

## An ERP for the Hospital

**Objective:** To Provide an integrated Solution for the Hospital, which

- Helps in Efficient Management of the Hospital.
- Enhance Patient Care
- Improve work efficiency
- Improve Fiscal Control
- Eliminate the chances of any Pilferage
- Enable the Growth of the Hospital

### What you need

- Be fully informed about the Vital Stats of the Hospital.
- Lesser dependency on middle & Lower Management. Full control on the staff.
- Take corrective actions based on the data instantly.
- Helps you to Plan any future activity.
- Ultimate Aim – **Better Patient Care with Efficiency.**

### Our ERP HMS

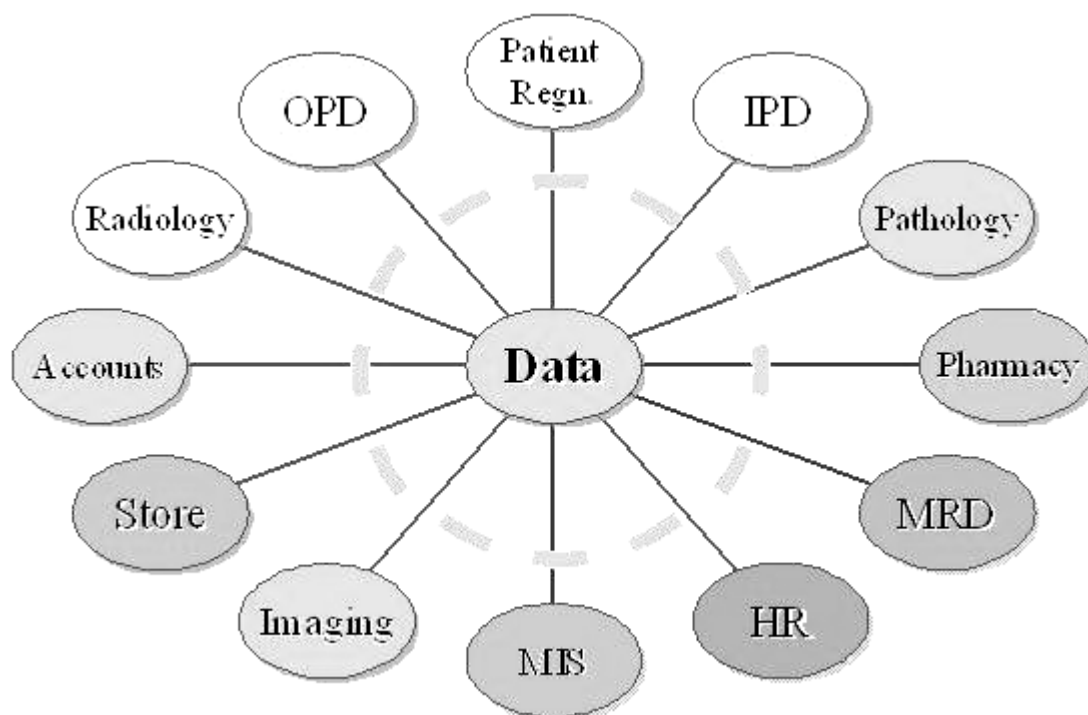
- HMS streamlines and integrate the operation processes and information flow in the hospital to synergize the resources namely men, material, money and equipments through information.
- This ERP facilitates hospital-wide Integrated Information System covering all functional areas like out & in Patients Billing & Management, Patient Beds, Visiting Consultants, Medical Stores, Pathology Laboratories, Radiology Laboratories, Imaging, Pharmacy, Manpower Management, Kitchen and Laundry Services etc.
- It performs core hospital activities and increases customer service thereby augmenting the overall Hospital Image. ERP bridges the information gap across the hospital
- HMS eliminates the most of the business problems like Material shortages, Productivity enhancements, Customer service, Cash Management, Inventory problems, Quality problems, Prompt delivery, Pilferage, TPA Billing etc.

### Key Features

- HMS is a fully-integrated, Hospital Information System Solution.
- HMS gives a total integration of order entry systems, administrative system, and departmental subsystems within a hospital.
- HMS allows for scalability, reliability, efficient data processing, quick decision making, reduced maintenance and overheads.
- The data is stored in a single database providing real time data across applications throughout the hospital. Since all the data is stored centrally, it can be viewed simultaneously from multiple terminals giving all departments' access to timely, up-to-date patient information.
- HMS offers a foolproof data security without user intervention to archive data.
- HMS is a comprehensive information system dealing with all aspects of information processing in a hospital. This encompasses human (and paper-based) information processing as well as data processing machines.
- As an area of Medical Informatics the aim of Admin Plus is to achieve the best possible support of patient care and administration by electronic data processing.

### Modules

We have devised the following modules according to the requirements of a Multi Speciality Hospital and they integrate the various departments into a comprehensive system.



The various modules are

1. Reception Management
2. Patient Registration (OPD & Indoor)
3. Out Patient Management
4. OPD Billing
5. LAB - Investigations Reporting (Pathology & Imaging)
6. Indoor Patient Management
7. Indoor Billing
8. Store
9. Pharmacy
10. Financial Accounting
11. Payroll
12. Canteen
13. MRD – Medical Record Data Management
14. Online Diagnostic Reporting ( we can develop this later if takes time)
15. MIS Reports
16. Online MIS

## 1. Reception Management

Reception is the first point of interaction for anybody coming to the Hospital. It has all the information of the patients, doctors, departments and activities of the Hospital. All enquiries and appointments are scheduled through this module.

All information available here are in real time and any enquiry about the patient status, Room Status, Doctors availability or tariff's for various services is on actual status since the data is constantly updated.

### **This module comprises of the following components**

**Patient Enquiry:** This will provide information of any patient like: Patient status, Name, Address or any other demographic detail.

**Consultants Enquiry:** Any Information regarding a visiting Consultant can be obtained like consultant's availability, days & time of availability, Department, specialization or any other.

**Tariff Enquiry:** This option can be used to enquire about the tariffs of the hospital. The tariffs are classified into departments. Enquiry about any service provided in the Hospital can be made.

**Appointments Scheduling:** This option allocates the slots for various consultants. Any appointment can be booked either by phone or visit, enquired and cancelled.

**In-patient Enquiry:** Any enquiry can be made for any indoor patient in the Hospital. The enquiry can be made as per the Name, Address, Department, Bed, Ward, Patient Registration Number, etc.

## 2. Patient Registration (OPD & Indoor)

Every patient who visits the hospital has to get registered prior to getting any consultation, treatment or investigations done. Registration of patients involves accepting certain general and demographic information about the patient. The patient is allocated a unique Registration number and a Patient Identification number. The Patient ID will remain same for his all subsequent visits to the hospital whereas he will be allocated a new registration number on every visit. The consultation charges (if applicable) can also be collected for the OPD patients during registration and a receipt will be generated.

The following information is required for the registration of OPD Patient

- i. Patient Demographic Details like Name, Age, Sex, Address, Contact number, Nationality, etc.
- ii. Referring Source and Sponsorship / Penal Details
- iii. Department & Consultant to be visited.

For Indoor patients the additional information requirements are:

- iv. Room / bed requirement.
- v. Consultant Incharge
- vi. Treatment required
- vii. Authorisation from Sponsor/Penal if required

After registration an OPD Card is printed for the OPD patients, which list all his registration information. This card is used for the prescription writing by the consultant.

An Admission form is printed with all the registration details for Indoor patients, which serves as the cover page of the patient file.

### **3. Out Patient Management**

After the registration the patient comes to the consultation chamber, where the consultant records his history, diagnose and prescribe medicines & investigation.

The Consultant note down the following details on Patients OPD Card

- i. Complaints
- ii. History
- iii. Diagnosis
- iv. Investigation
- v. Medicines
- vi. Advice
- vii. Next Visit

This information is then entered into the patient data by the consultant or the operator at the OPD Counter. It serves the purpose of tracing patient's visits history and also as a feedback for research & analysis.

The prescription can also be scanned and saved. The scanned data can be entered later into various fields by the operator.

### **4. OPD Billing**

For billing of any OPD service like Pathology Tests, or any imaging investigation, the patient moves to OPD billing counter. Here the services are charged as per the rates already defined for various categories/ penal/ time etc to the patient with his Patient ID. The Payment is collected for the service provided and a receipt is generated.

This module works as an interface with the diagnostic modules. All services will be automatically entered into the respective modules wherever required like lab & Imaging reporting.

The Salient features of this module are

- i. Record Charges to be taken from the patient.
- ii. Record details of the concession & concession authority.
- iii. Consultant charges are automatically picked according to general or emergency charges.
- iv. The charges for the services are automatically picked according to the category or panel of the patient.
- v. The charges are also dependent on time when the service is being given to patient.
- vi. When patient revisits his information will be automatically picked using his identification number.
- vii. Patient can be defined under Cash & Credit OPD.
- viii. All relevant information is transferred to the Investigation departments.

## 5. Investigations Reporting (Pathology & Imaging)

In the routine functioning of a hospital, various types of investigations are carried out. Carrying out number of tests and making the results available promptly is very crucial for assessing the patient's medical status and deciding on the further course of action.

The investigation requisition can be auto-generated (through OPD billing or IPD) or can also be generated here, depending on the system followed in the hospital. The tests parameters are pre defined with the interpretations & formulae wherever applicable. The test results are entered into the software manually or with equipment integration and a descriptive smart report is printed after verification and validation.

The Salient features of this module are

- i. Online investigation requisition can be raised from OPD or IPD or Labs
- ii. Provision for entering results for diverse tests in multiple reporting formats.
- iii. Five options for each test parameter, along with interpretations & explanation.
- iv. Age wise & Sex wise Reference range for Pathology tests.
- v. Warnings & Auto-highlighting of abnormal values.
- vi. Auto calculation and validation of test results with formulae
- vii. All the Reports will be validated before finally ready for printing after verifying its correctness.
- viii. Quality Control Check: The system will have the provision to enter the high and low valid ranges for each test. Special alert for the tests not falling under this value range.
- ix. Role Based Security. Different access password for each department & User.
- x. Comparative analysis of Test result with last visits reports.
- xi. Integration with diagnostic equipments to fetch actual result values directly

## 6. Indoor Patient Management

The Indoor patient module commences when the patient is being registered and allotted a bed in the ward. It deals with the complete treatment and services provided to the patient during his stay in the hospital.

This module works at the nursing station. During his stay in the hospital, every patient is provided various services in terms of consultants visits, investigations, procedures, medicines & consumable, room services, diet, etc. All these services are entered online to the patient record through nursing station. It also interacts with the Investigation module, Store, Pharmacy and sends the requisitions to these departments. This data serves as major input for the IPD billing.

Salient Features

- i. Bed Allocation and Transfer.
- ii. Consultants visit entry.
- iii. Recording Patient's Clinical Data
- iv. Requisition of Investigations required.
- v. Requisition to Store & Pharmacy for Medicines & Consumables.
- vi. OT Billing & Management

## 7. Indoor Billing

Indoor billing module has a supervisory role. The entries for billing are automatically transferred to the patient bill by the respective departments, which provide the service. The services are charged as per the category/panel/package applicable.

Here the bill is compiled and the payment collected from time to time. Provisional and Final bills are generated which provides complete information about the Services availed, its Charges, Advance collected, appropriate Receipts, Refunds, Credit notes, Concession allowed, etc.

### Salient Features

- i. Collection of Payment by Cash/Credit Card/ DD or Cheque.
- ii. Receipts, refunds, Credit Note Generation.
- iii. Provisional & Final Bills.
- iv. Department wise services availed.
- v. Scrutinizing the Deposit Exhaust list and sending requisition for deposit.
- vi. Automatic scrutiny of the credit limit available to the patient
- vii. Provision to bill a patient against another account (LIC account/company account/Donors account etc.)
- viii. Additional payment for Ambulance/attendants at discharge if required.

## 8. Central Store

This module deals with the inventory of all Hospital Equipments, Materials, Consumables, Medicines, Implants & Asset items in different departments of the hospital along with their purchase and supplier details. Requisitions for different items/equipment are sent to this store from different departments and accordingly the Central Store issues items/equipment to various departments and generate purchase orders for purchases. This also maintains records of purchases, stock, and supplier list, item/equipment/material master tables.

The Store module ensures that there is a round the clock availability of a sufficient quantity of drugs and consumable material for the patients in a mode that neither hinders efficient clinical work, nor it becomes a threat to the survival of the Store.

### Salient Features of this Module are:

- i. Maintains the details of all items, its suppliers and purchase details.
- ii. Items can be categorized under different groups.
- iii. Items can be defined for the store i.e. a particular will be able to view only those items which comes under it.
- iv. Generate Purchase order linked with patient indents.
- v. Maintain Separate Stock of Central Store & Multiple Sub Stores.
- vi. A particular store can indent items from all other stores.
- vii. Maintain vendor details from whom Items are being purchased.
- viii. Central Store can acknowledge return of purchased item.
- ix. Various area stores can return items that are not required by them back to the Central Store.
- x. Different store can issue Items to other Stores, Department.
- xi. Strict Check on the Expiry Date of Medicines & Consumables.

- xii. Items can be issued according to FIFO & LIFO check
- xiii. Maintain Reorder Level of Items and warn accordingly.

The following reports can be generated as part of this module:

- i. Report of all items according to their group
- ii. Stock in Hand Report (Group & Batch Wise)
- iii. Stock Valuation on Purchase Rate & M.R.P.
- iv. Report on Stock Movement as when & from where Item was issued and to whom it was issued.
- v. Items Expiry list & warning
- vi. Reorder Level of Items.
- vii. Purchase & Issue Registers.

## 9. Pharmacy

The Pharmacy Module deal with the Retail Sale of medicines to OPD patients and Issue of medicines to the In-patients in the hospital. Its function includes, online drug prescription, inventory management and billing of drugs, consumables and sutures. This module is closely linked to the Billing Module and In-patient Module. All the drugs required by the patient can be indented from the various sub stores.

Salient Features:

- i. This module enables complete control on pharmacy including Purchase & Issue of medicine to IPD or OPD Patient.
- ii. Medicines can be classified under different categories as per the salt or appearance.
- iii. Total amount of the bill for IPD Patient will automatically get added in his bill.
- iv. The Pharmacy can acknowledge the return of items and issue Credit notes.
- v. Items can not be issued after the expiry date.
- vi. Items can be issued according to FIFO & LIFO check.
- vii. Details of all vendors are kept in accordance with their transactions.
- viii. Maintain Reorder Level of Items

The following reports can be generated as part of this module:

- i. Stock in Hand Report (Group wise, Batch wise)
- ii. Expired medicines list. List of all the items according to their group classification. (Batch wise, or without Batch wise)
- iii. Report on Stock Valuation on Purchase Rate, Sale Rate & M.R.P.
- iv. Report on Stock Movement as when medicine was issued and to whom it was issued.
- v. Purchase, Sale & Issue Register.

## 10. Financial Accounting

A Financial accounting module is linked with hospital billing module. You get online accounting of all revenue generated along with expenses incurred. There is no need to enter the revenue entries as they are already fetched from the billing module. All relevant information for the staff salary/wages, consultant share, etc is available.

Salient Features of this module are:

- i. All revenue entries are transferred automatically from billing module.
- ii. Just enter the expense vouchers and the accounts are complete up to balance sheet.
- iii. Consultant Share and other relevant Information already available.
- iv. User defined ledger Groups & Accounts.
- v. User definition of Cost Centre.
- vi. Department wise income detail.
- vii. Cheque Printing.
- viii. Graph with Key Reports.

Key Reports of this module are:

- i. Party Ledger
- ii. Ledger Analysis.
- iii. Day Book
- iv. Cash Book
- v. Bank Book
- vi. Sale Book
- vii. Trial Balance as on date.
- viii. Group wise Trial Balance.
- ix. Profit & Loss Report.
- x. Balance Sheet

## 11. Payroll

Keep track of all staff member's attendance; there leave record and deductions. Generate salary slip and other related reports.

Salient Features of this Module are:

- i. Maintains complete record of all employees including the Employee Code, name, Demographic data, Salary in different heads, Department, Designation, PF account, ESI Account, etc.
- ii. Definition of Salary head as per formula or straight away.
- iii. Leave's as per defined by user.
- iv. Salary settings as per monthly basis, or on wages basis.
- v. Daily/ Monthly attendance record.
- vi. Short Term & Long Term Loans.
- vii. Record of employee's in time, out time, lunch hours, over time.
- viii. Application of salary increment formula.
- ix. Supports all types of Smart Cards, Bar Cards, etc.

Key Reports under this module are:

- i. Salary Register.



- ii. Leave Register.
- iii. Pay Slips.
- iv. Employee List with their complete details.
- v. Over time report.
- vi. Overall PF Report.
- vii. Report of Leaving and new join employees.

## **12. Canteen**

This module deals with the billing of all canteen items and issue to Inpatients or staff. This will work as OPD billing. The rates of all items will be defined as per the category (general/Inpatient/staff) and the items issued to them are billed respectively. Inpatients bill can be reflected in their hospital Bill.

Salient Features:

- i. Definition of rates for various categories.
- ii. Billing of all Canteen Items.
- iii. Dietary requirements of Indoor patients and schedule.
- iv. Auto-transfer of bills for indoor patients.

## **13. Medical Record data (MRD) Management**

Patient's Medical record data is critical for the analysis and research purposes. This data includes patient history, observation, diagnosis and therapeutic conclusions along with the tests details and serves as a source of information for any analysis and research. The purpose for this module is to utilize the patient's medical information and use it for analysis thereby improving patient care.

Salient Features of this Module are

- i. Statistical reports based on diagnosis, age, sex, geographical areas and other parameters.
- ii. Discharge Summary with details of test reports.
- iii. Reports on departments, consultants, etc.
- iv. Birth & Death Records with full details.

## **14. Online Diagnostic Reporting**

This module transfers all the diagnostic reports performed in the day to the hospital website where the patient can view or download the report using the password. This has special significance for telemedicine.

Salient Features:

- v. All Diagnostic reports can be made available on net.
- vi. All patients are provided the password while billing of tests.
- vii. Any patient can view, download or print the report from his home, office or cyber café.
- viii. The same reports can be available to any consultant worldwide for telemedicine and professional opinion.

## 15. Management Information System (MIS) Module

Today's world belongs to Information Technology. Information is worthwhile only if it can be accessed at the right time, by the right person & is useful for the purpose defined. The purpose of this module is to provide you all the information; you need about the working of your hospital. This is an important tool to control and effectively manage the entire operation in the hospital in a very efficient manner and take it to the path of growth.

We have Hundreds of reports covering all aspects & departments of the Hospital. These reports are so designed that you can have the same information in many formats, sizes, fields and output method. All reports are available for Draft, Windows as well as HTML format. You can also have reports for any flexible duration, User, Payment mode, Department, Consultant, panel, etc.

### Key Reports

#### Collection Reports

- Daily Collection Report:
- User Wise Payment Collection
- Total Revenue Report
- Main Department wise Report

#### Department Reports

- Department wise Service Aailed
- Department wise Detailed Revenue
- Service Wise Report.

#### Consultant Report.

- Admitted Patient Report.
- Discharged Patient Report.
- Visiting Consultant Summary.
- Consultant Visits Summary.

#### Consultant Service Share

- Consultant Hospital OPD Share
- Consultant Share Report
- Referred by Cons. Share Report
- OPD Receipt
- Bill wise Consultant Share
- Consultant Share Analysis
- Consultant Directory

#### Summary Reports

- Department wise Consultant OPD
- Service Summary
- Consultant wise OPD Service
- Summary
- Department wise detailed report
- Collection Summary Report.
- Month Wise Collection Comparison

#### Bills Printing

- Detailed Bill (IPD & OPD)
- Summarized Bills (IPD & OPD)
- Daily Provisional Bills
- IPD Bill Break up

#### Balance Payment Report

#### Consent Form

#### Hospital Out Pass

#### OPD Reports

- Department wise OPD Collection
- Department wise OPD Revenue
- OPD Register
- Reprint OPD
- Missing Registration No. Report.
- Cancel OPD List
- OPD Slips
- OPD Card Printing
- OPD Card List Report

#### IPD Reports

- Individual Package Detail
- Package Break up Report
- Discharge Summary Register
- Discharged Patient Revenue
- Cancelled Bills

#### Additional Reports

- Room Summary
- Discharge Register
- Admission Register
- Discharge\Admission Register
- ICD Register
- Consultant wise Performance
- Chemist Report
- Admission\Consent form
- Bill register
- IPD Revenue Summary
- Deposit Exhaust List
- Concession Report

#### Price List

- General Price List
- Room Category wise Price List
- Package Break up Details
- Package format Printing

#### Exception Reports

- Services with Rate Zero

#### PRO Reports

#### Patient Search

#### Patient Stay & Diet Summary

## 16. Online MIS

This is a unique tool in the hands of top management. This module shows a screen where all current activities in terms of revenue are displayed and this screen is refreshed automatically after every 10 seconds. Simply saying, by looking at this screen, top management can find out the collection of various departments in OPD & Indoor, Outstanding of General and panel patients, No. Of admissions, Discharge of the day and so on.

APMIS - [Daily Details]

File Windowlist Help

From 01/06/2005 To 30/06/2005 Refresh Total Collection 11,54,993.65 Total Revenue 12,03,813.62 18-May-2006 12:44 Thu

OPD			IPD			Running Bills			
Collection	3,99,777.00	Doctor Visits	1389	Collection	7,55,216.65	Admitted Patients	18	Outstanding	38,43,445.00
Cash	3,99,682.00	Consultation	65,669.17	Admission Advance	00.00	New Admissions	226	Normal	34,25,695.00
Cheque	95.00	Charges		In Patient Advance	2,20,800.00	Deaths	0	Panels	4,17,750.00
Credit Card	00.00	New Patients	212	Final Payments	5,46,987.65	Discharge	213	Discharged Patient OutStandings	
Revenue	3,99,777.00	Repeat Pateints	1177	Previous Adjustments	00.00	Revenue	8,04,036.62	Normal	38,628.92
Previous Balance	0	Services availed	3502	Refunds	12,571.00	Services availed (IPD)	2102	Panels	18,248.00
Balance C/F	00.00			Cash	7,42,606.65	Bank	12,610.00	Total	56,876.92
				Credit Card	00.00	Services availed (IPD & OPD)	5604		

\*This Report also includes Running Bills. Services are calculated on the actual date basis

Daily Report (01-Jun-2005 To 30-Jun-2005)

	Departme	OPDs	OPD Services	IPDs	IPD Services	TOTAL	TOTAL Services
Daily Report	ADV	ADVANCE CHARGES	4.00	4900	00.00	0	4.00
	AMB	AMBULANCE CHARGES	17.00	5600	8.00	2527.9200000000001	25.00
Room Type Occupancy	OTHER	ANY OTHER CHARGES	00.00	0	6.00	1325.8675000000001	6.00
	ASS	ASSISTANT CHARGES	00.00	0	26.00	20838.3865000000004	26.00
Consultant Report	CONS	CONSULTATION CHARGES	7.00	320	452.00	332668.45199999998	373.00
	CTSCAN	CT SCAN CHARGES	19.00	21580	18.00	22801.8300000000002	37.00
Revenue Report	DIA	DIALYSIS	00.00	0	2.00	2350	2.00
	DRESS	DRESSING	193.00	10027.75	7.00	530.782000000000004	200.00
Panel Wise Report	ECGRES	E.C.G.RESUSCITATION SERVICES	49.00	08346546	39.00	2549.625	76.00
	ECH	ECHO	00.00	0	7.00	7208.3999999999996	7.00
	EOPD	EVENING OPD	64.00	4130	00.00	0	64.00
	GOPD	GENERAL OPD	662.00	15480	00.00	0	670.00
	HOS	HOSPITAL CHARGES	183.00	51515159	880.85	109695.7089000000004	790.00
	LAB	LAB CHARGES.	693.00	28057614	176.00	71174.2109999999981	870.00
Patient Treated	OT	O.T/LABOUR ROOM CHARGES	00.00	0	70.00	89986.539000000000004	68.00
	PHY	PHYSIOTIHPREHY	146.00	50265	00.00	0	146.00
Department Wise Billing	POPD	PRIVATE O P D	594.00	31855	00.00	0	598.00
	PROC	PROCEDURE CHARGES	131.00	48484848	89.00	8565.065500000000006	163.00
Bills Modified	ROOM	ROOM RENT	00.00	0	421.85	232296.2049999999999	250.00
	SEC	SECURITY	2.00	7000	00.00	0	2.00

### Salient Features:

- Complete information of Hospital Activities in terms of revenue.
- Auto Refresh screen every 10 seconds.
- Details of Running & Outstanding payments for general & Panel Patients
- Panel wise billing & Outstanding
- Consultant wise visit report
- Details of Admission & Discharges
- All data available for any selected date range.
- Daily Collection Report.
- Room Occupancy report.
- Panel Wise Report.
- Patient Treated report.
- Department Wise billing details.
- Bills Modification Details.

40 calender days

35 K