, post examination results reporting and film tracking.

Appointments can be scheduled to the various clinics for examinations to be conducted. Timetables can be set up for different clinics with details of the days and times on which the clinic operates so the time slots can be allocated to specific patients. Appointment cards are generated and handed over to patients along with the instructions to be followed before arriving for the examination. Appointments can be cancelled if required. Groups of days can be blocked/unblocked for various reasons by the department.

Sage Solution for Healthcare has the capability to approve correctness of radiology orders. Such features are only assigned to authorised laboratory users. Radiology test turnaround times can be reported as the time is captured at each stage – order receipt, test performance and result entry.

**Insurance & Claims Management**

There are options to choose a plan available from different insurance providers.

Department-wise eligible services can be configured, pick co-payment percentage at sheet level or detail level, fix patient deductibles based on annual or per consultation visit basis, force preauthorization by the insurance provider when the amount exceeds a pre-defined limit for a bill or an individual item.

Discounts can be given at sheet level or at detail level. All claims-related activity such as rejected, accepted or settled, among others, is tracked and can be viewed on a real time basis. The patient’s balance as well as the family balance can be tracked. Payment can be received in multiple modes and is integrated with Bank Services, Accounts Receivable as well as the General Ledger modules of Sage 300 ERP.
Evaluation & Management

The main purpose of evaluation & management is to justify the work done by the doctors. Based on the patient type, level of history, level of examination and complexity of decision making in physician-patient encounters the system translates into five digit CPT codes to facilitate billing. Sage Solution for Healthcare supports both 1995 and 1997 guidelines based on the option setting.

Out-Patient Billing

The Out-patient (OP) Billing module provides the hospitals/clinics with a comprehensive facility that tracks all changes and services ordered for a patient from the point of registration to discharge/completion of a visit. The system is flexible and allows the patient billing process to be done at pre-defined periods or at the end of the visit.

The OP Billing module is integrated with other patient modules such as OP ordering, Nursing station and other patient core modules, so that all the billing transactions can be automatically posted to the patient’s records from OP ordering, Pharmacy, Wards, Clinics, Nursing Station, Radiology and Laboratory. The OP Billing module is fully integrated with Insurance and Claims Management modules and furthermore with Sage 300 ERP financial modules - Accounts Receivable (A/R) and General Ledger (G/L).

In-Patient Billing

A hospital’s ability to leverage a new generation of health information technology is often hampered by the use of inappropriate systems. One of the predominant areas that must be addressed is IP flow. IP flow that covers the patient’s journey goes through several procedures, including A- Admission, D- discharge, T- transfer, R- referral and F- follow up. Hence, hospitals need a system that streamlines and tracks the entire inpatient flow and reduces the complexities.

In an effort to accelerate the hospitals’ performance, Sage Solution for Healthcare has enabled a better Inpatient tracking system that streamlines inpatient flow. From the registration to discharge stage, Sage Solution for Healthcare plays a significant role in enabling hassle free inpatient billing like accurate provisional bill, supplementary, final bills and bill settlement.

The flexible graphical interface for tracking and consolidating in-patient details, charges from the time of patient registration till the time of discharge has resulted in rolling out excellent quality care. Most of the time, the hospitals loses its reputation due to frequent billing and readmission errors. Sage Solution for Healthcare covers ADTRF and avoids readmission errors, double billing and several other problems by tracking details of services provided on a daily basis that includes ward/room charge, nursing care, operation charge, packages, consultant, surgeon, laboratory tests, x-rays, radiology, medicines, diet etc.

The system also handles various billing categories such as corporate, insurance, package, extra billings that helps hospitals estimate and decide the further plan of action. By categorising the various billing areas hospitals are easily able to estimate the plan and optimise their performance.

MIMSYS and Sage 300 ERP Financials

MIMSYS is tightly integrated with Sage 300 ERP Premium Edition G/L, A/R & A/P. Transactions generated in/ OP, IP and Day-care bills are posted to the A/R module. The Corporate, Credit & Insurance transactions have two components; Patient Responsibility & Company Responsibility. Patient responsibility amounts collected through cash or credit card are posted to A/R Receipts, whereas for the Company Responsibility amounts create an invoice and is posted to the A/R Invoice. Inventory & Pharmacy items posted in these bills are posted in Sales & COGS is posted in G/L.
Inventory

This module manages the hospital inventory of medical supplies, surgical supplies and lab and radiology items stocked by the hospital stores. The inventory module is integrated with all financial modules such as Accounts Payable, Accounts Receivable and General Ledger as well as relevant modules such as Nursing station, Medical Department, OR and Pharmacy. MIMsys Inventory has a well-defined workflow for inventory procurement and material issue. Multiple stores can be defined and there is a facility to attach sub-stores to nursing stations, OR and departments.

• Tracks the movements of individual items in the hospital. Store-wise document numbering can be generated for all transactions.
• Batch and expiry date wise stock can be maintained.
• Supports multiple segments. Map to UN Medical Inventory codes.
• Cost of goods sold is tracked for every issue. Supports multiple stores, multiple price lists and vendor-wise item setup.
• Combination of one-to-many material requisitions to one-to-many Purchase Orders.
• Supports store-wise item setup and stock. Mapping of relationship between Pharmacy item and Inventory items.
• Analysis utility.

Pharmacy

The Pharmacy Management system caters for maintenance of a comprehensive drug database, dispensing and stock control functions of the pharmacy department. The module maintains a centralised drug information system, covering complete drug formulary with information on the generic name and the trade name. It supports standard dosages, contra indications, interactions, physical and chemical characteristics, different drug classifications and indexes.

It offers a comprehensive application for managing the inventory of the hospital’s drugs and other medical, surgical and laboratory items. It is linked with purchasing system for replenishment of all pharmacy items.

The system takes into account their billing and cost aspects along with tracking of multiple batches with expiry dates in both the billing module and the pharmacy POS. It supports multiple stores and multiple pharmacies.

Pharmacy allows dispensing of drugs against the drug medication orders and prescriptions for both outpatients as well as inpatients. The medications can be for one time use or can be repeated for a period as specified by the doctor. Labels can be generated with flexible format and include dosage and other instructions for the patient.

Operation Room

The Operation Room (OR) module has functionalities like OR booking, scheduling for the surgeons, assistant surgeons and anaesthetist, surgery recording, interfacing the OT Equipment, ordering lab, radiology tests and consumables required for the surgery. Surgeons and anaesthetists can define their own templates for capturing the pre-operative and post-operative notes.

Operation Room seamlessly integrates with other modules such as Patient Accounts, Doctors, Nurses, Inpatients, Outpatients, Medical record and Stock. It is set up for different types of operations such as Major, Moderate and Minor.

Operations can be scheduled for a patient based on the availability of operating rooms. Schedule information includes surgeon, operation selection from available CPT4, ICD 10-CM surgical procedures and any instructions that the surgeon wishes to reach the operating theatre.

It allows for queries to list operations for today, previously done, current day and those scheduled for future. Pre-operative checklists can be set up and used for operations. It also offers set up of surgeon-specific pre-operative, inter-operative, and post-operative notes.
Medical Records Department

The Health Information Management Department maintains and safeguards the confidentiality of medical record information in accordance with the patient’s right to privacy and legal requirements governing such.

The medical record and its contents are the property of Hospital. However, patients and their legal representatives are entitled to inspect or obtain copies of the information. All copies of medical records are released from the Health Information Management Department/Release of Information Office. Other forms of health information such as X-ray films and lab slides not considered part of your medical record, must be requested from those specific departments in which they reside (Radiology Department, Laboratory Medicine Department).

The medical record does not contain billing information and Patient Financial Services Department need to be contacted to obtain copies of billing records. An electronic medical record (EMR) is a digital version of the traditional paper-based medical record for an individual. The EMR represents a medical record within a single facility, such as a doctor’s office or a clinic. There are a number of different types of digital health records that contain most of the same types of information. A personal health record, for example, is health-related documentation maintained by the individual to which it pertains.

Quality Control

Incident Reporting - Incident reports are simply records of all events that are not part of routine medical care. The system helps in gathering data on all events that are not part of routine medical care in hospitals for both research and quality assurance purposes. By analysing the data entered in the system, hospitals can reduce the risk of future incidents.

Blood Bank

The Blood Bank is one of the major components of a hospital, concerned with various related activities including donor registration, physical examination, Blood Components Separation and merge.

- Screen the blood with a set of Lab test Analysis from master setup. Blood Request linked to IP and OP Patients and Blood Issue will happen on request.
- Blood Transfusion to patients and details including Nurse and vital signs during transfusion can be recorded. There are different Inquires available, including Stock wise, date wise, patient and Components wise.

Infection Control (Vaccination & Immunization)

- Immunization eMAR and History, Patient Clinical Assessment and Screening
- Options and Decision Support Setup
- Immunization Type, Medical Administration Item Location, Canned Comments, Special Instructions, Immunization Schedules, Patient Scheduled Immunization, Decision Status

Central Sterile Services Department (CSSD)

The Central Sterile Services Department's (CSSD) main function is to provide sterile items to wards and OT's.

- The CSSD receives contaminated packs of items from various wards and OT’s for sterilization. Items are exchanged depending upon the requirements.
- In CSSD Work lists are generated for contaminated items. They sterilize using different Sterilization methods.
- Transfer the Sterilized items to ward/OT.
- Include different inquiries like stock, location and transaction history.
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Image Management

Sage Solution for Healthcare medical imaging module makes reading, storing and sharing clinical images easier and more efficient than ever. It is a sub-module of EHR used to access, store, view and share medical images. Its innovative technology transforms the power of EHR imaging into tangible clinical benefits.

In terms of quality, efficiency and patient outcomes, Sage Solution for Healthcare enables healthcare facilities to see real results.

Document Manager

The Hospital Document Management System is required as almost every aspect of the medical facility will entail some sort of paper trial. The Document Management system can set up document types and assign barcodes for them.

It is able to store the particular document type placed on the scanner automatically into folders without manual assignment for the patient. Any number of document types such as Lab, Radiology, Dental can be created. The document can be stored for a visit or a case type. Document name, document type, visit id, document date, visit date can be recorded along with review status and review date. Documents can be filtered and viewed based on criteria such as provider, visit ID, case type or document type.

Dietary & Kitchen

The Dietary module is designed to manage the patients’ meal services. This module depends on the In-patient module. The diet can be prescribed for In-patients, Op-Patients, Visitors, Hospital Employees and Staff. It will help people choose, customise and follow their diet. There are several supported diets for example Cardiac Diet, Normal Diet, Diabetic Diet, Renal Diet with details for every one of them.

Salient Features:

Meal Scheduling: A day-wise menu scheduling for the patients can be entered. This schedule can be reviewed according to the changes prescribed. By default, the meal of the previous day is scheduled for the patient. However if the diet is to be changed, diet scheduling can be used to make the required changes. The changes made are followed for all the subsequent days till further changes are made. This option is also used for changing the already prescribed diet to the patient.

Meal Cancellation: If a patient is discharged or ceases to exist due to his/her demise, the diet cancellation can be used to annul the diet prescribed for that patient. However a cancellation can be done only within 24 hours of the discharge of the patient. After 24 hours the diet cannot be cancelled.

Diet Requisition Slip: This option is able to generate a ward wise statement of the diet required by each patient. This can be printed from the diet kitchen. Once printed in the morning (configurable), it will print the patient’s diet requirement for the next 24 hours.

Diet Cancellation Report: This generates the list of the diets that have been cancelled during the past 24 hours. On the basis of this, the kitchen staff can alter the quantity of diets that have to be prepared.

Late Admission Report: This is prepared for those patients who are admitted after the diet is prescribed. Once the diet is prescribed, the diet kitchen will print it just before the diet is given to the patients.

Therapeutic Diet: The diet kitchen will print the therapeutic diet details prescribed by the dietician to different patients.

Alternative Items Ordering

Group Ordering: This has a provision For Group Ordering in a day if the diets are repeated.

Bulk Ordering: In a day, a bulk order can be processed for an event e.g. seminar, meeting or conference.
E-Prescription

Sage E-Prescription module will send insured prescriptions to DHPO site for approval. E-Prescriptions may be rejected or approved after checking in DHPO site.

The status will be automatically updated in the E-prescription module. If it is approved, no comments will show otherwise rejected reason like denial code will show. This helps the pharmacist to work more easily.

Claims and Re-Claims

Sage Solution for Healthcare Claims module will allow sending bills (OP Bill, IP Bill and POS) to insurance sites for approval.

We can create a claim based on visit-wise (all bills for a visit are combined and sent as a single claim)/ Bill-wise.

Claims module will allow creating separate claims for OP internal Bills, OP external Bills, OP Bills+ Pharmacy bills, IP Bills, Pharmacy internal and Pharmacy external.

It will allow attaching reports to a claim (Lab, Radiology, Histopathology, Microbiology, Cytology, Patient summary, Insurance card).

Sage Solution for Healthcare Re-claim screen will allow sending rejected claims again for approval.