

**DISSERTATION**  
**AT**  
**AKHIL SYSTEMS PVT LTD**  
**NEW DELHI**  
**(FEB 15 – MAY 2015)**

**BY**  
**Vidhu Trikha**  
  
Under The Guidance  
  
**Dr. Anandhi Ramachandran**  
  
**PGDHM**  
  
**2013-2015**



**INTERNATIONAL INSTITUTE OF HEALTH MANAGEMENT RESEARCH**  
  
**NEW DELHI**

**DISSERTATION**  
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**(FEB 15 – MAY 15, 2015)**

**HIS IMPLEMENTATION GIAN SAGAR HOSPITAL**

By

Vidhu Trikha

Under The Guidance

**Dr. Anandhi Ramachandran**

**Post Graduate Diploma in Hospital and Health Management**

**2013-2015**



(Completion of Dissertation from respective organization)  
The certificate is awarded to

Name VIDHU TRIKHA

In recognition of having successfully completed her  
Internship in the department of

Title HIS IMPLEMENTATION GIAN SAGAR PUNJAB

and has successfully completed her Project on

Title of the Project


Date 15-May-2015

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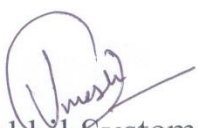
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The following dissertation titled "HIS AND EHR IMPLEMENTATION Gian sagar hospital "at "AKHIL SYSTEMS PRIVATE LIMITED" is hereby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a prerequisite for the award of **Post Graduate Diploma in Health and Hospital Management** for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed or conclusion drawn therein but approve the dissertation only for the purpose it is submitted.

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## Feedback Form

### FEEDBACK FORM

Name of the Student: VIDHU TRIKHA

Dissertation Organization: AKHIL SYSTEMS PVT LTD

Area of Dissertation: HIS IMPLEMENTATION CHIRAN SAGAR HOSPITAL

Attendance: 15 Feb 2015 - 15 May 2015

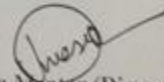
Objectives achieved: Mr Vidhu is familiar with HIS Implementation.  
Early provide support and training to users. Maintenance of HIS  
master data Entry, Customization, setting up formats (LIS, RIS)

Deliverables: Training to Staffs, Customization of HIS  
EMR, Resolve the bugs quickly.

Strengths: Hard worker, Good learner

Suggestions for Improvement: Best of Luck

Signature of the Officer-in-Charge/ Organization Mentor (Dissertation)



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CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled "HIS AND EHR IMPLEMENTATION GIAN SAGAR  
HOSPITAL

Submitted by Vidhu Trikha

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Under the supervision of Dr. Anandhi Ramachandran

For award of Postgraduate Diploma in Hospital and Health Management of the  
Institute carried out during the period from 15 february 2015 to 15 may 2015

Embody my original work and has not formed the basis for the award of any degree,  
diploma associate ship, fellowship, titles in this or any other Institute or other similar  
institution of higher learning.

  
Signature



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## **Introduction**

MIRACLE - HIS (Hospital Information System) is designed to automate each and every functional area of a Hospital. The function areas included both patient care and non-patient functions. MIRACLE HIS is a comprehensive solution designed to have an easy-to-use user interface.

## **Purpose**

The purpose of the report is to explain and understand the functional work flow requirements for proposed MIRACLE HIS in Aster Medcity.

## **About Hospital**

Aster Medcity is one of the upcoming prestigious DM Healthcare hospitals, built across 1 km waterfront on 38 acres at Cheranallur, Kochi. It has 3.2 Million sq. ft. built up area in Phase I & II having 540 beds in Phase I, 500 beds in Phase II. It has 500 seat Medical Convention Centre & 4-star Hotel & Serviced Apartments. It has high class residential development for general Public and Expected Township population of around 10,000.

## **Following Modules covered in SRS:**

- 1. Patient Registration**
- 2. Doctor Appointment**
- 3. OPD Billing & Consultation**
- 4. LIS**
- 5. RIS**
- 6. Admission Transfer Discharge (ATD)**
- 7. Ward Management**
- 8. IP Billing**
- 9. Pharmacy & Drug Store**
- 10. General Store**
- 11. EMR**
- 12. OT**
- 13. Doctors Accounting**
- 14. MRD**
- 15. Dietary Management**
- 16. Blood Bank**
- 17. CSSD**
- 18. Equipment Maintenance**
- 19. E-Claims**
- 20. Emergency**
- 21. Master Health Checkup**
- 22. Physiotherapy**

## 1. Patient Registration

### 1.1 Proposed System

1.	<b>Registration</b>  Screen 1.1	<ul style="list-style-type: none"><li>• <b>Following three type of patients will go for registration :</b><ul style="list-style-type: none"><li>a. <b>Walk-in patients</b> will report to the Front Desk counter for Registration. The patients will be allotted Hospital No on Registration.</li><li>b. Patient through <b>Telephonic/web appointment</b> will have to go for registrations once checked-in to the hospital.</li><li>c. For <b>Emergency patient</b> there is no need to fill up details immediately. We just have to mention Emergency patient then it will register the patient as Unknown and later details can be filled up.</li></ul></li><li>• The Registration screen will be in new mode by default i.e., user can start the new entry directly.</li><li>• Patient Name, Age and other Demographic details are entered along with the Payer Information. On saving the Registration a Registration No will be generated and the system will prompt for proceeding to appointment window.</li><li>• Registration is a mandatory first step for every patient whether Cash, Corporate or Insurance.</li><li>• Patient is handed over a Registration form for entry of Name and demographic details.</li><li>• Provision is given to merge any duplicate Registration No in to any other Registration No and to block any of the Registration No. If the blocked Registration is entered then suitable message to be shown that the Registration No is not in use and has been merged to a New Registration No. Check for duplicate registration to be based on combination of Name, date of birth and Emirates Id/Any Id like Voter Id, Adhar Card etc.</li><li>• Provision to capture Mother Registration No while registering a new born baby.</li><li>• Provision to Company or Insurance wise checklist is available to capture necessary document and details have been collected from the patient.</li><li>• One time Registration fee may be different, Company Wise, Insurance Patient and for the Cash Patient.</li><li>• The Patients Insurance and entitlement details are tagged in the registration</li></ul>
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itself. The entitlement details are entered in master by the insurance department. Provision to add **Insurance Details like TPA, Insurance/Payer, Card, Sponsor, Member Id, Policy No, Valid From, Valid upto, Soap No, Coverage for OP/IP/Both, Copay on Net or Gross, Credit limit, OP Pharmacy Copay(%), IP Pharmacy Copay (%), Copay max limit**, Provision is also available to define Deductible and Copay % for service categories for OP and IP . It will allow multiple Insurance Details to be tagged.

- Setup is provided to mark mandatory field as per each facility, as for each facility the mandatory fields may vary. A Checklist for the necessary document collected. Once a patient is marked as VIP in billing, Ward and Admission screen VIP mark to be shown
- A Registration plastic card with Barcode will be printed and handed over to the patient. Provision for region wise registration report printing.
- Provision to print Registration label stickers. Provision to attached scan files against a Registration No.
- Provision is available for searching of registered patient on first name, last name, DOB, Mobile no, Passport No, Emirates ID/ Any Other Valid ID card.

### Screen 1.1: Patient Registration Form

Welcome! ADMIN ASPL Logout Help


Find Patient Patient Details

MIS Dashboard Flash Report Contribution Report Hospital Performance Performance Analysis Marketing Performance Debtor Position Revenue and Tar

**New Patient** Reg No 240509 New Save Print

**GARIMA MITTAL**, 29 Yrs/Female, UHID 240509, DOB 02/01/1984, Home #, Mobile # 8447324426

**Patient Demographics** Demographics Permanent Address Attach Doc. Appointment OP Order Bill

 Mrs. First Name \* Garima Middle Name Last Name Mittal Gender \* Female DOB \* 02/01/1984 New Born ☐ Mother Reg. # Age(Y-M-D) 29 0 0 Guardian \* W/O Karan Mittal

Address \* Street City 12/854, 18 th floor Country \* INDIA State \* HARYANA City \* GURGAON Area \* DLF PH I Home # Mobile # \* 8447324426 Email Marital Status Married Nationality Indian Zip

**Emergency Contact** Name Contact No.

**Payer Info** Payer Type ☒ Direct Patient ☐ Company ☐ Insurance Payer \* TARIFF VERSION 5.0 Sponsor \* TARIFF VERSION 5.0

**Referral Info** Provider \* A Lead Source Select Status Active Referred Type Self Referred By Select

**Other Info** Identity Type CPR Identity # Religion HINDU Diagnostic Only ☐ VIP ☐ VIP Narration



Following options will be present in Patient Registration form:

Sr. No.	Options	Description
1.	Registration Number	It's a unique id number generated for each patient after registration.
2.	Attach Document	To attach any patient record available
3.	Upload Image	To upload the image of the patient available and it can be integrated to webcam.
<b>Demographic Details</b>		
4.	Name	For entering name of the patient various boxes are provided which includes Salutation, First Name, Middle Name, Last name
5.	Gender	To mention gender of the patient
6.	Date of Birth	To enter birth date of patient
7.	Age	It mentions age of the patient in Year – Month - Days.
8.	Address	For entering address various text boxes and dropdowns are provided which includes Address, Address line 1, Country, State, City, Area and Zip code
9.	Contact	For contact information boxes are provided which includes home number, mobile number, and e-mail address.
10.	Nationality	To mention nationality of the patient
11.	Marital Status	To mention marital status of the patient
12.	Mandatory Fields	Setup to be provided to mark mandatory field as per each facility in admin module, as for each facility the mandatory fields may vary.
13.	Merged Registration	Provision is there to merge any duplicate Registration No in to any other Registration No and to block any of the Registration No.
14.	New Born Reg.	Provision is there to capture Mother Registration No which helps pick up demographic details automatically
<b>Emergency Contact</b>		
15.	Next of Kin	Details of the person provided- name, relationship to patient, address, phone number, email address.
<b>Payer Info</b>		
16.	Direct patient	It will include options for Private patient/Cash patient.
17.	Company	It will include that patient which belongs to some company tariff.
18.	Insurance	It will include that patient which comes under the Insurance company. Provision to add Insurance Details <b>like Insurance Details like TPA, Insurance/Payer, Card, Sponsor, Member Id, Policy No, Valid From, Valid up to, Soap No, Coverage for OP/IP/Both, Copay on Net or Gross, Credit limit, OP Pharmacy Copay (%), IP Pharmacy Copay (%), Copay max limit</b> , Provision is also available to define Deductible and Copay % for service categories for OP and IP. It will allow multiple Insurance Details to be tagged. It allows multiple Insurance Details to be tagged.
<b>Referral Info</b>		
19.	Provider	To mention the referral doctor name
20.	Referral Type	To mention type of referral like by self , friends, doctor etc.

21	Lead Source	Source of referral
22	Referred by	To mention referral hospital
23	Status	To mention status of patient Active or Inactive
<b>Other Info</b>		
24	Identity type	To mention type of the identity available for patient like passport etc.
25	Religion	To fill religion of the patient
26	Diagnostic only	To mention if patient has come for diagnostic service only
27	VIP	To mention if patient is a VIP along with a VIP note

## 2. Appointment Scheduling

### 2.1 Proposed Systems

2.	<b>Appointment Screen 2.1</b>	<ul style="list-style-type: none"> <li>• Appointments are given for Consultation, Investigation, Procedure, and MHC.</li> <li>• The Appointment window has a date calendar on top and a list of Specialties/Department/Doctors/facility to filter.</li> <li>• To book an appointment the user has to select the appointment date and then the Doctor/Department from the list. This selection will show the available Doctors with time slots. The desired time slot can be double clicked which will pop a new window for Hospital No /Patient Name entry.</li> <li>• System is capable to handle both appointments with Registration No and also of patient without any Registration No (Telephonic Appointment - Unregistered Patient)</li> <li>• If the appointment option is opened after patient's registration then in the Appointment window the same patient details get filled up.</li> <li>• If any message has been tagged to Patient, then on entry of Registration it will be seen. If it is an alert then user should be able to proceed after the alert else if it is of block type the user should be allowed to proceed.</li> <li>• On entry of Registration No in appointment screen, the system will show list of already pending appointments of the patients with respective status like - open, no show, cancelled, visited etc.</li> <li>• Appointment can be booked for a one schedule slot or multiple slots. The system even provides provision to book recursive appointment.</li> <li>• On saving of appointment details the particular slot gets booked and also the system send an SMS to the patient. SMS will be send a day prior to appointment for appointment confirmation and based on patient confirmation SMS reply by [Y] or [N] the appointment should get confirmed or get cancelled. (DM to provided 2 way SMS gateway for the requirement).</li> <li>• Unregistered patient appointments will be shown in Appointment view grid.</li> </ul>
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	<ul style="list-style-type: none"> <li>• Provision to book standby appointment will be done by access right.</li> <li>• Doctor wise Queue No is generated on patient check-in. Any Remark entered in the appointment is also shown in the appointment screen.</li> <li>• The Appointment has to be acknowledged (Patient Present) once the patient arrives and sent to the Doctor chamber. On acknowledgment of the patient in front office an OP Encounter/Visit No will be created. In Out Patient Clinic Module, Clinical detail of only Check-In patients can be entered.</li> <li>• The OP Visit No created will be created for a Doctor and all billing of this encounter will be done on the Registration no and OP visit no will help in calculating OP Doctor Incentives.</li> <li>• By default all appointments are booked as tentative and a day prior to the appointment a confirmation call is made to the patient and once confirmed the status is changed to confirm. Print Appointment Slip of a particular patient's appointment. Print Appointment report of a particular doctor or Department for a date range.</li> <li>• Provision to search all appointments of a Registration No and is able to cancel print any future appointment. Once an appointment is confirmed and checked in, provision given to Create a visit entry of the patient (Same as Open OP Encounter for which we will assign a Doctor against each Encounter).</li> <li>• Provision is provided to doctor wise slot time definition.</li> <li>• Provision is available to book a standby appointment in the same slot. Doctor Wise setup is provided as to how many appointments can be given in a slot. Today appointment summary is shown in the appointment screen.</li> <li>• If an appointment is booked by patient Registration No then a file request will be send to MRD for the appointment date time.</li> <li>• The Appointment screen will have color codes for Appointment Given, Appointment Acknowledged, and Slots Blocked. Etc.</li> <li>• The Appointment module has features of Copy &amp; Paste and Cut &amp; Paste, i.e. more than one appointment for a patient without entering the Patient details again and changes the appointment timings.</li> <li>• Repeat/Serial Appointment i.e. patient who has to visit the doctor frequently may get his serial appointments done at a single go using recursive appointment option.</li> <li>• While cancelling and appointment reason for cancellation is mandatory and an SMS will be send to the patient for the cancellation.</li> </ul>
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- Provision for E- appointment

## Screen 2.1: Appointment Window

Following options will be present in Appointment Window:

Sr. No.	Options	Description
1.	Filter	To filter the doctors availability according to department wise
2.	Date Calendar	For choosing date to filter and give appointment
3.	Specialization	To filter doctor slot specialty wise for appointment
4.	Facility	To filter doctor slot facility wise for appointment used for group of hospitals
5.	Provider	To filter doctor wise slot for appointment
6.	Weekly View	To view the weekly appointment slots
7.	Doctor Slot	To give appointment as per the doctors availability. Timing slots are provided to each doctor for consultation
8.	Break and Block	To break and block the timing slot of doctor as per their availability

### Includes Scheduling of Appointment for –

1. OPD and IPD Doctors
2. Investigations/Modality/Machine/Procedure
3. OT

### **Mode of Appointment -**

1. Appointments may happen over phone and online.
2. Personally by Patient or
3. By Patient's Attendant

**Appointment Scheduling for OPD Doctors** – Doctor who is a consulting doctor is available in his consultation room in OPD area. The availability of a doctor depends on his/her roster defined by the management and, according to that, patient appointment may be confirmed.

The patients who visit the hospital for consultation may come with three conditions –

1. Request for a particular doctor
2. Request for a particular department
3. Has a complaint but doctor/department is not known to him

In case of first condition, if the said doctor is available, simply fix an appointment with that doctor. In case of second condition, he is given information about all the available doctors in that department and with his consent, he is sent to the doctor of his choice. In case of third condition, the Guest Relations person sitting at the front desk needs to understand his complaint, interpret it in clinical terms and accordingly direct him to a particular doctor. In this scenario, Guest Relations person may even take the help of some physician.

If the patient is referred from any external doctor/hospital, his entire referral detail is captured as this data is important to the marketing department. While fixing an appointment, availability timings of the doctor need to be kept in mind and also the queue needs to be managed.

### **Transfer/Rescheduling of Appointment**

There are times when, even if the appointment of a patient is fixed with some doctor, that doctor is not available in OPD (due to Surgery, academic meets etc.). In such a case, the appointment needs to be either transferred to some other doctor of same specialty, or rescheduled for the same doctor for some other date or time when that doctor will be available after taking consent from the patient.

### **Cancellation of Appointment**

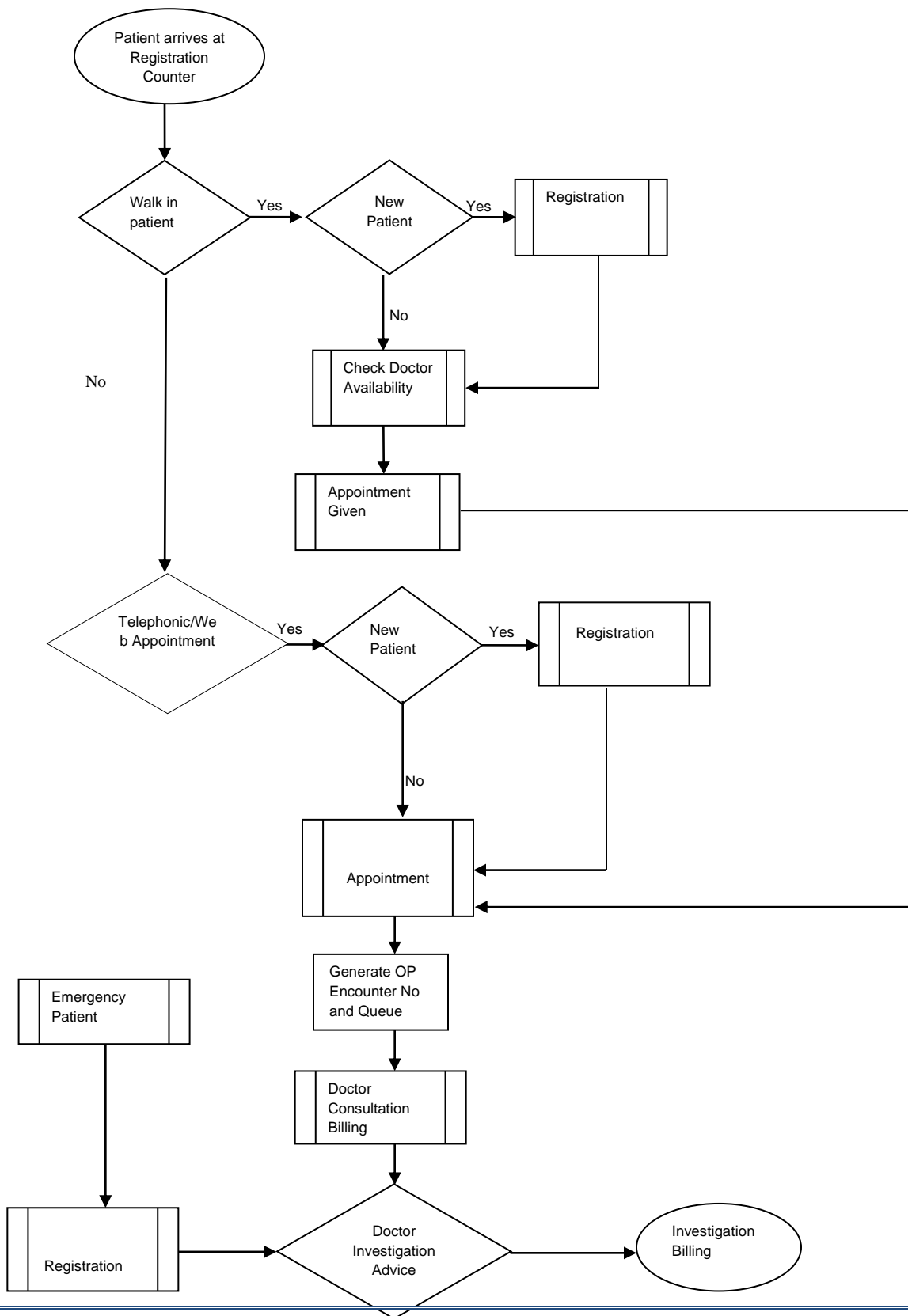
In case, after scheduling of appointment, patient is not able to visit the doctor due to any reasons and he even doesn't want to get his appointment shifted for any future date, his appointment needs to be cancelled.

### **Other important features of Appointment Scheduling are -**

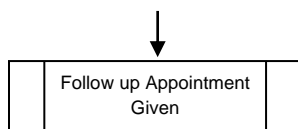
1. No show capture – the system should capture the times when patient doesn't turn up even after getting his appointments done against any clinical/non-clinical resource.
2. Allow specified resources to be associated with an appointment (personnel, equipment etc.)
3. Allows scheduling of surgical procedures from the OPD itself so that the doctor himself can fix a schedule of a surgery if he has advised for the patient.
4. Allows linked appointments & consultations between departments e.g. Imaging and OPD, or between doctors with cross-viewing of records
5. System alerts if there are conflicting appointments i.e. multiple appointments against a doctor at the same time or multiple appointments against patient at the same time.
6. Can be able to send text messages to patients in the event of a clinic cancellation



## 2.2 PROCESS FLOW FOR REGISTRATION & APPOINTMENT



NO



### 3. Consultation & OP Billing

#### 3.1. Proposed Systems

3	<b>OP Billing &amp; Consultation</b> Screen 3.1	<ul style="list-style-type: none"><li>• The Appointment window will give access to the consultation billing option.</li><li>• The option will fetch the Patients Registration and other details from the appointment window. The Consulting doctors name and fee will get selected. The consultation service and charges will be filled up by the system based on the follow-up rules defined.</li><li>• Provision for discount and different mode of payments are available.</li><li>• Provision to create OP Encounter Directly by entering the Patient Registration and selection of Doctor.</li><li>• Provision required for Laboratory, Radiology and Op Nurse Station to enter OP orders if the orders are not entered by the doctors and the doctors just write a paper prescription. A setup to be made whether the sample for LIS and RIS will be inserted on Order Entry or on Billing.</li><li>• On entry of Registration the default Op Encounter gets attached and all the orders entered by Doctors thru EMR and any other Orders entered by Laboratory, Radiology or OP Nurses should show up in the billing screen.</li><li>• The billing person based on right assigned to him should be able to remove or add any services.</li><li>• Provision to change Insurance details or reselect any other as default if multiple insurance companies are attached to the patient. The Copay and deductible calculation to be done as per the patient payer or insurance.</li><li>• If any message has been tagged to Patient, then on entry of Registration it should be shown. If it is an alert then user should be able to proceed after alter else if it is of block type the user should be allowed to proceed.</li><li>• Provision to select the patient by scanning the patient card by barcode reader.</li><li>• Common Interface is used to enter or change Insurance Details like Copay and deductible details for OP, IP and Pharmacy. With option to select copay on Net Amount or gross Amt. Applicable for all Service Category or selected service category.</li></ul>
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		<ul style="list-style-type: none"> <li>• Separate bill for OP service and OP Pharmacy.</li> <li>• Provision for billing <b>Antenatal Packages</b>. As and when the patient arrives for availing any investigation or consultation, provision to be provided to render the service or consultation. If any patient discontinues the antenatal package in between then refund of the service is done on basis of the service actual amount (from the total package amount sum of the actual amount of the service rendered is subtracted and the rest is refunded). The system will be capable to show the count of services availed and the services not availed. The Package can be taken up by the patient any time during 12th week and 20th week tentatively.</li> <li>• In case of Insurance patients where service approval is required, a service approval code is to be entered during billing. If users are authorized to enter discount then only he should be able to enter any discount.</li> <li>• In case of Radiology services are billed, an HL7 order message is send to PACS system for scheduling and further management. Billing person have the provision to remove any of the ordered services if it has not been acknowledged by the department. He/She will be able to add any new service in the bill along with the ordered services.</li> <li>• In case an OP Encounter is created, but no orders are entered and the consultation is also not to be charged then option is required to close the visit without billing.</li> <li>• Tariff of the services to be charged based on the combination of Payer and network. The default discount setup of the services should also be based on combination of Payer and Network. In case of CASH bill if a service is not provided then option to refund the service. Every financial transaction should ask for a password re-entry.</li> <li>• Provision for accepting multiple currency payment for billing. Provision for Copay Amount to be refunded for any selective service.</li> <li>• Provision for partial receipt or full outstanding of cash bills.</li> <li>• Automatic cancellation of OP orders put by Doctor by a cut-off date. By the 3rd of a month all previous months unbilled op orders should get closed.</li> <li>• If a patient has availed an Antenatal package, a message to be shown in EMR, Appointment and OP billing screen that the patient is under an Antenatal package</li> <li>• Cancellation of bill to be allowed on till a certain period of time and after that to be blocked.</li> </ul>
--	--	---

- The Contract summary for the Insurance Company to be shown in the billing screen.
- Option to Validate the Dispatch Or Uploading of the Insurance Bill for valid approval code, other insurance parameters like policy no, cert no, Member Id etc. without which e-claim upload not to be allowed and mandatorily someone has to validate each bill and mark verified before upload.
- Alert Is needed for the outstanding of the Credit patient, currently it is only for the Cash Patient

### Screen 3.1: OP Billing Checklist

Menu Task

Welcome! ADMIN ASPL Logout Help

Patient Lists Patient History OP Order Master Activity List OP Order Bill IP Order Bill Billing Dashboard Refund Pricing Advance Collection Pri

OP BILL Reg No 1555 New Save Print

**Patient Details**

PHOTO NOT AVAILABLE Arya Sunil Lokhande Male/9 Yr 1 Mnth 25 Days GURGAON-NEW GURGAON HARYANA

**Bill Details**

Year 13-14 Type Credit Bill# Date: 26/09/2013 17:06

**Payer Details**

Type \* Company Payer \* CGHS (PRIOR NOV06) (CREDIT) Sponsor \* CGHS (PRIOR NOV06) (CREDIT) Card Name

**Other Details**

Referred Type Self Referred by Name Select Treatment / Available Limit 0.00 / 0.00 Advance / OutStanding 0.00 / 0.00 Disc. Remove Disc.

Service Payment Adjustment Outstanding Checklist Patient Diagnosis Entry

☒ Check hospital name on the referral letter  
☒ Validity as mentioned on the referral letter  
☐ Signature and stamp of the CMO of dispensary on the referral letter.  
☐ Match patient name on referral letter with CGHS smart card  
☐ Clear photocopy of smart card of the patient (front and back)  
☐ Service provided as per MOU and correct tariff  
☐ Old prescription in case of diagnostic facility availed as per referral letter.  
☐ Attach referral letter,Original bill,CGHS Smart card,copy of prescription on same day and old prescription in case of diagnostic mentioned in the referral letter.

Net Amt 0.00 Deductable % 0.00 Received 0.00 Currency Rs Received 0.00  
Advance 0.00 Deductable Amt 0.00 Balance 0.00 Rate 1.00 Conv.Amt 0.00

☐ Refunded Service ☐ Excluded Service ☐ Approval Required

Service Note Narration:

### Screen 3.2: Antenatal Package Billing

Welcome! ADMIN ASPL Logout Help

Find Patient Patient Details

Patient Lists Patient History Master Activity List IP Order Create OP Visit OP Order OP Billing IP Billing Billing Dashboard Refund Advance

OP Bill Reg No 151 Enc #.

Bill No OPCA14/70926

**Patient Details**

PHOTO NOT AVAILABLE

Treatment / Available Limit 0.00 / 0.00  
Advance / Outstanding 0.00 / 0.00

**Bill Details**

Year 13-14  
Type Cash  
Bill# OPCA14/70926  
Date: 26/11/2013 12:16

**Payer Details**

Type \* Direct Patient  
Payer \* Self Pay  
Sponsor \* Self Pay  
Network

Co-Pay Disc. Remove Disc

**Other Details**

Prescribing Doctor \* ASTHA MISHRA  
Referred Type Self  
Referred by Name Select  
Facility Select

Service Payment Adjustment Outstanding Checklist Patient Diagnosis Entry

Sno	Service Name	Provider	Unit	Charge	Disc Amt	Patient Amt	Payer Amt
1	ASTER ANTENATAL PACKAGE		1.00	4000.0000	0.0000	4000.0000	0.0000
2	CONSULTATION FEE - NEW VISIT		12.00	100.0000	0.0000	1200.0000	0.0000
3	URINE ANALYSIS(DIP STICK)		3.00	7.9200	0.0000	23.7600	0.0000
4	CBC - COMPLETE BLOOD COUNT		3.00	71.2800	0.0000	213.8400	0.0000
5	CTG		2.00	118.8000	0.0000	237.6000	0.0000
6	BLOOD SUGAR (FASTING)		1.00	31.6800	0.0000	31.6800	0.0000
7	VDRL (RPR)		1.00	55.4400	0.0000	55.4400	0.0000
8	HIV (ELISA)		1.00	138.6000	0.0000	138.6000	0.0000
9	HBsAg (ELISA)		1.00	106.9200	0.0000	106.9200	0.0000
10	HCV RNA PCR QUALITATIVE		1.00	784.0800	0.0000	784.0800	0.0000
11	TSH (THYROID STIMULATING HORMONE)		1.00	130.6800	0.0000	130.6800	0.0000
12	GTT (GLUCOSE TOLERANCE TEST - 100GM)		1.00	198.0000	0.0000	198.0000	0.0000
13	URINE CALCIUM		1.00	59.4000	0.0000	59.4000	0.0000
14	HVS FOR C & S GARDNERELLA VAGINALIS		1.00	118.8000	0.0000	118.8000	0.0000

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### Screen 3.3: Antenatal Package Service Rendering




Welcome! ADMIN ASPCL Logout Help

Find Patient Patient Details Patient Lists Patient History Master Activity List IP Order Create OP Visit OP Order OP Billing IP Billing Billing Dashboard Refund Advance Col

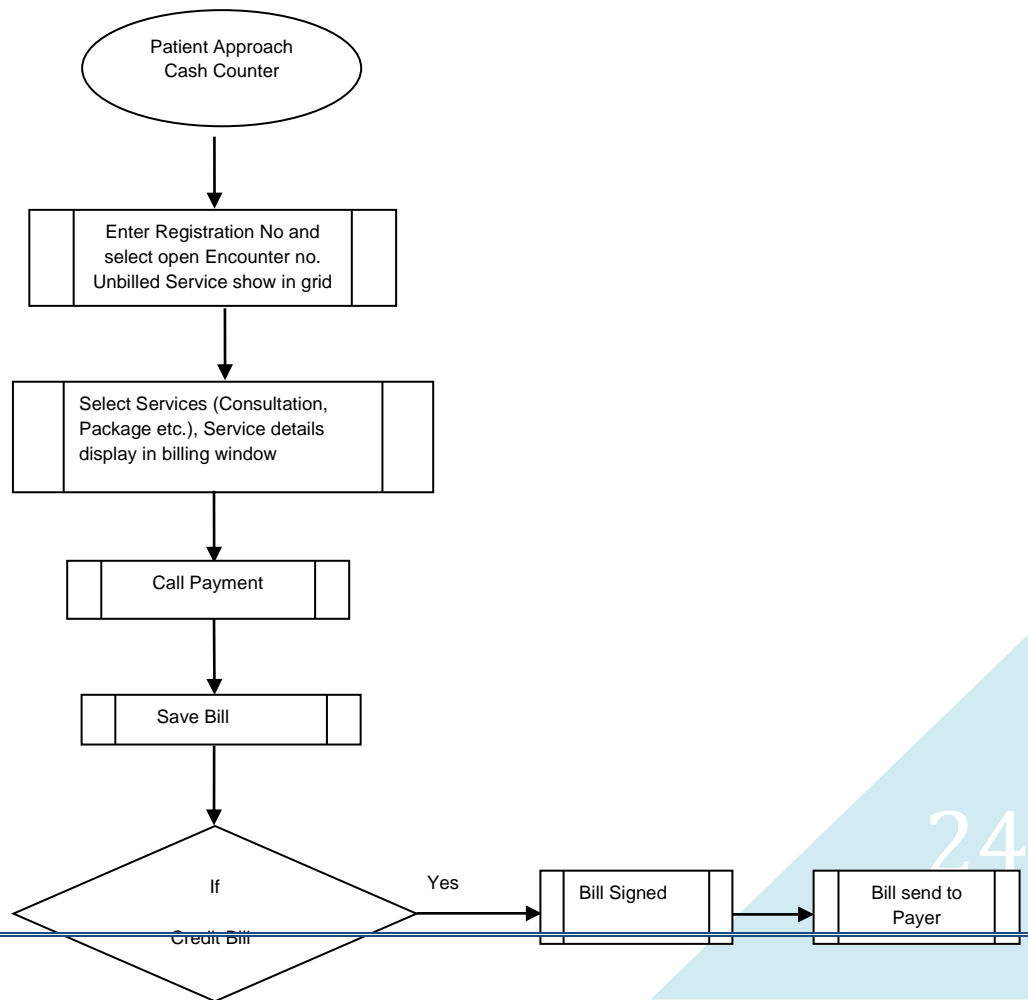
Package Details Reg No 151 Enc # Package Name ASTER ANTENATAL PACKAGE New Save Print

Data Saved

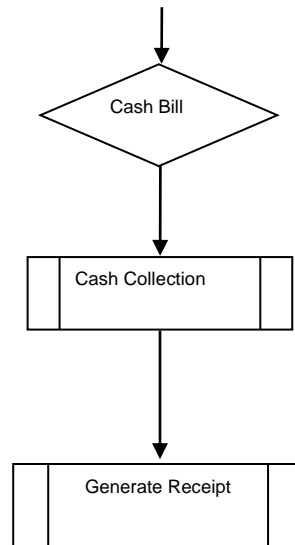
<b>Patient Details</b>  Test 2 Male/25 Yr Dubai Dubai Invoice Amount 4000.00 Advance / Outstanding 0.00 / 0.00	<b>Bill Details</b> Year 13-14 Bill# OPCA14/70926 Date 26/11/2013 10:48AM	<b>Payer Details</b> Type Cash Payer Self Pay Sponsor Self Pay Card Name	<b>Other Details</b> Facility Al Raha Hospital Package Name ASTER ANTENATAL PACKAGE Package Status OPEN
---	--	--	--

SNo	Service Name	Doctor Name	Total Units	Units Consumed	Balance Units	Package Amount	Actual Amount	
1	BLOOD SUGAR (FASTING)		1	0	1	0.00	0.00	<input type="checkbox"/>
2	CBC - COMPLETE BLOOD COUNT		3	0	3	0.00	0.00	<input type="checkbox"/>
3	CONSULTATION FEE - NEW VISIT	ASTHA MISHRA	12	1	11	100.00	100.00	<input checked="" type="checkbox"/>
4	CTG	CHITRAMANI SUNDARARAJU	2	1	1	118.80	150.00	<input checked="" type="checkbox"/>
5	DOUBLE MARKER TEST		1	0	1	0.00	0.00	<input type="checkbox"/>
6	GTT (GLUCOSE TOLERANCE TEST - 100GM)		1	0	1	0.00	0.00	<input type="checkbox"/>
7	HbA1c (ELISA)		1	0	1	0.00	0.00	<input type="checkbox"/>
8	HCV RNA PCR QUALITATIVE		1	0	1	0.00	0.00	<input type="checkbox"/>
9	HIV (ELISA)		1	0	1	0.00	0.00	<input type="checkbox"/>
10	HVS FOR C & S GARDNERELLA VAGINALIS		1	0	1	0.00	0.00	<input type="checkbox"/>
11	RUBELLA IgG		1	0	1	0.00	0.00	<input type="checkbox"/>
12	RUBELLA IgM		1	0	1	0.00	0.00	<input type="checkbox"/>
13	TSH (THYROID STIMULATING HORMONE)		1	0	1	0.00	0.00	<input type="checkbox"/>
14	URINE ANALYSIS(DIP STICK)		3	0	3	0.00	0.00	<input type="checkbox"/>
15	URINE CALCIUM		1	0	1	0.00	0.00	<input type="checkbox"/>
16	VDRL (RPR)		1	0	1	0.00	0.00	<input type="checkbox"/>
Total							218.80	250.00

### 3.2 PROCESS FLOW of OP Billing



No



#### 4. Laboratory Information Systems (LIS)

##### 4.1. PROPOSED SYSTEM

4	<b>LIS</b> Screen 4.1 Screen 4.2	<ul style="list-style-type: none"> <li>• In the proposed system the Order entry can be done in EMR by doctor or can be entered from front office for patient.</li> <li>• From there billing of the order can be done. After that the information again goes to Phlebotomy department. The Phlebotomist can select the records and collect the sample whenever the patient approaches the Phlebotomy department. A unique lab no will be generated for each order.</li> <li>• Provision for generation of Daily Serial Lab No. Provision for generation of Lab No based on a setup thru which lab no can be generated monthly, yearly and as per Lab stations.</li> <li>• A sticker with detail of patient name, age, sex and laboratory no and test name can be printed and pasted on the sample vacutainer. A test result sheet format can also be printed.</li> <li>• The location where test facility is not available then after sample collection the sample is dispatched to the location where test is being performed.</li> <li>• Once the sample is handed over to the laboratory department the concerned department will acknowledge the sample. On sample acknowledgment in the department the test records can neither be cancelled nor refunded. The department will have to de-acknowledge the sample and then only the test can be cancelled or</li> </ul>
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refunded.

- Once the test results are processed the results can be entered in the result entry screens or in case of laboratory equipment interface the results can be fetched into the screen verified and saved. The system will show alerts in case any abnormal value lesser or higher than the normal range is entered. Provision for entry of Interpretation and remark will also be available.
- The department authorized person will have to finalize the test report and then only the final reports can be printed. There is provision to release provisional reports as well. Also the reports can be printed from any of the location. On finalization of report the wards will be able to view the results on screen.
- Provision for SMS for panic results and provision for Emailing lab Reports is also given.
- Provision to change the Sample Collection Date Time in few selective cases in Phlebotomy.
- The System also provides a facility of dispatch, using which the dispatch status of each report can be updated on physical delivery of the reports. Through interface the outsourced lab investigation or orders can be traced by pulling the data from interfaces for outsourced lab orders.

### Screen 4.1 Phlebotomy Module

The screenshot displays the Phlebotomy Module interface. On the left is a vertical menu with options: Phlebotomy, Sample Collection, Sample Dispatch, Sample Acknowledge, Sample De Collection, Dispatch Cancel, Sample UnAcknowledge, Lab Request, Lab Request List, Change Station, Registration, Appointment, Billing, Clinical Masters, Administration, EHR, LIS Setup, Phlebotomy, LIS, RIS, Provider Dashboard, and MIS Dashboard. The main window is titled 'Welcome! ADMIN ASPL' and contains a 'Find Patient' tab and a 'Patient Details' tab. Below these are tabs for 'Sample Collection', 'Sample Dispatch', 'Sample Acknowledge', 'Sample De Collection', 'Dispatch Cancel', 'Sample UnAcknowledge', 'Lab Request', and 'Lab Request List'. The 'Sample Collection' tab is active, showing a list of sample collection records. The records are filtered by 'SNC OP - 99 IP - 3'. The list includes columns for Facility, Lab No, Reg No, Manual Lab No, Order Date, Patient Name, Age/Gender, Referred By, and Select. The records are as follows:

Facility	Lab No	Reg No	Manual Lab No	Order Date	Patient Name	Age/Gender	Referred By	Select
DMC	1130425	205243		22/04/2013 6:08AM	Anil Kumar	32 Yrs/Male		Select
DMC	1130424	205240		20/04/2013 12:15PM	Tapes	1 Mths 14 Days/Male	Ogunsina	Select
DMC	1130422	205240		20/04/2013 11:28AM	Tapes	1 Mths 14 Days/Male		Select
DMC	1130421	205234		20/04/2013 6:31AM	Avinash Sharma	32 Yrs/Male	Alli	Select

Below the list is a pagination bar showing '32 items in 8 pages'. The bottom section of the interface shows a detailed view of a sample collection. It includes a table with columns: Investigation, Sample Coll. Date, Remarks, Entry Site, DI Sr No, Print, and Details. The investigations listed are:

Investigation	Sample Coll. Date	Remarks	Entry Site	DI Sr No	Print	Details
HAEMATOLOGY						
COMPLETE BLOOD COUNT -CBC(HB/TLC/PCV/RBC/PLATELET)					Print Label	Details
MICROBIOLOGY						
WIDAL TEST					Print Label	Details

The footer of the interface reads: 'Akhil Systems Pvt. Ltd... Your Healthcare IT Partners... All Rights Reserved.'

### Screen 4.2 LIS Module

Menu LIS

Sample Status Result Entry Result Attachment Result Finalization Sample Acknowledge Sample UnAcknowledge Cancel Finalization Result Printing

Sample Status - Laboratory

Print Investigation(s) Tag External Center Lab History Inv. Result

Source OPD From 07/05/2013 To 07/05/2013 Status [ALL] Facility [ALL] Manual Request(s) Only

Search By Lab No Test Priority [ALL] Entry Site [Select]

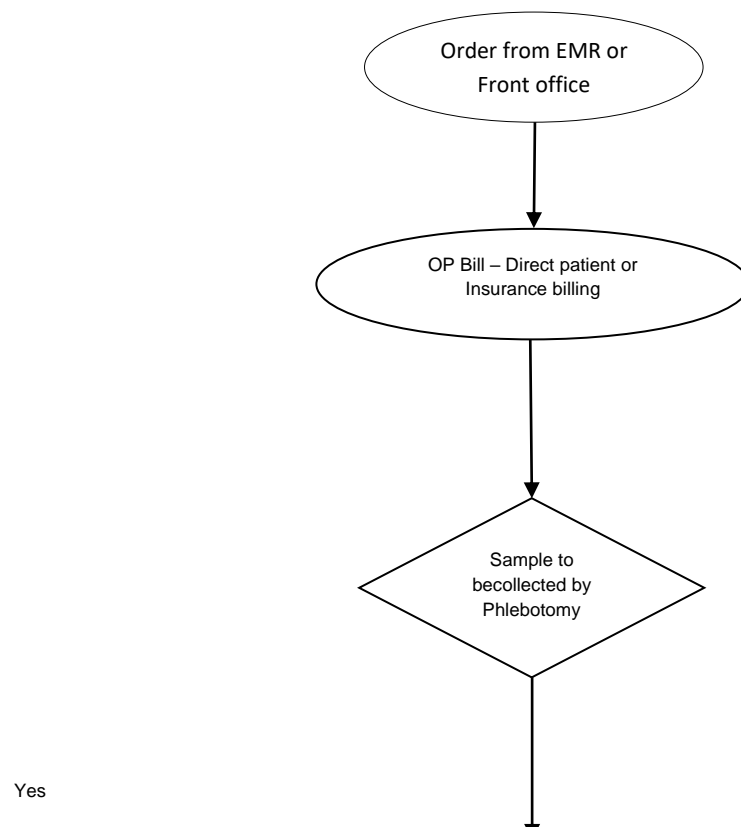
Report Type [Select Report Type] Relay Details Clinical Details Package Details Other Details Notes Refresh

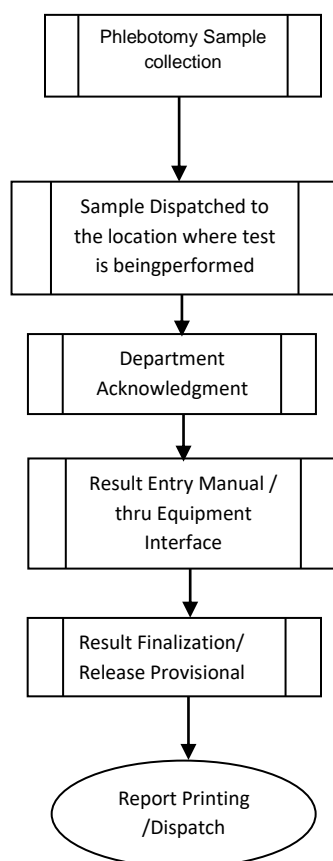
Facility	Lab No	Reg No	Manual Lab No	Order Date	Patient Name	Age/Gender	Referred By	Select
DMC	113054	205255		07/05/2013 6:34AM	Wahid Ali	27 Yrs/Male	Yusuf	Select
DMC	113053	205254		07/05/2013 4:54AM	Shiv Das	25 Yrs/Male	Yusuf	Select

Investigation	Sample Coll. Date	Remarks	Entry Site	DI Sr No	Details
HAEMATOLOGY					
COMPLETE BLOOD COUNT -CBC(HB\TLC\PCV\IRBC\PLATELET)	07/05/2013 11:04AM		Paras Hospital	2	Details
MICROBIOLOGY					
WIDAL TEST	07/05/2013 11:04AM		Paras Hospital	2	Details

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## 4.2 Process Flow LIS





**Following options are available in LIS Module:**

S. No.	Option	Description
1.	<b>Sample Collection</b>	All laboratory test samples are collection at the Phlebotomy department. The Phlebotomist is required to acknowledge the collection of sample. The system will assign a unique number to the sample for identification in laboratory. Option is also available for printing of label and sample sheet for result entry.
2.	<b>Department Acknowledgement</b>	Once the Sample is collected by the phlebotomist, it is being sent to the concerned department for result processing. Each department is required to acknowledge the sample. Once the sample is acknowledged the test cannot be cancelled.
3.	<b>Result Entry</b>	The option provides provision for entry of results. The result parameters supported are numeric, text and profile with option for remark for each test.
4.	<b>Provisional Report</b>	Provisional report can also be released.
5.	<b>Result Finalization</b>	This process is for final approval of test result for printing and viewing in wards. If any test is printed before finalization it is printed with a header as provisional test result.
6.	<b>LIS Dashboard</b>	It will show the real-time status of every event in Laboratory site wise
7.	<b>Turn Around Time</b>	This option will shows the turnaround time for Laboratory events.
8.	<b>Lab Devices Result</b>	To view the results fetched directly form Lab devices
9.	<b>Result Printing</b>	Through this option finalized or provisional lab reports can be printed

10.	<b>Lab History</b>	In this user can view laboratory history of the patient
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## 5. Radiology Information System

### 5.1 PROPOSED SYSTEM

5	<b>Radiology</b> Screen 5.1	<ul style="list-style-type: none"> <li>• In the proposed system the Order entry can be done in EMR by doctor or can be entered from front office for patient. Provision for Radiology scheduling is provided.</li> <li>• From there billing of the order can be done. After that the information again goes to the interface and it's pulled by RIS. Also Resource Scheduling option can be provided.</li> <li>• The Radiology department will acknowledge the Order. On acknowledgment in the department the test records can neither be cancelled nor refunded. The department will have to de-acknowledge the sample and then only the test can be cancelled or refunded.</li> <li>• Once the investigation results are processed the results can be entered in the result entry screens.</li> <li>• The department HOD will have to finalize the test report and then only the final reports can be printed. On finalization of report the wards will be able to view the results on screen. Provision for entry of Interpretation and remark will also be available.</li> </ul>
---	--------------------------------	--

- Provision for generation of HL7 order for PACS is also given.
- Medical Transcriptionist name will also be displayed in Radiology report.
- Provision for Name of Radiographer to be captured who is performing the radiology investigation.
- Before Performing any Radiology test there will be provision to view patient clinical History entered by doctor in EMR
- In Resource Appointment the slot timing will come According to the Procedure
- The System also provides a facility of dispatch, using which the dispatch status of each report can be updated on physical delivery of the reports.

## Screen 5.1 RIS Module

The screenshot displays the RIS Module interface. On the left is a vertical menu with options: RIS, Sample Status, Acknowledgement, Result Entry, Result Finalization, Cancel Finalization, Result Printing, Change Station, Resource Appointment, Registration, Appointment, Billing, ATD, Clinical Masters, Administration, EHR, LIS Setup, Phlebotomy, LIS, RIS, Provider Dashboard, and Ward Management. The main window has a header with 'Welcome! ADMIN ASPL' and 'Logout Help'. Below the header is a navigation bar with tabs: Sample Status, Acknowledgement, Result Entry, Result Finalization, Cancel Finalization, Result Printing, Change Station, and Resource Appointment. The 'Sample Status' tab is active, showing 'Sample Status - Radiology & Imagine'. It includes search filters for Source (OPD), From/To dates (07/05/2013), Status (ALL), Facility (ALL), Manual Request(s) Only, Search By (Lab No), Test Priority (ALL), and Entry Site (Select). Below these are tabs for Report Type, Relay Details, Clinical Details, Package Details, Other Details, Notes, and Refresh. A table lists patient data with columns: Facility, Lab No, Reg No, Manual Lab No, Order Date, Patient Name, Age/Gender, Referred By, and Select. The table contains three rows of data. Below the table is a section for 'Investigation' with columns: Investigation, Sample Coll. Date, Remarks, Entry Site, DI Sr No, and Details. A red message 'No Record Found.' is displayed below this section. The footer reads 'Akhil Systems Pvt. Ltd... Your Healthcare IT Partners... All Rights Reserved.'

Facility	Lab No	Reg No	Manual Lab No	Order Date	Patient Name	Age/Gender	Referred By	Select
DMC	113055	205296		07/05/2013 10:04AM	Sachin Kumar	24 Yrs/Male	Yusuf	Select
DMC	113054	205255		07/05/2013 6:34AM	Wahid Ali	27 Yrs/Male	Yusuf	Select
DMC	113053	205254		07/05/2013 4:54AM	Shiv Das	25 Yrs/Male	Yusuf	Select

Investigation	Sample Coll. Date	Remarks	Entry Site	DI Sr No	Details
No Record Found.					



## Screen5.2. Resource Scheduling

Menu Task

Find Patient Patient Details Welcome! ADMIN ASPL

Ult Finalization Cancel Finalization Sample UnAcknowledge Receiving Register Result Printing Change Station Resource Appointment Turn Around Time

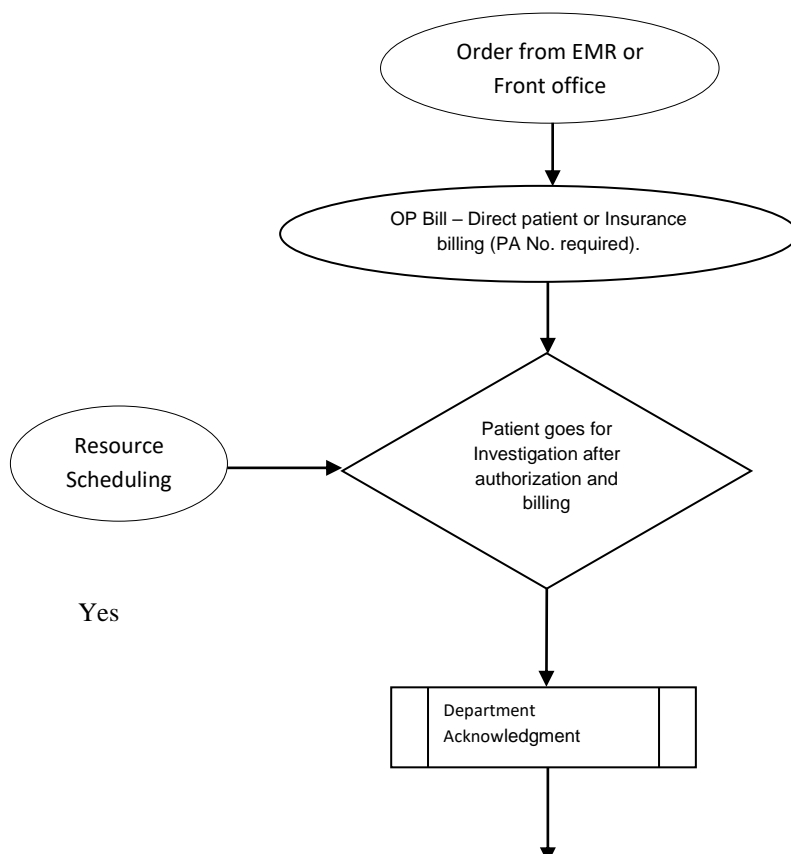
Date 27/09/2013 Today

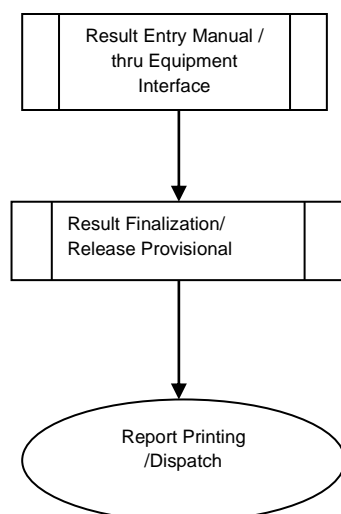
Facility DEMO HIS Resource Name All items checked Filter

Friday, September 27, 2013 Day Week Month

	CT Scan	MRI	ULTRASOUND	XRAY
08:00 am				
08:30 am				
09:00 am				
09:30 am				
10:00 am				
10:30 am				
11:00 am				
11:30 am				

### 5.2 Process Flow RIS





#### Following Options Available in RIS:

S. No.	Option	Description
1.	<b>Resource Appointment</b>	This is an optional option to schedule the investigation on machine and provide timing slots for patient investigation which can be viewed by radiologist.
2.	<b>Department Acknowledgement</b>	Each department is required to acknowledge the test. Once the test is acknowledged the test cannot be cancelled.
3.	<b>Result Entry</b>	The option provides provision for entry of results. The result parameters supported text.
4.	<b>Provisional Report</b>	Provisional report can also be released.
5.	<b>Result Finalization</b>	This process is for final approval of test result for printing and viewing in wards. If any test is printed before finalization it is printed with a header as provisional test result.
6.	<b>RIS Dashboard</b>	It will show the real-time status of every event in Radiology site wise
7.	<b>Turn Around Time</b>	This option will shows the turnaround time for Radiology events.
8.	<b>Result Printing</b>	Through this option finalized or provisional radiology reports can be printed

## 6. Admission, Transfer & Discharge (ATD)

### 6.1 PROPOSED SYSTEM

6	<b>Admission</b> Screen 6.1 Screen 6.2	<ul style="list-style-type: none"><li>• Provision to print Admission face sheet and Patient Labels.</li><li>• Provision to search the Patient Bed Category Wise, Status Wise and using any information of the patient like the registration number, IP number, Bed category, Bed number etc.</li><li>• Provision for the Insurance patients to assign beds as per the entitlement of the patient.</li><li>• SMS to be send to the outside referring doctors for any admission or op billing.</li><li>• Provision for making the bed retain for the same patient.</li><li>• Pre Admission option is available for the Admission booking.</li><li>• Provision to transfer the patient's bed.</li><li>• Provision to transfer patient to another doctor.</li><li>• Provision to make the bed release option as per the intimation of the house keeping department.</li><li>• Provision to see the Discharge Approval.</li><li>• Provision to capture New born baby date time of birth, type of delivery, Mother Registration No, Para (Sequence of birth), Weight (kg)</li><li>• Provision to acknowledge the bed transfer requisition.</li></ul>
---	--	--

- Provision to see the patient details of the occupied bed.
- Referral Doctor Wise admission list report (New Requirement).
- All Kin detail will be fetched from Registration.
- Patient age and Date of birth both will be printed in Admission Form and admission labels.
- At the time of Admission there will be provision in the system to prompt that the patient has some un billed orders and user should have selection option to transfer the orders to IP Invoice.
- Provision to capture both referring Facility and referring Doctor at the time of admission.
- Provision to capture any other facility name in case the patient is transferred to other facility.
- The signature option for Patient and patient attendant to be separate.
- Provision to enter Admission remark and this remark to be printed on the admission form also.

## Screen 6.1 ATD Module

Menu

Task

Find Patient Patient Details

Welcome! ADMIN ASPL Logout

Bed Status Bed Transfer Bed Release Admission Discharge Approval Doctor Transfer Transfer Requisition Booking Patient Bed Retain/Release

Bed Status

Bed Category All

Bed Status All

Patient Search by regno, ipno, name...

Show all

First Floor

CCU01	CCU02	CCU03	CCU04	CCU05	CCU06	CCU07	CCU08	CCU09	CCU10
CCU11	CCU12	CTICU1	CTICU2	CTICU3	CTICU4	CTICU5	MICU01	MICU02	MICU03
MICU04	MICU05	MICU06	MICU07	MICU08	MICU09	MICU10	MICU11	MICU12	MICU13
NSCU01	NSCU02	NSCU03	NSCU04	NSCU05	NSCU06	NSCU07	SICU01	SICU02	SICU03
SICU04	SICU05	SICU06	SICU07	SICU08	CCU13	CCU14			

Fourth Floor

402	403	404	405	406	407	408	409	410--A	410--B
410--C	410--D	411--A	411--B	411--C	411--D	412--A	412--B	412--C	412--D
413--A	413--B	413--C	413--D	414	415	416	417	418	419
419-A	421	422	423	424	425	426	427	429	430

## Screen 6.2 Admission Screen

**Patient Admission**

Non Admitted Patient Reg No 27 Notes Booking No. IP NO. New Save Cancel Close

Patient: Taniya Jacob, Female/25 Yr DOB: 18/02/1988 Mobile No: 345345345 IP No: 13/9 Admission Date: 14/10/2013 10:17  
Address: S - 34, 23RD FLOOR, ERIC TOWERS, AL BARAHA City: Dubai State: Dubai Country: United Arab Emirates

**Admission Detail** MLC Package VIP Patient Attach Documents

Date & Time \* 14/10/2013 10:38 Ward No \* First Floor Source \*  
Admitting Team Bed Category \* NURSERY Payer Type Insurance  
Admitting Doctor \* Billing Category \* NURSERY Payer \* MEDNET INSU CO.  
Refer Type \* Bed No \* 12 Sponsor \* MEDNET INSU CO.  
Refer By Insurance Card CITY Upload Remove

Insurance company [Select] Remarks

**Kin Details**

Previous Kin Details No of Attendant 1  
First Name \* Middle Name \* Last Name \*  
Relationship \* Gender \* Date Of Birth \*  
Address 1 S - 34, 23RD FLOOR, ERIC TC Address 2 \* Country United Arab Emirates  
State Dubai City Dubai Zip \*  
Home # Mobile # 345345345 Email \*

**Insurance Details** New Save Close

Reg No 27 Patient: Taniya Jacob, Female/25 Yr DOB: 18/02/1988 Mobile No: 345345345

TPA Member Id 3345 Covered OP Credit Limit 6500.00  
Payer/Insurance \* MEDNET INSU CO. Policy No 2784001 IP OP Pharmacy Copay(%) 10.00  
Card GOLD Valid From IP Pharmacy Copay(%) 0.00  
Sponsor MEDNET INSU CO. Valid Upto \* 31/01/2014 Copay on Net Co-Pay Max Limit 0.00  
Card No. \* 4472600000 SOAP No. \* 1307029FC0 Gross Adm. Approval Required  
Remarks Default Invalid card

Sno.	Category	Approval Required	Deductible Amt.	Co-Pay OP %	Co-Pay IP %
1	CONSULTATION	<input type="checkbox"/>	0.00	0.00	0.00
2	DENTAL	<input type="checkbox"/>	0.00	0.00	0.00
3	LAB	<input type="checkbox"/>	0.00	10.00	10.00
4	MATERNITY	<input type="checkbox"/>	0.00	0.00	0.00
5	OTHERS	<input type="checkbox"/>	0.00	0.00	0.00
6	PROCEDURE	<input type="checkbox"/>	0.00	0.00	0.00

Sno	TPA	Payer	Sponsor	CardType	Default	
1		MEDNET INSU CO.	MEDNET INSU CO.	GOLD	Yes	Select
2		MEDNET INSU CO.	MEDNET INSU CO.	STANDARD	No	Select

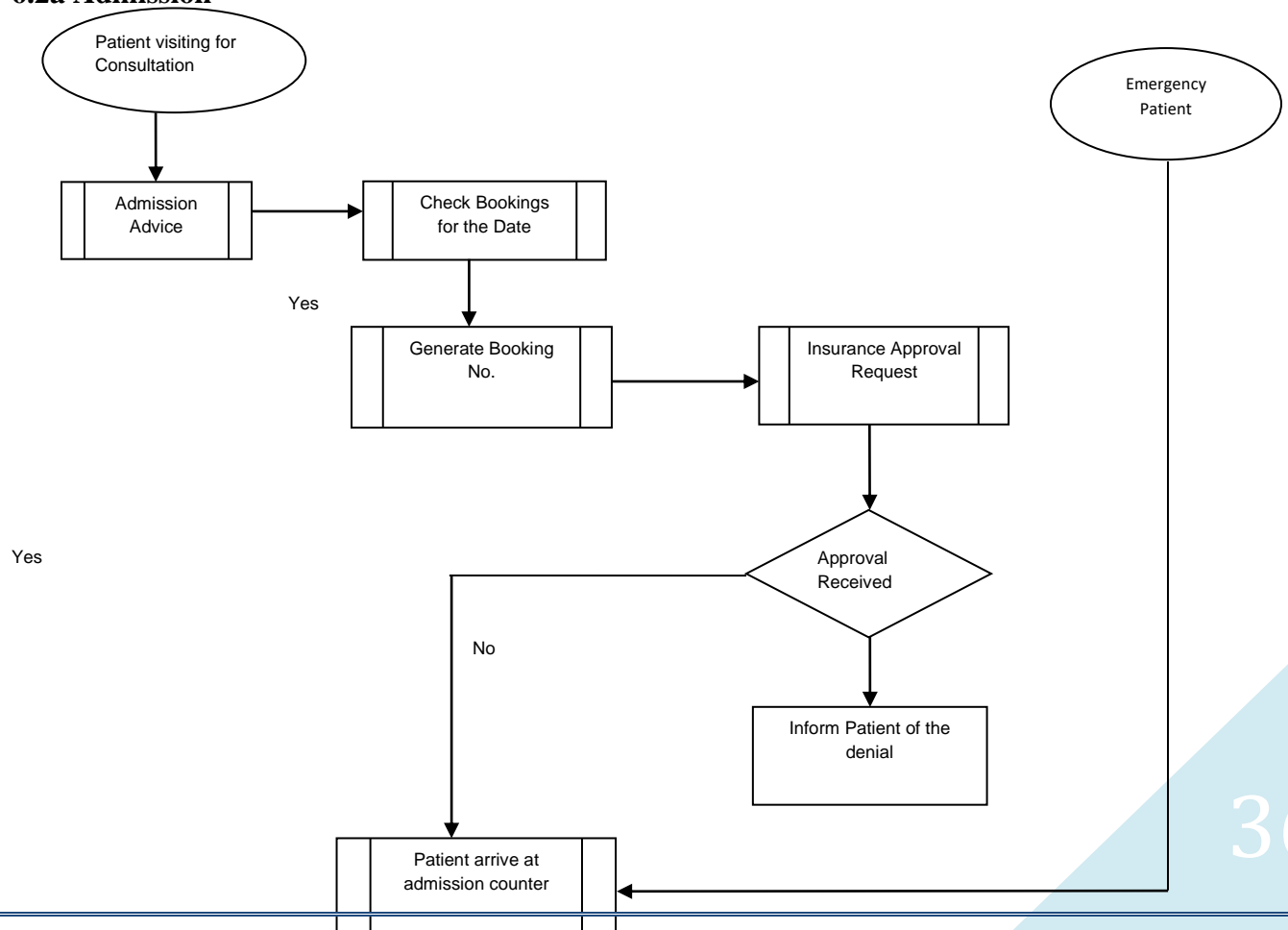
Following options are available in ATD Module:

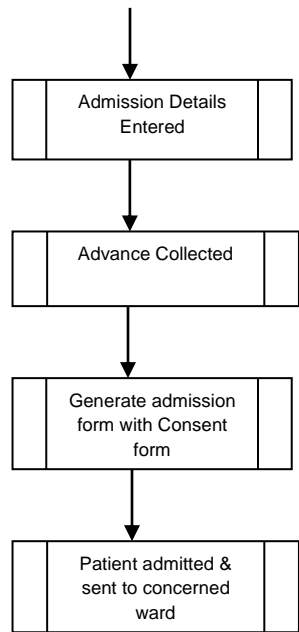
S. No.	Option	Description
1.	<b>Admission</b>	This option is used to make the admission of the patient as per the vacant bed available in the hospital and from here also the users also able to make the Bed Transfer, Doctor Transfer, Bed Retain, Admission Update and Patient Details.
2.	<b>Bed Transfer</b>	From this option users are able to make the transfer of the patient's bed in the same and the different ward.

3.	<b>Bed Release</b>	The option provides provision to release the bed which is in the housekeeping department.
4.	<b>Doctor Transfer</b>	Provision to making the transfer of the Doctor which is may or may not be from the same specialty.
5.	<b>Booking</b>	This option is used for making the Pre Booking of the bed for cases like the surgery and maternity and any others which is pre-defined by the doctor.
6.	<b>Discharge Approval Status</b>	This option allows users to see those patients which discharge approval is confirm from the ward.
7.	<b>Bed Transfer Requisition</b>	This option is used to make the approval of the Transfer which enter by the any others staff.

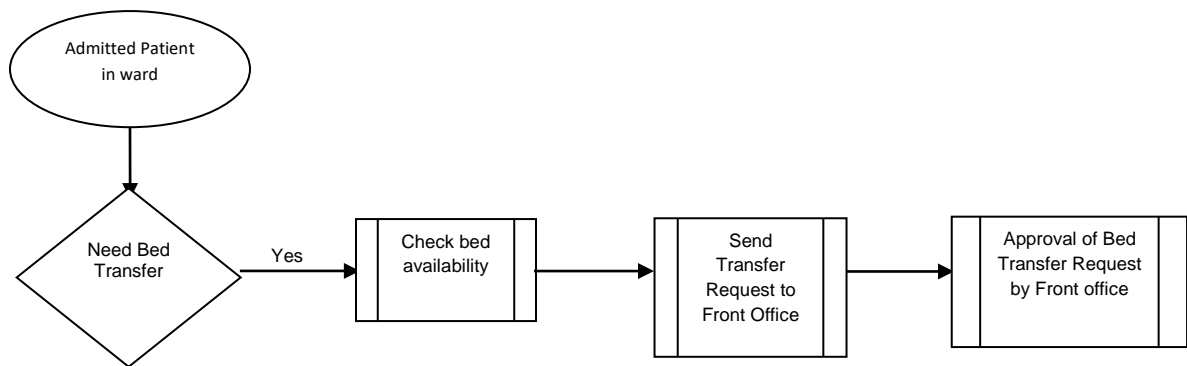
## 6.2 PROCESS FLOW OF ATD

### 6.2a Admission

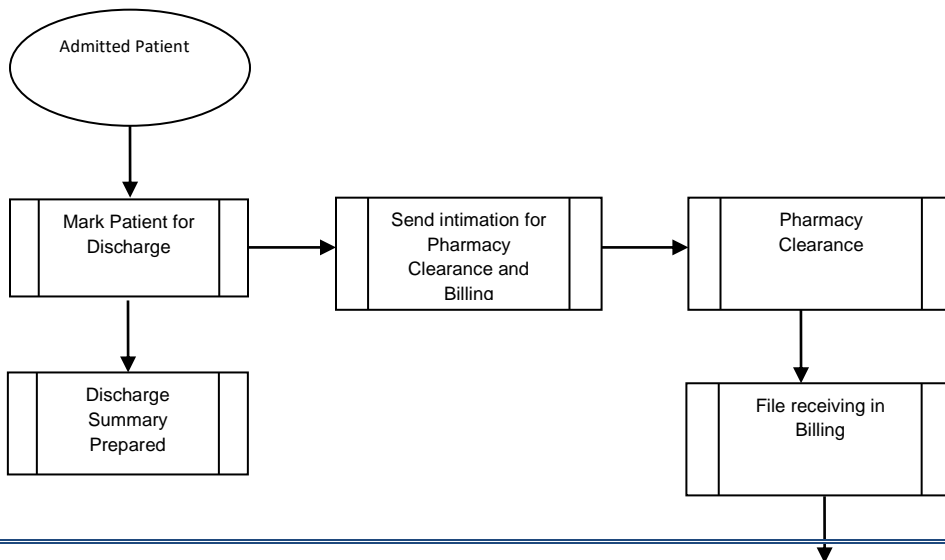




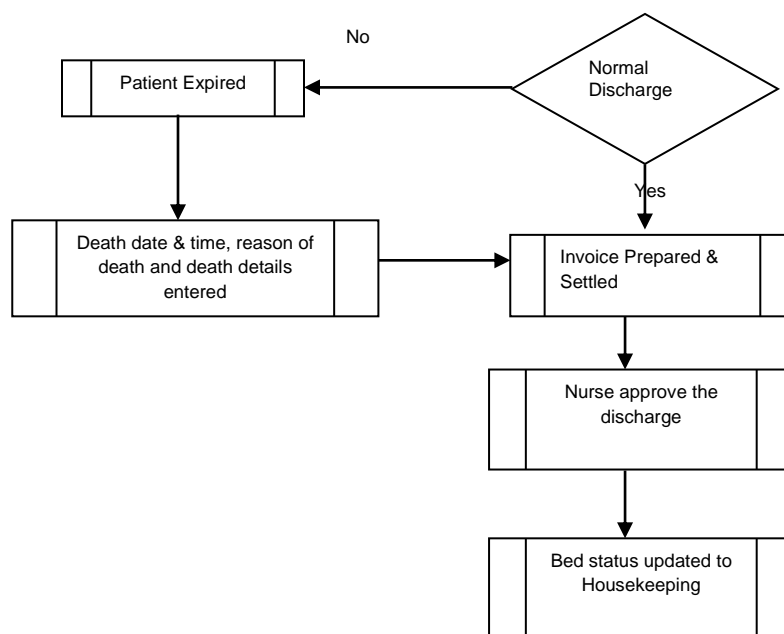
## 6.2b. BED TRANSFER (PROCESS FLOW)



## 6.2c. PATIENT DISCHARGE (PROCESS FLOW)



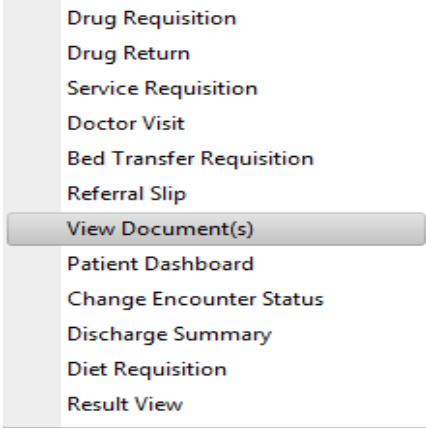





## 7. Ward Management

### 7.1 Proposed System.

7	<b>Ward</b> Screen 7.1 Screen 7.2	<ul style="list-style-type: none"> <li>• Provision for entry of service/ investigation requisitions</li> <li>• Provision for collection of sample of IP patient and dispatch to laboratory.</li> <li>• Provision within ward module for the sample collection and dispatch and barcode label printing.</li> <li>• Provision to cancel service/investigation requisitions</li> <li>• Provision for entry of Pharmacy requisition</li> <li>• Provision for entry of Pharmacy returns from ward</li> <li>• Provision for daily nursing notes</li> <li>• Provision for entry of drug administration</li> <li>• Provision for enter the Stock from the ward also issue and charged to the patient.</li> <li>• All issues done from ward are to be shown under Pharmacy and Consumable head in IP billing.</li> <li>• Provision for entry of referral for cross consultation and SMS to be generated on referral.</li> <li>• Provision for the Discharge Summary is then uploaded to the patient registration record.</li> <li>• Provision for blood component request from blood bank.</li> <li>• Provision for entry of bed transfer requisition</li> <li>• Provision for viewing certified result of LIS and RIS.</li> <li>• Provision for making the Resource Scheduling for the admitted patient.</li> <li>• Provision to see all the previous entered Discharged Summary with Edit functionality.</li> </ul>
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		<ul style="list-style-type: none"> <li>• Provision to see the details of the Drugs Return from the ward and to make the new entry of the Drugs Return.</li> <li>• Provision to see the OT Booking List.</li> <li>• Provision to make the PAC Clearance from the ward also.</li> <li>• Provision to make the Discharge approval from the ward also.</li> <li>• Also the option is there for the Bed Release form the ward itself.</li> <li>• These are the Option below which the users use for the Admitted patient.</li> </ul>  <ul style="list-style-type: none"> <li>• Provision to see the Attached document which is related the patient like the old reports of the lab and the radiology any many more things.</li> <li>• Provision to enter the Vitals, Diagnosis, Allergies, Chief Complaints and many more.</li> <li>• Provision to see the results which is done in the Lab and the radiology.</li> <li>• Provision to enter the visit of the doctor which is auto affected the IP Billing of the Patient.</li> <li>• Random search option is available for making the fast searching in the ward management.</li> <li>• Provision to see the current status of the patient with their color legends which is described below.</li> </ul> 
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**Screen 7.1 Ward Management**

Menu Task

Welcome! ADMIN ASPL Logout Help

Find Patient Patient Details

Ward Details Discharge Approval IPD Return by Ward OT Booking List Resource Scheduling Discharge Summary

Ward Details Bed Status All Ward Legend Column(s) 8

Patient Search by regno, ipno, name... Clear

**3RD A**

301	302 13/8403 Mr. Himanshu Anaand (TPA)	303 13/8187 Mrs. Layla Bahlol Sameen (CASH)	304 13/8459 Mrs. RENU KAUL (CASH)	305 13/8412 Mr. Mahender Singh (CASH)	306	307 13/8280 Mr. Manasvi Mohan Sharma (CASH)	308 13/8464 Mr. Sumit Kumar Singh (CASH)
348 13/8385 Mr. Khaled M Kh Taher (CASH)	349	350	351 13/8326 Mrs. Kamlesh Deswal (CASH)	352 13/8351 Mr. Love Sharma (TPA)	353	354	355 13/8373 Mrs. Ruchi Shamsha Sinha (TPA)
356 13/8408 Mrs. Balash Yadav (TPA)	357	358 13/8380 Mrs. Veena Sarna (TPA)					

**3RD B**

309 13/8345 Mrs. Rashmi Rathour (PSU)	310-A 13/8291 Mr. Rajesh Kumar (PSU)	310-B 13/8419 Master Nimit (CASH)	310-C	310-D 13/8367 Mr. Mohit Sharma (CASH)	311-A 13/8321 Mr. Veer Sharma (CASH)	311-B 13/8467 Ms Swetha Polana (CASH)	311-C 13/8213 Mrs. Kitab Kaur (CASH)
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## Screen 7.2 Resource Scheduling

Menu Task

Welcome! ADMIN ASPL Logout Help

Find Patient Patient Details

Ward Details Discharge Approval IPD Return by Ward OT Booking List Resource Scheduling Discharge Summary

**Resource Appointments**

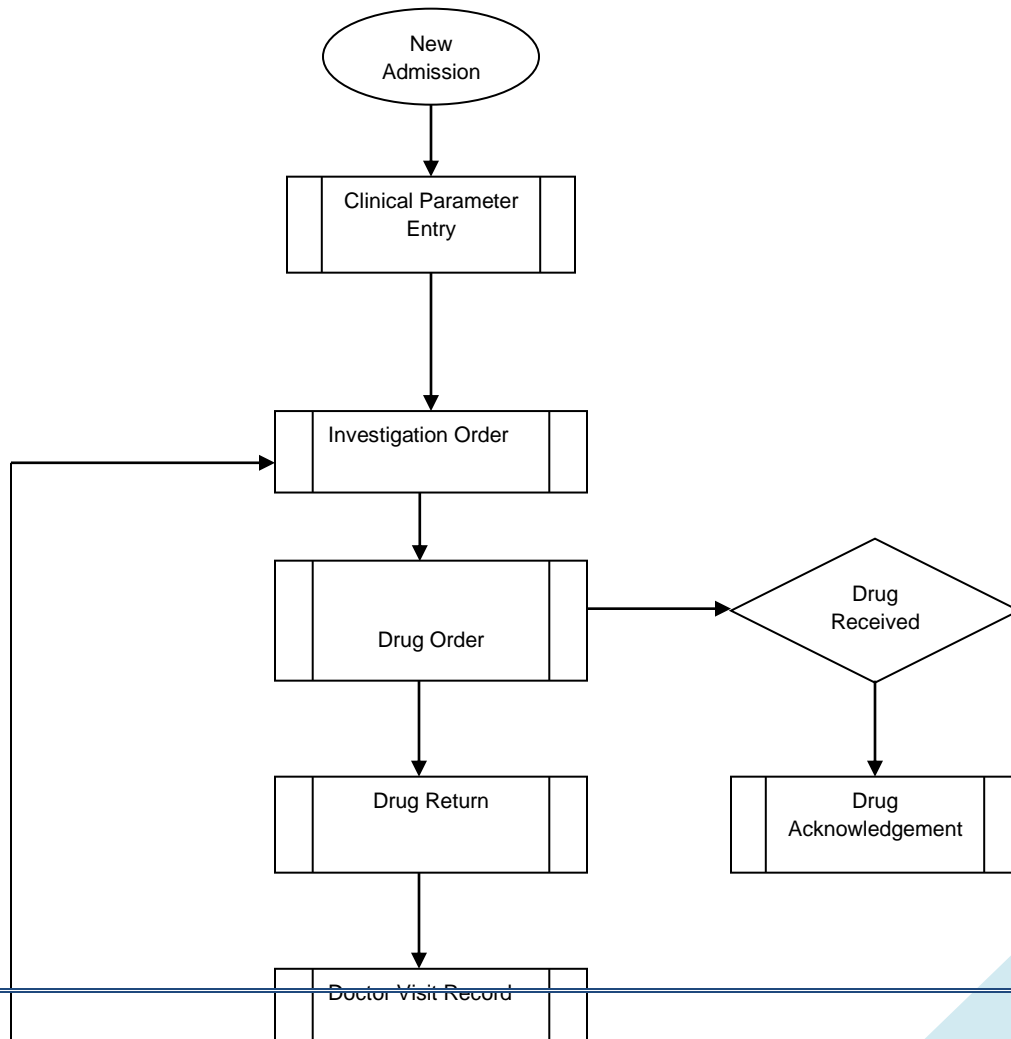
Resource MRI Date Range Select All From 23/09/2011 To 23/09/2013 Filter Reset

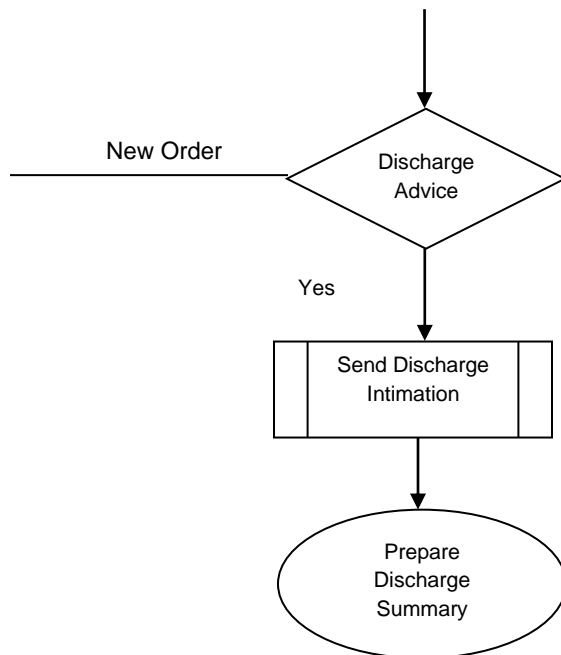
SNo	Appoint	Patient	Age/Sex	Ward Name	BedNo	Status
1	14-03-2013 5:30PM- 5:45PM 204904	TULA RAM	68 Yrs/Male			Confirm
2	05-03-2013 6:45PM- 7:00PM 204905	SUNITA YADAV	39 Yrs/Female			Confirm
3	05-03-2013 5:15PM- 5:30PM 204778	GAUTAM YADAV	23 Yrs/Male			Confirm
4	05-03-2013 2:45PM- 3:00PM 201102	VIDYA DEVI	61 Yrs/Female			Confirm
5	05-03-2013 10:00AM- 11:00AM 204933	SONIA	28 Yrs/Female			Confirm
6	04-03-2013 9:45AM- 10:00AM 15863	ASEEM MEHROTRA	52 Yrs/Male			Confirm
7	04-03-2013 1:15PM- 1:30PM 15863	ASEEM MEHROTRA	52 Yrs/Male			Confirm
8	02-03-2013 8:15AM- 8:30AM 204712	GAURAV KAUSHIK	19 Yrs/Male			Confirm
9	02-03-2013 10:30AM- 10:45AM 401	HITESH SHARMA	24 Yrs/Male			Confirm
10	02-03-2013 9:15AM- 9:30AM 204818	NIRMALA DEVI	60 Yrs/Female			Confirm

Following option is available in the Ward Management.

S. No.	Option	Description
1.	<b>Ward Details</b>	This option is used to display all the patient with their bed status and the other details which is associated with that patient like the results, Drug Order, Service Order and many more and these option directly inter related with the other modules like the LIS, RIS, Pharmacy, billing and others.
1.1	<b>Drug Requisition</b>	For making the requisition of drugs from the desire Store.
1.2	<b>Drug Return</b>	That is used for making the return of the drugs which was previously received by the ward.
1.3	<b>Service Requisition</b>	For making the requisition of the services from the Lab and the radiology department.
1.4	<b>Doctor Visit</b>	For adding the doctor visit in the IP bill.
1.5	<b>Bed Transfer Req.</b>	For making the Bed transfer requisition to the billing users and any other department which is authorized.
1.6	<b>Referral Slip</b>	For Referral the patient from one doctor to others.
1.7	<b>View Document</b>	For view the attached document related the patient.
1.8	<b>Patient Dashboard</b>	For making the entry of the vitals, Notes, Diagnosis and the others clinical related entry for the Nurses.
1.9	<b>Change Encounter</b>	For making the 2 major events i.e. Sent For Billing and Mark for Discharge.
1.10	<b>Discharge Summary</b>	To view and enter the Discharge Summary of the Patient.
1.11	<b>Diet Requisition</b>	For making the Diet Requisition of the Patient to the Diet Department.
1.12	<b>Results View</b>	To view the results of the Lab and the Radiology this is finalized by the Doctors.
2.	<b>Discharge Approval</b>	This option allow users to make the Discharge approval which send by the lower authority as well as also the user can make the bed released which was in housekeeping or not in use.
3.	<b>IPD Return by Ward</b>	This option display users the details of the return which was done by the Ward users as the order of the Doctor which prescribed those medicines.
4.	<b>OT Booking List</b>	Provision to See the details of the different OT booked slots associated with the patient details.
5.	<b>Resource Scheduling</b>	This option is used for see the Resource (Machine) Scheduled for the specific date.
6.	<b>Discharge Summary</b>	This option allows users to view and prepare the patient's discharge summary of admitted and discharged patients.

## 7.2 Process Flow Ward





## 8. IP Billing

### 8.1 Proposed System

8	<b>IP Billing</b> Screen 8.1 Screen 8.2	<ul style="list-style-type: none"> <li>• Tariff of the services to be charged based on the combination of Payer and network.</li> <li>• The default discount setup of the services should also be based on combination of Payer and Network.</li> <li>• Provision to transfer patient from Cash to Insurance and vice versa</li> <li>• Concept of Copay calculation with consideration on non-covered items (If any insurance patient avails a service which is not covered then the 100% service amount is to be paid by the patient.)</li> <li>• Provision for implementation of credit limit in insurance bills.</li> <li>• Inclusion of Package breaks up items automatically based on breakup defined in package master for each payer.</li> <li>• Inclusion of package breakup by manual selection and by date range.</li> <li>• Room rent is calculated on 24 hours basis or check out time basis. In case of bed transfers in a date the higher bed category with maximum stay will be charged.</li> <li>• Provision for auditing the bill to a date and the services are not allowed to be modified or cancelled for the dates the bill has been audited.</li> <li>• Main Package or surgery is charge 100% and secondary package or surgery is charge 50% of itself.</li> <li>• Provision to upload scan files and view them.</li> <li>• Provision to set the Business Rules like Surgeon Fee (30% of Package fee), Theatre Charges (30% of package fee), Anesthetist fee (12 % of Package fee) in Masters.</li> </ul>
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- Provision to set the Surgeon Fee breakup for each Package (Fixed amount defined for each package and each room category) in Masters.
- All the packages are categorized as major, minor, and major with GA, LA etc. and accordingly the surgeon fee is defined for each package.
- Provision to set the business rules like the Balance of (Package Amt. - Surgeon fee) is distributed 50:50 between Anesthetist and OT Charges. Everything else other than Surgeon fee, OT Charge, Anesthetist Charge is excluded from package and is chargeable or excluded from package.
- Depending on the amount payable by the patient (Cash patient) or Copay amount (insurance patient) provision required to receive the amount from patient or to be settled by another company. Ex in case of Damamtiga the copay is paid by another company and not by the patient
- Provision to Re – Admitted the patient without making the cancellation of the old prepared bill.
- If any incorrect service is billed or any modification is required to be done in the bill, the bill can be cancelled and a new bill is prepared.
- Provision for service wise credit note entry and consideration of the same in e-claim submission and resubmission
- Provision for making the Service wise credit note.
- Provision for see the patient bill details in the different defined formats like the Summary, Details, Package Billing with associated like the Advance and the adjusted amount and many more.
- These are the following options is available for the IP Billing Users which they can done in the IP Billing.
  - Change Billing Category
  - Change Payer
  - Change Insurance Company
  - Prob. Discharge Date
  - Entitlement Difference
  - Tariff Comparison
  - Time Based Services
  - Package Inclusion/Exclusion (Manual)
  - Package Inclusion (Auto)
  - Room Rent (Manual)
  - Supplementary Bill Services
- The Room Rent Charge Calculation is auto calculated by the system in for the some cases the Manual option is also available for the users.
- Provision to add the Investigation, Consultation (IP Visit), Surgery, Package Billing and many more.
- Provision to cancel the Charge slip with the specific business rules and some constraints which are defined in the Masters.
- Provision to display the patient note in the IP Billing which is entered in the various department like the MRD, Radiology, Lab
- Provision to Enter the Discount Authority wise for a fixed percentage user wise.
- Provision to show the outstanding amount alert for the IP Billing.
- Provision to adjusted the amount which taken as an advance.



- Provision to track the IP status from the ward and the Pharmacy.
- Provision to print the report Department Type Wise.
- Provision to Discharge the patient after getting all the intimation from the ward and the Pharmacy.
- All stores and sub store (ward) issues of a patient to be shown separately or clubbed to one head as Pharmacy
- Auto entry of visit charges of the admitting doctor.
- Auto entry of Nursing charges (1 unit per day)
- Online fetching of current exchange rates of other currency rates.
- Setup for defining second surgery percentage for each surgery or package instead of standard second or third surgery percentage as it is done presently by Miracle.
- Provision to modify an invoice after saving of an invoice at a later date.
- Provision to see the Billing Dashboard in which all the reports like Admitted patient, Mark For Discharge, Surgery, Investigation and many more which related from the billing and these reports can be view by the Graphical form like the Bar Graph, Line graph, Pie Chart and may more.

### Screen 8.1 : IP Billing

Menu Task


Welcome! ADMIN ASPL Logout Help

Find Patient Patient Details

Patient Lists Patient History OP Order Master Activity List IP Order OP Order Bill Billing Dashboard Refund IP Order Bill Advance Collection

IP Billing IP No 13/8469 Notes(0) Discharge New Save Print

Patient Details

 **Vijya Kumrai**  
Female/29 Yr  
GURGAON HARYANA

Reg No 240500  
Type Cash  
Bill No  
Date: 23/09/2013 12:38

Payer: TARIFF VERSION 5.0 / TARIFF VERSION 5.0  
Consultant: A  
Bill Category /Bed No.: LDR SUITE /317  
IP Status Open

Admission Date: 09/09/2013 18:36  
Treatment/Available Limit 0.00 / 0.00  
Advance 0.00  
Receivable 142650.00

Department Wise Department Type Wise

Sno	Department	Charge	Disc %	Disc Amt	Patient Payable	Payer Payable
1	ROOM CHARGES	140000.00	0.00	0.00	140000.00	0.00
2	LABORATORY	150.00	0.00	0.00	150.00	0.00
3	IP CONSULTATION	2500.00	0.00	0.00	2500.00	0.00
		142650.00		0.00	142650.00	0.00

Discount Authorized By: [ Select ] ( % ) Remarks:

### Screen 8.2 Master Activity List

Menu Task

Welcome! ADMIN ASPL Logout Help

Find Patient Patient Details

Patient Lists Patient History OP Order Master Activity List IP Order OP Order Bill Billing Dashboard Refund IP Order Bill Advance Collection P

Date Range Date Range From 05/09/2013 To 23/09/2013 Search For All Settled UnSettled

Payor Type Select All Payer Sponser

Patient Type Both Patient Find Reset Print As Summary Detail Search

Invoice Details Receipt Details

Company	Reg No	Patient	Enc#	Type	Bill#	Date	NetAmt	Patient	Payer	Adjusted	Refund	Cr.Note	Balance	Status	Cancel
TARIFF VERSION 5.0	240505	Emr1		OP	OPCA14/71008	11/09/2013	600.00	600.00	0.00	600.00	0.00	0.00	0.00		
TARIFF VERSION 5.0	240505	Emr1		OP	OPCA14/71009	11/09/2013	500.00	500.00	0.00	500.00	0.00	0.00	0.00		
TARIFF VERSION 5.0	345	NEELAM ARYA		OP	OPCA14/71022	20/09/2013	120.00	120.00	0.00	120.00	0.00	0.00	0.00		
CGHS SEP 2010 (CREDIT)	240449	Nametest		OP	OPCR14/11200	11/09/2013	32.00	0.00	32.00	32.00	0.00	32.00	-32.00		
TARIFF VERSION 5.0	240503	Ganesh		OP	OPCA14/71011	11/09/2013	650.00	650.00	0.00	650.00	0.00	0.00	0.00		
TARIFF VERSION 5.0	240506	Manav		OP	OPCA14/71010	11/09/2013	700.00	700.00	0.00	700.00	0.00	0.00	0.00		
TARIFF VERSION 5.0	240507	First Cash Patient		OP	OPCA14/71012	12/09/2013	540.00	540.00	0.00	540.00	0.00	0.00	0.00		
TARIFF VERSION 5.0	240507	First Cash Patient		OP	OPCA14/71015	13/09/2013	300.00	300.00	0.00	300.00	0.00	0.00	0.00		
AIR INDIA (CREDIT)	240508	First Credit Patient		OP	OPCR14/11201	12/09/2013	525.00	0.00	525.00	366.00	0.00	525.00	-400.00		
TARIFF VERSION 5.0	240509	Garima Mittal		OP	OPCA14/71013	13/09/2013	600.00	600.00	0.00	600.00	0.00	0.00	0.00		

Page size: 10

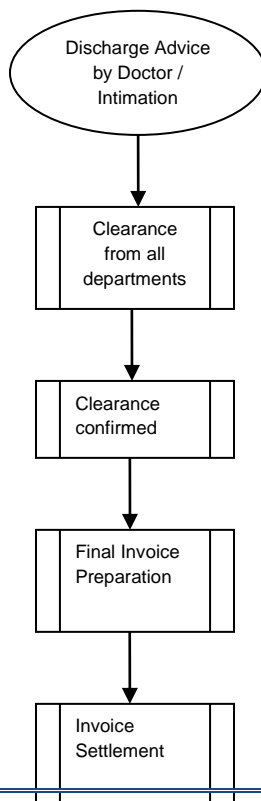
Refundable Outstanding Settled

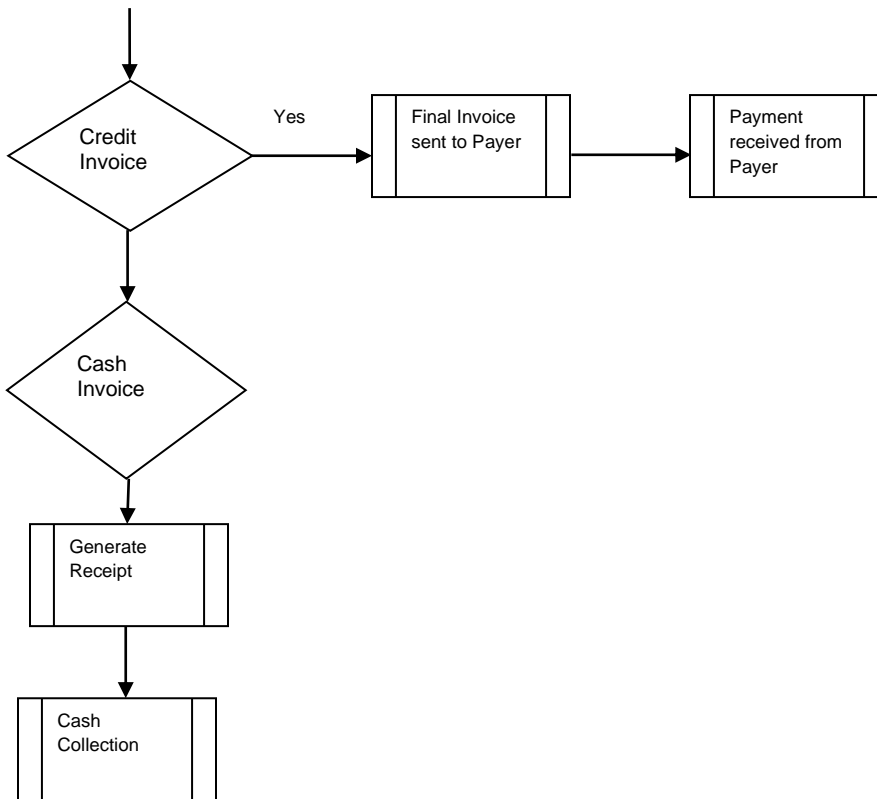
### Following options are available in IP Billing

S. No.	Option	Description
1.	<b>Master Activity List</b>	This option is used to make the settlement of the Outstanding amount as well as making the entry of the TDS and also for making the refund against the advance, bill and many more.
2.	<b>IP Billing</b>	This option allow users to make the Billing of the admitted patient and also this option allow users to done the billing related changes like the change in billing category, Discharged the patient and saving the bill and many more.
3.	<b>Advance Collection</b>	This option display users the details of the return which was done by the Ward users as the order of the Doctor which prescribed those medicines.
4.	<b>Insurance</b>	Insurance Company wise Mandatory Field Setup for insurance details screen.
5.	<b>Non -discountable Service</b>	Non-discountable service setup is needed which can be defined for each Payer and Network.
6.	<b>Discount setup</b>	Discount Setup entry for each payer and Network. Where in if same discount percentage is applicable then provision is available to define it for all Network in one time.

7.	<b>Tariff Tagging</b>	setup needed where we can tag the tariff network wise
8.	<b>Network blocking</b>	Setup needed where we can block a network for specific facility
9.	<b>Exclusion</b>	Tagging provision needed for the exclusion ,approval setup
10.	<b>Credit limit</b>	Setup needed for defining the credit limit on the net and gross value ,there are 4 company who define the credit limit on gross value
11.	<b>Approval limit</b>	Provision is required where in if the patient's net amount exceeds the credit limit then approval is required to be entered to proceed to bill.
12.	<b>Remarks</b>	Remarks should be visible on the billing screen which are defined in the master on the combination of the payer,sponsor and network
13.	<b>Copay</b>	The copay calculation would be on the (Net Amount - Deductible Amount) or on Net Amount

## 8.2 Process Flow IP Billing





## 9. Pharmacy & Drug Store

### 9.1 Proposed System

<b>9. Pharmacy</b>  <b>Screen 9.1</b>	Department Indent	Provision to generate department indent based on dynamic reorder level.
	Purchase indent	Provision to generate Purchase indent based on dynamic reorder level. Provision for calculation of selling price based on a formula
	Purchase Order	Provision for preparation of direct purchase orders as well as against Purchase indents
	Department Issue	Issue to sub stores based on request or direct issue
	OP Issue	In Al Rafa Hospital the pharmacist does not collect the money or create the Pharmacy bill. The Pharmacist prepared the Issue note and the patient is required to pay the amount in the Cash counter or get the issue billed from the Cash counter. A separate bill is prepared for the Pharmacy issue and is not clubbed with the hospital services. The pharmacist on seeing the status of the Issue as billed delivers the medicine to the patient.

		<p>MOSH &amp;MedCare - If the Pharmacist receives online prescription from EMR then he scans the medicine barcode and makes the issue. However if no online prescription is available the pharmacist either scans the barcode enter the items by selection. A separate pharmacy bill is created. The Pharmacist collects the money from the patient.</p> <p>Consideration of Copay concept in OP sale</p>
	IP Sale	For IP Patients medicine requests are entered from Wards. The pharmacist selects the request and issues the medicines. The co-Insurance if applicable gets applied as the entitlement defined for the patient
	IP Return	The Patient returns are entered from ward and the pharmacy posts the returns.
	Physical stock Taking	Done once a year and relevant adjustment are made.
	Adjustment Issue/ Receipt	This option will provide provision for making any adjustment to the computer stock, though proper authorization to be taken before using this option and also the option should be restricted to department HOD only.
	Goods Receipt Note	<p>Once the Purchase order is prepared and item supplied by the supplier the Pharmacy will be required to prepare the GRN with details of batch no, expiry, MRP etc. (Similar to present Receiving bay).</p> <p>On verification of item physically the GRN can be posted which will actually update the stock</p>
	Pharmacy Dashboard	Shows real time opened transactions details in pharmacy

**Screen 9.1 Pharmacy Dashboard**

Find Patient

Patient Details

Purchase

Issue And Receipt

Patient Issue/Return

Requisition And Approval

Utility

Consignment Details

Intimation

Pharmacy Dashboard

Dashboard

Change Store

Open Transactions

Transaction Type : AllFilter

Sno	Document Type	Document No	Document Date	Supplier Name	Encoded By	Encoded Date	Store	Facility
1	GRN	13-14/5300	23/08/2013 3:34PM	AAA PHARMA TRADE PVT. LTD	ADMIN ASPL	23/08/2013 3:34PM	MEDICAL STORE	DEMO HIS
2	GRN	13-14/5303	26/08/2013 11:37AM	B V M MEDITECH PVT LTD	ADMIN ASPL	26/08/2013 11:37AM	MEDICAL STORE	DEMO HIS
3	GRN	13-14/5307	30/08/2013 2:45PM	A to Z TECHNOLOGIES	ADMIN ASPL	30/08/2013 2:45PM	MEDICAL STORE	DEMO HIS
4	DEPT ISSUE	13-14/3913	23/08/2013 4:46PM		ADMIN ASPL	23/08/2013 4:46PM	OP PHARMACY	DEMO HIS
5	DEPT ISSUE	13-14/3914	23/08/2013 4:47PM		ADMIN ASPL	23/08/2013 4:47PM	OP PHARMACY	DEMO HIS
6	DEPT ISSUE	13-14/3917	24/08/2013 10:34AM		ADMIN ASPL	24/08/2013 10:34AM	OP PHARMACY	DEMO HIS
7	DEPT ISSUE	13-14/3920	29/08/2013 5:07PM		ADMIN ASPL	29/08/2013 5:07PM	OP PHARMACY	DEMO HIS
8	DEPT RECEIVE	13-14/1513	03/08/2013 4:06PM	IDRISH MALIK		03/08/2013 4:06PM	MEDICAL STORE	DEMO HIS
9	DEPT RECEIVE	13-14/3	07/08/2013 2:24PM	NEERU PRAJAPAT		07/08/2013 2:24PM	MEDICAL STORE	DEMO HIS
10	DEPT RECEIVE	13-14/1685	17/08/2013 12:47PM	IDRISH MALIK		17/08/2013 12:47PM	MEDICAL STORE	DEMO HIS
11	DEPT RECEIVE	13-14/749	17/08/2013 3:52PM	KUNA NAYAK		17/08/2013 3:52PM	MEDICAL STORE	DEMO HIS
12	DEPT RECEIVE	13-14/750	17/08/2013 4:31PM	KUNA NAYAK		17/08/2013 4:31PM	MEDICAL STORE	DEMO HIS
13	STOCK ADJUSTMENT	13-14/126	24/08/2013 10:54AM	ADMIN ASPL		24/08/2013 10:54AM	MEDICAL STORE	DEMO HIS
14	IPD RETURN	13-14/2195	08/05/2013 8:23AM	DHANYA AC		08/05/2013 8:23AM	MEDICAL STORE	DEMO HIS
15	IPD RETURN	13-14/2772	17/05/2013 10:13AM	ROBIN C THAMPI		17/05/2013 10:13AM	MEDICAL STORE	DEMO HIS
16	IPD RETURN	13-14/2927	19/05/2013 2:07PM	TISSYMOL VARGHESE		19/05/2013 2:07PM	MEDICAL STORE	DEMO HIS
17	IPD RETURN	13-14/3029	21/05/2013 12:14PM	DELMA VARGHESE		21/05/2013 12:14PM	MEDICAL STORE	DEMO HIS
18	IPD RETURN	13-14/3078	22/05/2013 11:21AM	LITI BABY		22/05/2013 11:21AM	MEDICAL STORE	DEMO HIS
19	IPD RETURN	13-14/3093	22/05/2013 12:44PM	GREESHMA VARGHESE		22/05/2013 12:44PM	MEDICAL STORE	DEMO HIS
20	IPD RETURN	13-14/3146	23/05/2013 1:02PM	SHASHI SINGH		23/05/2013 1:02PM	MEDICAL STORE	DEMO HIS
21	IPD RETURN	13-14/8380	17/08/2013 12:38PM	SUNITA KUMARI		17/08/2013 12:38PM	MEDICAL STORE	DEMO HIS
22	IPD RETURN	13-14/8390	17/08/2013 4:12PM	SAJIMOL MATHEW		17/08/2013 4:12PM	MEDICAL STORE	DEMO HIS
23	IPD RETURN	13-14/8391	17/08/2013 4:14PM	SAJIMOL MATHEW		17/08/2013 4:14PM	MEDICAL STORE	DEMO HIS
24	IPD RETURN	13-14/8403	24/08/2013 12:34PM	ADMIN ASPL		24/08/2013 12:34PM	MEDICAL STORE	DEMO HIS
25	SUPPLIER RETURN	13-14/192	04/09/2013 5:02PM	A to Z TECHNOLOGIES	ALOK GUPTA	04/09/2013 5:02PM	MEDICAL STORE	DEMO HIS

Expiry Item Next 30 Days

Sno	Item Name	Batch No	Expiry Date	Stock	Coel Price	GRN No	Supplier Name	Store
1	CROCCIN 100mg/ml ODOROP 1x15ml GSK	92073	30/09/2013	41.000	10.0000			MEDICAL STORE
2	MEDICUT 20 - PORTEK	1986	11/10/2013	4.000	93.5000			MEDICAL STORE
3	NEOPEPTINE 20mg+2mg+2mg+10mg/ml ODOROP 1x15ml RAPTAKOS	3255	29/10/2013	1.000	41.1738			MEDICAL STORE
4	PROCTOLYSIS ENEMA 1x100ml SILU	77372	30/10/2013	17.000	9.9988	13-14/4385	I.B PHARMA PVT.LTD	MEDICAL STORE
5	PROCTOLYSIS ENEMA 1x100ml SILU	91119	30/10/2013	50.000	9.9988	13-14/5188	I.B PHARMA PVT.LTD	MEDICAL STORE
6	RENAD INJ 1x2ml MOLEKULE	3899	16/10/2013	2.000	68.8300			MEDICAL STORE

## Following options available in Pharmacy & Drug Store

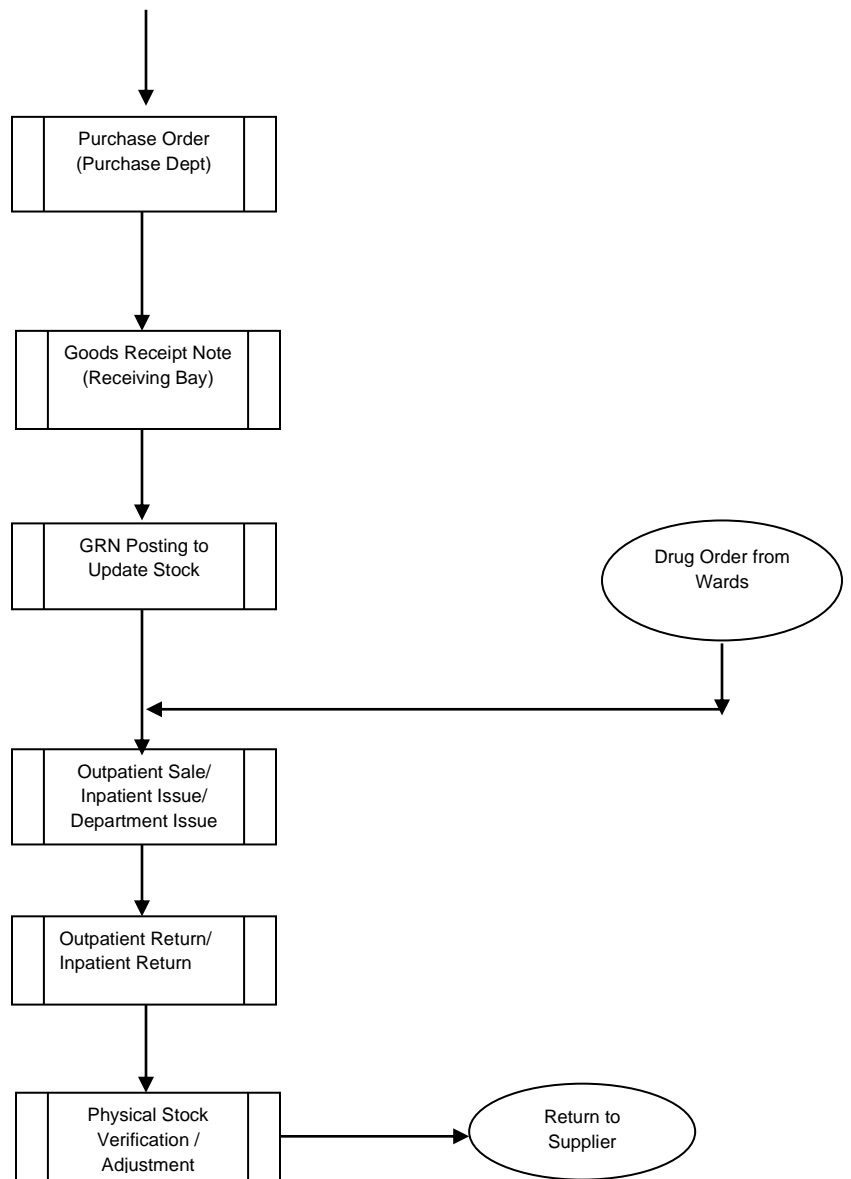
S. No.	Option	Description
1.	Requisition & Approval	Pharmacy can prepare purchase requisition based on consumption patterns or day to day requirements. Approval for the same is required. PO indent can be raised from ROL. Also department indent can be raised from ROL as well.
2.	Goods Receipt Note	Once the Purchase order is prepared and item supplied by the supplier the Pharmacy will be required to prepare the GRN with details of batch no, expiry, MRP etc. (Similar to present Receiving bay).  On verification of item physically the GRN can be posted which will actually update the stock.
3.	Outpatient Sale	Pharmacy can make cash sale and staff issue using this option. Provision is available for discount entry and accepting other modes of payment like credit card.
4.	Inpatient Issue	The Nurse station will enter drug orders for the inpatients. Pharmacy can select these orders and issue the items with

		provision for substitute selection.
5.	Department Issue	Pharmacy can issue drugs to other departments in the hospital based on online indents or manual requisition.
6.	Inpatient Return	The drug return entries will be done in the wards by the nurses. The pharmacy will be required to verify the return and post them.
7.	Adjustment Issue/ Receipt	This option will provide provision for making any adjustment to the computer stock, though proper authorization to be taken before using this option and also the option should be restricted to dept. HOD only.
8.	Consignment Details	Through this option user can view all the consignment details like raise PO/GRN, Consignment receiving and return details
9.	Utility	In this user can view details of substitute items, Item wise stock, and Item reorder level. Also user can modify batch details
10.	Pharmacy Dashboard	It will show the details of open transactions and expiry item in 30 days.
11.	Handling of Expired Items	Provision required to handle the expired item on following condition : 1) When supplier gives a credit note against the expired item. 2) when the supplier replaces the expired item with a new item. Best Proactive suggestion from Akhil - An expiry store to be created & all expired items to be transferred to this store.
12.	OP sale history	Provision to print the patient issue history with date,item,amount,copay,doctor etc.
13.	E-Prescription	Provision for the doctor to know that the item selected is an Un-Registered Item.
14.	Medicine Return after discharge	In the option of post discharge return option to select patients IP bill no to be provided, where the item and batch can be selected and a return can be generated instead of selecting any item from the list and putting item rates etc.

## 9.2 Process Flow of Pharmacy & Drug Store



Drug Order



<b>10. General Store</b> Screen 10.1	Purchase Indent	Provision to generate Purchase indent based on dynamic reorder level and manual selection of items
	Quotation	Provision for entry of final quotations
	Purchase Order	Provision for preparation of direct purchase orders as well as against Purchase indents
	Purchase Order Authorization	Purchase authorization required based on Purchase order value
	Purchase Amendment	Provision for amendment of Purchase order before GRN entry
	Direct Purchase Order	Provision for direct purchase orders
	Other Charges	Since no VAT and other taxations are in place the selling price of the items are calculated based on a Formula.
	Selling Price	Selling price of the items is calculated based on a Formula.
	Goods Receipt Note	Whenever the items are supplied by the Vendor a Goods Inward entry is made and then with that Goods Inwards entry a GRN is prepared. Each GRN are categorized as Capital, Consignment, Consumable, and Free Format Items.
	Gate Pass Entry	Provision for Entry of Gate pass for items moving out of the hospital to suppliers
	Department Issue/indent	Provision for department indents generation based on dynamic reorder level. The main store should be able to issue on indent approval.
	Adjustment Issue/Receipt	Provision for entry of both receipt and issue adjustment for reducing and adding up the stock
	Consumption Entry	Provision for entry on department or store wise consumption entry
	Condemnation	Provision for entry of condemnation of items
	Physical Stock Taking	Feature to enter computed stock against computed stock and entry of stock adjustment based on its approval by the management

MSD  
Task

Find Patient Patient Details

Welcome! ADMIN ASPL (MATERIAL STORE) Logout

Purchase Issue And Receipt Patient Issue/Return Requisition And Approval Utility Consignment Details Intimation Pharmacy Dashboard

Change Store

Open Transactions

Transaction Type : All Filter

Sno	Document Type	Document No	Document Date	Supplier Name	Encoded By	Encoded Date	Store	Facility
1	GRN	13-14/1376	26/08/2013 2:44PM	SEM POWER TECHNOLOGIES	ADMIN ASPL	26/08/2013 2:44PM	MATERIAL STORE	DEMO HIS

Expiry Item Next 30 Days

Sno	Item Name	Batch No	Expiry Date	Stock	Cost Price	GRN No	Supplier Name	Store
1	PRINTED ADMISSION REQUEST 1/8	84150	25/10/2013	1.000	20.5000	13-14/1117	VASHISHTA OFFSET PRESS	MATERIAL STORE
2	PRINTED VISITOR PASS	84154	25/10/2013	1000.000	0.4000	13-14/1117	VASHISHTA OFFSET PRESS	MATERIAL STORE

### Following Options are Available in General Store:

S. No.	Option	Description
1.	Requisition & Approval	General Store can prepare purchase requisition based on consumption patterns or day to day requirements. Approval for the same is required. PO indent can be raised from ROL. Also department indent can be raised from ROL as well.
2.	Goods Receipt Note	Once the Purchase order is prepared and item supplied by the supplier the Pharmacy will be required to prepare the GRN with details of batch no, expiry, MRP etc. (Similar to present Receiving bay).  On verification of item physically the GRN can be posted which will actually update the stock.
3.	Outpatient Sale	General Store can make cash sale and staff issue using this option. Provision is available for discount entry and accepting other modes of payment like credit card.
4.	Inpatient Issue	The Nurse station will enter orders for the inpatients. General Stores can select these orders and issue the items with provision for substitute selection.
5.	Department Issue	General Store can issue drugs to other departments in the hospital based on online indents or manual requisition.

6.	Inpatient Return	The drug return entries will be done in the wards by the nurses. The pharmacy will be required to verify the return and post them.
7.	Adjustment Issue/ Receipt	This option will provide provision for making any adjustment to the computer stock, though proper authorization to be taken before using this option and also the option should be restricted to dept. HOD only.
8.	Consignment Details	Through this option user can view all the consignment details like raise PO/GRN, Consignment receiving and return details
9.	Utility	In this user can view details of substitute items, Item wise stock, and Item reorder level. Also user can modify batch details
10.	Store Dashboard	It will show the details of open transactions in real time.
11.	PO indent	PO indent should be renamed as Purchase Requisition
12.	Purchase Requisition thru ROL	Provision is required to prepared purchase requisition based on item expiry.
13.	Item stock transfer from Central Store to each clinic.	The PO and GRN will be done in Oracle in Central Purchase Store from where it will be transferred to Miracle HIS through Interface. HIS will then transfer the stock from Central Store to each Clinic by a stock transfer activity.
14.	Department Indent	While preparing any Department indent if any existing Issue from Main store has not been acknowledged by the sub store, it should not be allowed to prepare new indent.

## 11.1 Proposed Systems

11	<b>EMR</b> Screen 11.1 Screen 11.2 Screen 11.3	<ul style="list-style-type: none"> <li>• Doctor login with their username and password. It will open EMR screen. They can see the appointment details in providers (doctor) dashboard.</li> <li>• Through EMR doctor can enter vital sign, problems, diagnosis, medication, allergy, investigation orders, and notes. It also includes option for attachment of past medical records.</li> <li>• It also includes forms which has various templates as per doctor's specialization created through Template Master.</li> <li>• Nursing Module is also available so that nurses can enter vitals and other basic details if required before visiting consultant. Option provided to enter the allergy by the nursing staff</li> <li>• Referral module is also available in which from OPD referrals sent to other departments and the doctor can view the referred cases in their dashboard. Doctor can send the comment regarding observation to the doctor who had referred the patient, so that flow of information occurs from both sides.</li> <li>• Doctor can again check and enter in EMR for follow up visit.</li> <li>• List of the entire appointment schedule for a doctor are to be shown with details that the Visit entry has been created or not by the Nurses.</li> <li>• Once the patients Arrives at the counter and OP Visit entry or OP Encounter is created, the OP Nursing staff should have a provision to enter patient vital, allergies, patient history, nurse notes etc.</li> <li>• All patients MRD files are scanned and uploaded to the patient Reg. no the doctor has provision to view all the previous file details and also any other document scanned and uploaded.</li> <li>• The doctor to have options for entry of Complaints, investigation order, diagnosis, medicine prescription, treatment planning.</li> <li>• Provision for favorites or order set for easy selection.</li> <li>• Provision to view medication history of the patient and feature to re-order the same medicine.</li> <li>• Result viewing option which show lab results in tabular as well as in graphical manner.</li> <li>• If same investigation or medicine has been ordered by any doctor then the system having the option to prompt an alter message.</li> </ul>
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	<ul style="list-style-type: none"> <li>• Doctor's dashboard shows a list of patients schedule for a day and when a visit entry is created, the doctor can enter the clinical entries.</li> <li>• A Nurse Work bench is available for entry of vital sign, allergies, patient history etc. List of the entire appointment schedule for a doctor are shown with details that the Visit entry has been created or not. Once the patients Arrives at the counter and OP Visit entry or OP Encounter is created, the OP Nursing staff have a provision to enter patient vital, allergies, patient history, nurse notes etc.</li> <li>• List of the entire appointment schedule for a doctor is shown with details that the Visit entry has been created or not. Doctor will be able to select and proceed with the entries. Doctors have provision to enter patient complaints, diagnosis, investigation orders, pharmacy prescription and treatment planning.</li> <li>• Result viewing option which show lab results in tabular as well as in graphical manner. If same investigation or medicine has been ordered by any doctor then the system should prompt an alter message.</li> <li>• Once the Pathologist certifies the report, provision for the advising doctor to review the result and certify it also. Till the report is not certified the report is not to be dispatched.</li> <li>• For Radiology order a skeleton or skin image is shown and on selection of body part the services get filtered for selection. For orders other than Radiology a dropdown selection is available for selection.</li> <li>• Provision in Report to see the change in the vital values</li> <li>• Provision to Mark all values as normal by minimum of clicks</li> </ul>
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Find Patient **Garima Mittal, 29 Yrs/Female** Logout Help

Patient History Vitals Allergies Chief Complaints Clinical Examination Diagnosis Orders And Procedures Prescription LAB History Attachments

**Patient History** [View All Case Sheet](#) [Download Old CaseNotes](#)

**Garima Mittal**, Female/29 Yr, Reg No 240509, DOB 02/01/1984, Home # , Mobile # 8447324426,

Reg No  Source  Provider

Date  [Filter](#) [View](#) [Lab History](#)

<input type="checkbox"/> All	Enc. #	Date	Facility Name	Provider	Diagnosis	View
<input type="checkbox"/>	8749	18/09/2013 5:30AM	DEMO HIS	A	Abdominal aortic aneurysm ruptured	<a href="#">View Case sheet</a>
<input type="checkbox"/>	8748	18/09/2013 5:30AM	DEMO HIS	A	Gynaecological examination (general)(routine)	<a href="#">View Case sheet</a>
<input type="checkbox"/>	8745	18/09/2013 5:30AM	DEMO HIS	A	Abnormal head movements	<a href="#">View Case sheet</a>

## Screen 11.2 Providers Dashboard

Find Patient Patient Details Logout Help

Patient History Vitals Allergies Chief Complaints Clinical Examination Diagnosis Orders And Procedures Prescription LAB History Attachments

**Provider Dashboard**

Dashboard for:

**Appointments**

This Week   [Filter](#)

Appt Date	Duration	Patient Name	Visit Type	Status	Encounter No	Room	Reason For Visit	Recurrence	Facility
18/09/2013 17:15	30 Min(s)	Garima Mittal	New Patient Consultation	Chk-in Re-Call	8745		Gyne related consultation		DEMO HIS
18/09/2013 17:45	15 Min(s)	Vijya Kumrai	Follow up Visit	Chk-in Call	8746		gyne Follow Up		DEMO HIS
18/09/2013 19:15	15 Min(s)	Ankita	New Patient Consultation	Chk-in Call	8747		Gyne Problem		DEMO HIS
18/09/2013 19:30	15 Min(s)	Garima Mittal	Follow up Visit	Chk-in Re-Call	8748				DEMO HIS
18/09/2013 19:45	15 Min(s)	Garima Mittal	Follow up Visit	Chk-in Re-Call	8749				DEMO HIS

**Admission**

Reg#	Name	IP No.	Admission Date	Provider	Bed No	Ward Name	Company Name
1254	Swetha Polana	13/8467	09/09/2013 08:30	Dr. A	311-B	Third Floor	TARIFF VERSION 5.0
240500	Vijya Kumrai	13/8469	09/09/2013 13:06	Dr. A	317	Third Floor	TARIFF VERSION 5.0

## Screen 11.3 Template Master

Menu

Task

Find Patient

Garima Mittal, 29 Yrs/Female

Welcome! A

Logout

Help

Patient History

Vitals

Allergies

Chief Complaints

Clinical Examination

Diagnosis

Orders And Procedures

Prescription

LAB History

Attachments

Case Sheet

New

Template Specialisation

☒ All
 ☐ Specialisation

Master Template

12 Month Visit

15 Month Visit

18 Month Visit

2 Year Well-child Visit

24 Month Developmental Checklist

6 Months Visit

9 Months Visit

Admission Plan

Antenatal Form

Assessment Of Fitness - Coding

Summary Template

Child Birth

Circulatory System

Comments (Consultant)

Comments (Medical Officer)

Delivery Details Template

Dermatology Template

Discharge Plan Template

Doctor's Notes

Ent Examination

Eye - Physical Exam

Family History:

Family Planning Client Record

General Examination

General Medicine Examination

General Surgery Examination

Gynaecology History

Gynaecology Physical Examination

HAC Assessment Template

HAC Clinical Findings

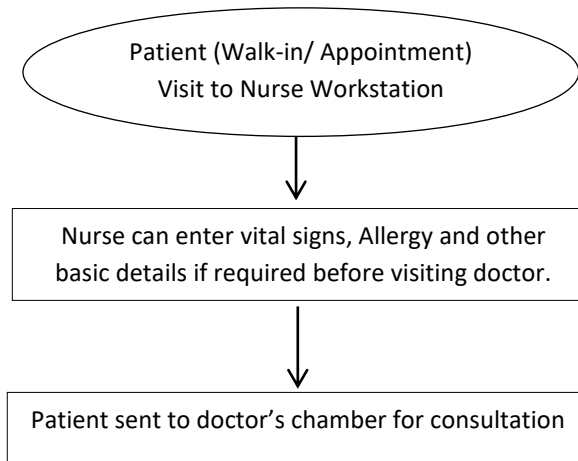
HAC Questionnaire Template

HAC Template

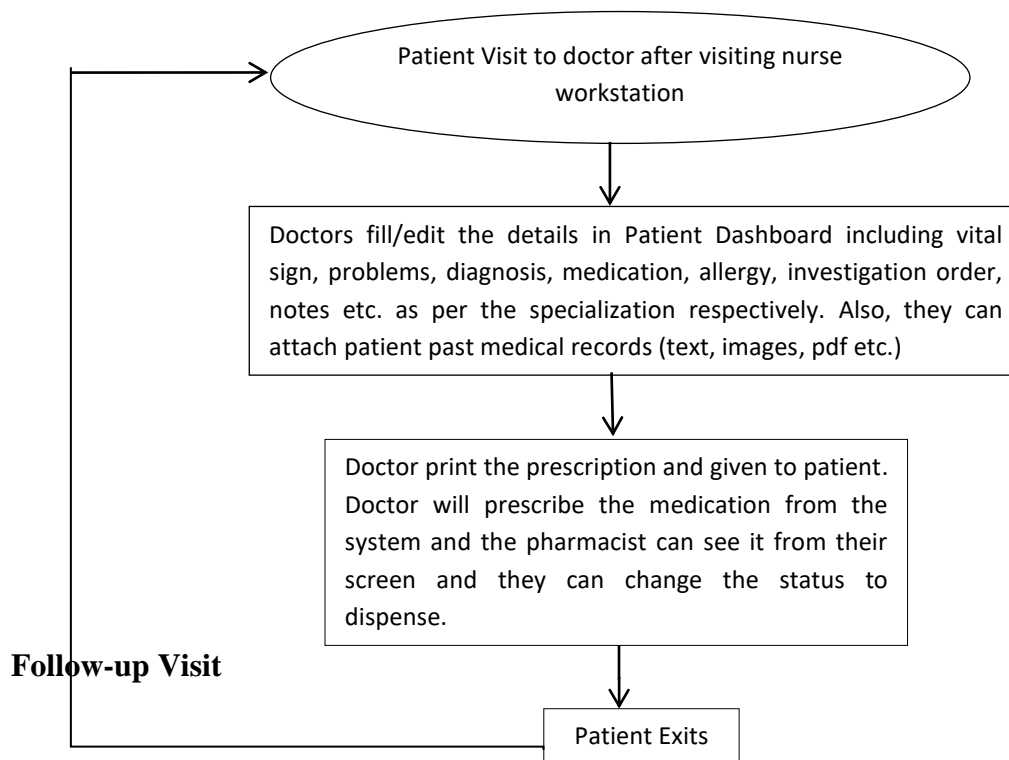
Patient Template \*

[ Select ]





### 11.3 Process flow of EMR for Doctors



S.NO.	Option	Description
1	Patient Dashboard	In doctors login patient dashboard will show the opened encounter of the patient to fill the details like problem, diagnosis, vitals, allergy etc. in the single window.
A	Problem	Doctor/Nurses can select the problem through search or using custom or favorite option as per patient complaint. Also problem details can be filled up like location, side, onset, duration etc. Provision to mention chronic problem is also available.
B	Vitals	Doctor/Nurses can fill-up the vitals of the patient and see the vital charts of the patient as well. It will also automatically calculate BMI and BSA and vital charts can be prepared.
C	Diagnosis	Doctor can select the diagnosis through search or using custom or favorite option. They can see past diagnosis and past patient diagnosis. Also they will be able to see diagnosis ICD 10 codes and doctor can be able to mention chronic diagnosis as well.
D	Lab/Radiology Order	Doctor can select the lab/radiology order through search or using custom or favorite option. This order will be reflected in LIS module after billing of the respective order. After release of result patient can get the report in person/via mail/via courier etc.
E	Medication Order	Doctor can fill-up the medication through search or favorite option as per diagnosis. Drug database (Like CIMS, Lexi etc.) for drugs is used. They also get warning for drug to drug and drug to allergy reaction. Also the order reflected in pharmacy module.
F	Allergy	Doctor/Nurses can fill-up the allergy through search or using other or favorite option. In this doctor can fill up drug allergy and other allergies like food, dust etc.
I	Notes	Doctor can select forms as per their specialization. By default the form opened as per the specialization of respective doctor. It has templates for various specialization like Pediatrics, Gynae, Orthopedics etc.
2	Patient History	Doctor can view patient past medical records
3	Attachments	Attachment of patient medical records can be done through this option. Various images, documents etc. can be done.
4	Physical Examination	Through this option doctor can enter details of the physical condition of patient at the time of visit.
5	Word processor	It will generate the prescription after filling all the details by doctor/nurses and they can take a print out and give it to patients.
6	Provider Dashboard	Doctor can view the details of the registered patient with confirmed appointment, past encounters, admitted patient, pending tasks, unassigned patient notes and lab/radiology test results on real time basis. The OPD queue/interface will be according to respective consulting rooms so that medical officers can log in to see any of the patients on the queue according to consulting room

7	Template Master (Clinical Examination)	Through template master we can create Templates for various specializations. It can create template for Cardiology, Neurology, Pediatric, Gyane, Obstractics, Physiotherapy, Dermatology etc.
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## 12.Operation Theater (OT)

### 12.1 Proposed System

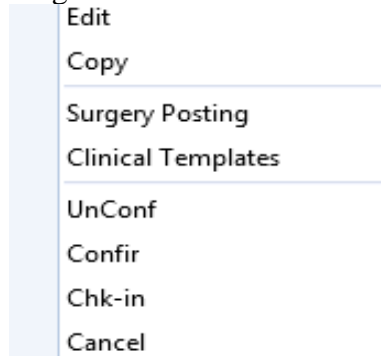
12

## OT

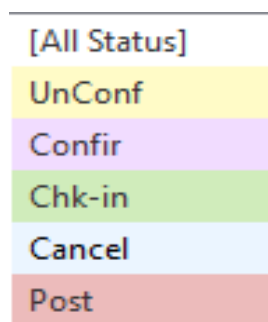
Screen 12.1

Screen 12.2

- Provision for making the advance booking on the basis of the date and the Time with the details description of the Main Surgery and the associated components with the surgery like the OT Gas and many More.
- Once we define the slot for a patient then the available option for the users are given below.



- From the Edit option here the user can make the changes in the Slot information which is previously defined by the same or another user.
- Provision to make the Copy Paste of the whole slot of the patient from one date or timings to another date or timings.
- Provision to make the surgery posting of the patient.
- Provision to add the details of the patient's Surgery in forms of the Pre-defined dynamics Templates which are created as per the define format provided by the Doctors.
- Provision to mark the patient's Surgery Status with the user friendly color status like the Confirm, Un-Confirm, Check In and Cancel.
- Provision to make the Surgery Booking Facility Wise with different OT available in the Facility.
- Provision to search the Surgery Booking Status Wise which is useful in term of saving the time of the Users.



- Provision to enter the Masters of the OT in the same module.
- Provision to search the OT Booking Details date wise and Date wise with the PAC Clearance.
- Provision to create the Masters of the Templates as per the doctor suggestions.
- Provision to create the Check List for the OT and the option is there for making the Existing templates In Active.

- Provision for OT Check list with remark.
- Provision to capture whether the surgery with a clean surgery or unclean surgery (i.e. with complication or without complications)
- Provision to mark whether the site has been prepared.
- Various Reports is available for the OT module like Surgeon wise Surgery list (Summary and Detail), Anesthesia Type wise Surgery list (Summary and Detail), Case Type (Major, Minor, Minor Elective) wise Surgery Report., Department wise Surgery list (Summary and Detail), Surgeon wise Theatre utilization and many more.

### Screen No. 12.1

Menu Task

Find Patient Patient Details

OT Scheduler OT Master Booking Details OT Templates OT Checklist Master OT Order List Report OT Booking Details

Date: 19/06/2013 Today [All Status] UnConf Confir Chk-in Cancel Post

Facility: DEMO HIS OT Name: All items checked Filter

Wednesday, June 19, 2013 Day Week Month

	OT 1	OT 2	OT 3	OT 4	OT 5	OT 6	Gynae OT	Minor OT
08:00 am	<b>Jai Kishan Khanduja</b> Acc# 224185 8:00AM-9:00AM	<b>Ranjit Rout</b> Acc# 231758 8:00AM-10:30AM ACL Tear						
08:30 am								
09:00 am	<b>Bimlesh Singh</b> Acc# 83308 9:00AM-10:00AM			<b>Sunita</b> Acc# 231985 9:00AM-11:00AM				
09:30 am								
10:00 am	<b>Raj Karan Singh</b> Acc# 231700 10:15AM-11:30AM				<b>Nawal Singh</b> Acc# 230509 10:00AM-3:00PM ASD	<b>Ram Ji Lal Agrawal</b> Acc# 75030 10:00AM-5:00PM		
10:30 am								
11:00 am								
11:30 am		<b>Rippan Dullet</b> Acc# 231942 11:30AM-1:30PM Operated # Humerus		<b>Himanshu Gahlaut</b> Acc# 231457 11:15AM-12:00PM				
12:00 pm	<b>Ravinder Madan</b>							

### Screen No. 12.2

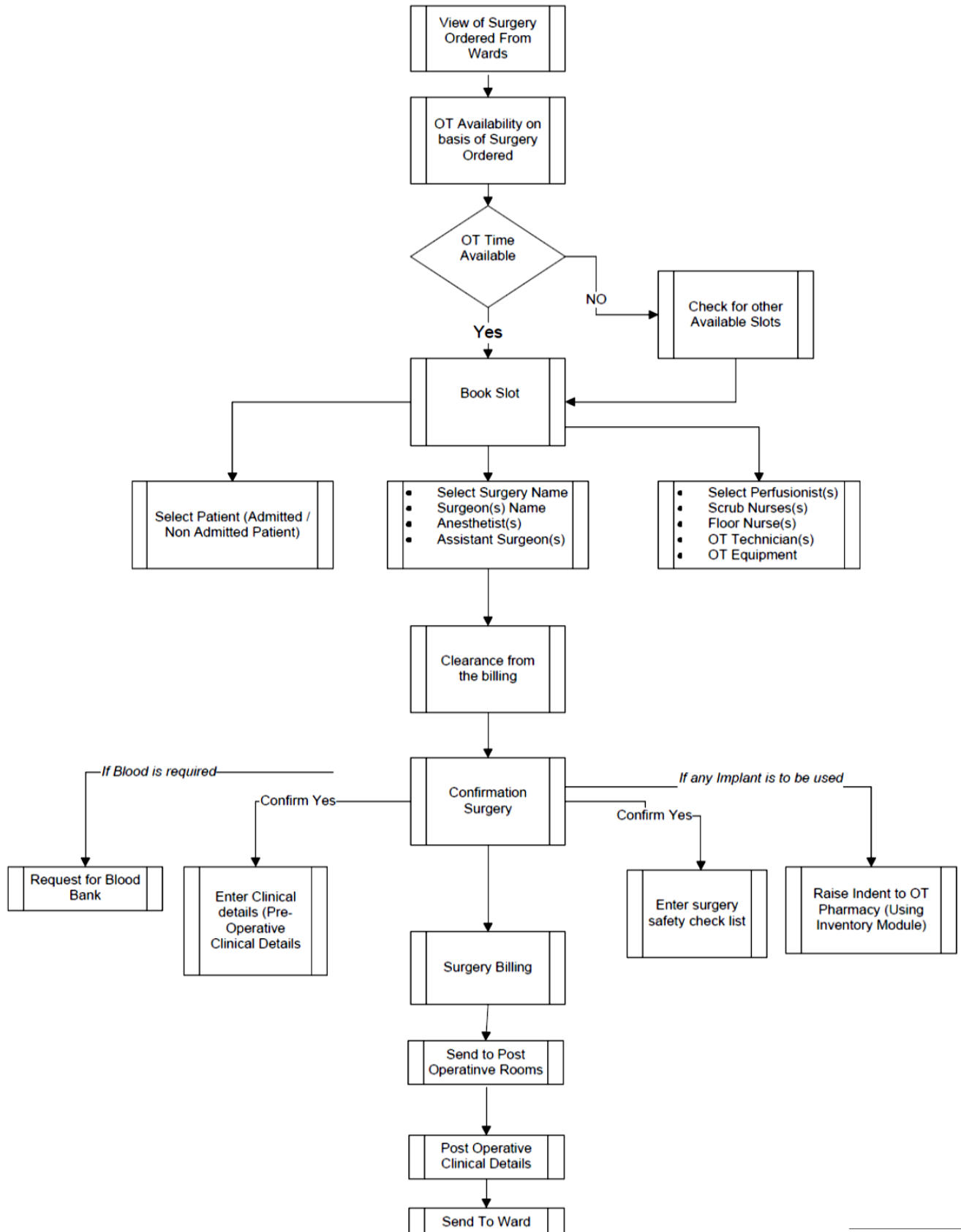
Menu  
Task

Welcome! ADMIN ASPL																	Logout	Help		
Find Patient		Patient Details																		
OT Scheduler		OT Master		Booking Details		OT Templates		OT Checklist Master		OT Order List		Report OT Booking Details								
OT Booking Details																	Tag Patient	Clinical Details	OT Check List	Details
OT Name		All		Date		03/06/2013		Monday		Filter		PAC Clearance		Remarks						
<input type="checkbox"/> UnConf		<input type="checkbox"/> Confir		<input type="checkbox"/> Chk-in		<input type="checkbox"/> Cancel		<input type="checkbox"/> Post												
		Booking No	Theatre Name	Start Time	End Time	Reg No	IP No	Patient Name	Admitting Doctor	Surgery	Booking Status	Order No	Order Date	Bill Clearance	PAC Clearance	Ward				
<a href="#">Select</a>		OT602	OT 1	09:00	11:00	229020	13/5455	Harish Chandra Pande	ANURAG KHAITAN VC	HERNIA INGUINAL REPAIR UNILATE	Confir			Yes	Yes	Fourth Floor				
<a href="#">Select</a>		OT603	OT 1	11:15	12:00			Rajni Narang		CYSTOSCOPY WITH BLADDER BIOPSY	UnConf									
<a href="#">Select</a>		OT604	OT 1	12:15	14:00			Suman		LAP. CHOLECYSTECTOMY (Main)	UnConf									
<a href="#">Select</a>		OT605	OT 1	14:30	16:00	229781	13/5457	Sujatha Udaya Kumar	MEENAKSHI SHARMA/NAVEEN SATUA FT	HAEMORRHOIDECTOMY STAPLED (Main)	Confir			Yes	Yes	Third Floor				
<a href="#">Select</a>		OT606	OT 2	08:00	10:00	228077	13/5448	Manashi Chatterjee	RAVI SAUHTA/DEVENDRA YADAV	ORIF FRACTURE CLAVICLE (Main)	Confir			Yes	Yes	Fourth Floor				
<a href="#">Select</a>		OT607	OT 2	10:30	13:30	229913	13/5439	Sandhya Devi Khandelwal	T SRINGARI FT	Total Knee replacement (B/L) (	Confir			Yes	Yes	Third Floor				
<a href="#">Select</a>		OT608	OT 2	13:45	15:00	158030		DEEPAK KUMAR		REMOVAL OF IMPLANTS - LONG BON	UnConf									
<a href="#">Select</a>		OT609	OT 2	15:15	18:00			Om Prakash Yadav		Total Elbow Joint Replacement	UnConf									
<a href="#">Select</a>		OT610	OT 4	09:00	10:30	137459	13/5454	Parth Anand	SARIKA VERMA (CC)	TONSILLECTOMY (Main)	Confir			Yes	Yes	Fourth Floor				

Following Option is available in OT

S. No.	Option	Description
1.	<b>OT Scheduler</b>	This option is used to create the new surgery slot for the IP patient date wise as well as also time wise and for that slot which is already created for the Patient having the various functions like the surgery posting, Status Updating and many more.
2.	<b>OT Master</b>	This option allows users to make the Masters of the OT as well as also allow the users to make the OT as an Inactive which is not needed for any reason.
3.	<b>Booking Details</b>	This option is used to show the details of the surgery which is already booked and the users having the various filters in it for fast searching.
4.	<b>OT Templates</b>	This option is used to Create, Edit the new defined templates here which are used in the OT Department.
5.	<b>OT Check List Master</b>	This option is used to describe the Check List as a Master means the user can make the check list here which is directly display in all the booking counters.

## 12.2 Process Flow OT



## 13. Doctor Accounting

### 13.1 Proposed System

13	<b>Dr. Accounting</b>	<ul style="list-style-type: none"><li>• Provision to make the Provisional and the Final Statement for the Doctors as per the Business rules defined by the Hospital.</li><li>• Provision to see the payable statement of the doctors date wise in the form of Reports as well with the Summary and details wise.</li><li>• Provision to make the Doctor Amount Statement adjustment bill wise.</li><li>• Provision to make the doctor charge Setup for the doctors both departments wise and Doctor Wise.</li><li>• Provision to define the Doctor Share date wise and for this concept we have the separate Doctor Share Setup.</li><li>• Provision to define the Doctor Setup Remuneration Type and MG Amount wise with the parameter called Fixed, Sharing, fixed + sharing.</li><li>• Provision to Block previous settled amount in the Doctor Setup when the user define the new Doctor Setup or may change the Setup Remuneration.</li><li>• Provision to define the Doctor Wise ordering / billing of Services in the system.</li><li>• Provision to get the Incentive Calculation of Doctors which concept must be defined as the Business Rules for the Doctor Accounting.</li><li>• Provision to make the Earning and Deduction Head for the hospitals.</li><li>• Provision to define the Head details for the Earning and Deduction Head and in that time user allows defining the Earning/ Deduction Percentage as well as also the Earning/ Deduction Amount.</li><li>• Provision to define the Doctor Share in the Team means the System allows the users to make the payment terms and condition for the Doctor Team also.</li><li>• Provision to get the report of the each event including the Doctor Contribution, Doctor Provisional Statement, Final Statement, Payable Statement and many others.</li><li>• Provision to make payment on bill settlement wise and revenue month based wise on agreement with doctor and others business rules which applied by the Hospital.</li><li>• Provision to make the payment on the basis of the rules which define in the master and setup for example setup is required to configure whether to be paid on settlement basic or on bill generation month wise so the users can easily do these types of the task for Doctor Accounting.</li><li>• Provision to define the any cases related company/Insurance/cash patient like in case of any rejection from the Insurance Company, it is deducted from the doctor's fee and many more.</li><li>• Provision to define the concept in the setup of the excluding for department basic like for any non - surgical cases (patients for medical management) a percentage of bill amounts is paid excluding pharmacy and consumables.</li></ul>
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### Following Option is available in Doctor Accounting

S. No.	Option	Description
1.	<b>Final Statement</b>	This option is used get the final statement of the Doctors this option allow to see the final statement month wise and year wise for the one specific doctor and the all doctors available in the hospital.
2.	<b>Provisional Statement</b>	This option allows users to see the provisional statement of the Doctors on the basic of the Month and year wise.
3.	<b>Payable Statement</b>	This option is used to get the statement of the doctor which is payable for each doctors this option contain the multiple filters in it.
4.	<b>Dr. Amount Adjustment</b>	This option is used to make the adjustment in the bills (Doctor Amount) which was previously saved by the users.
5.	<b>Service charge Setup</b>	This option is used to define the setup for the doctors as per the services defined basic of the department and allow users to define the business rules department and the Doctor wise.
6.	<b>Doctor Share Setup</b>	From this given option the users are allowed to define the setup for the doctor's share in the OPD and the IPD.
7.	<b>Doctor Setup</b>	From this option users are allowed to define the doctor Remuneration Type means weather it may be the Fixed charges, percentage wise charges and it may be the both as well.
8.	<b>Earning Deduction</b>	This option here allows the users to define the earning and the deduction head on the basic of the setup of hospitals.
9.	<b>Head details</b>	This option allows the users to define the details of the Head which was created in the previous option and the details which defined here are Earning / Deduction Percentage and the amount of both heads.
10.	<b>Team Doctor details</b>	This option allows the users to setup the Share of the Doctor's Team for the various departments as per the rules defined by the hospitals.

## 14. MRD

### 14.1 Proposed System

14	<b>MRD</b> Screen 14.1	<ul style="list-style-type: none"><li>• Provision for the MRD Users to scans all the patient files and uploads the scan files to the patient Registration No.</li><li>• Provision for Medical Records department assigns the codes Standards like ICD 10 with the patient diagnosis.</li><li>• Provision for to updating of codes Standards like ICD 10 when done by whom from excels formats.</li><li>• Provision to see the request of the files which send by the OPD and the IPD department.</li><li>• Provision to Issue the Patient files to a selected users and the selected department.</li><li>• Provision to make the file return for the selected patient to the selected users and the department.</li><li>• Provision to see the Death Register on the filtration of Date with the desire download option like the PDF, Excel and the MS World and many more.</li><li>• Provision to see the Birth Register on the filtration of Date with the desire download option like the PDF, Excel and the MS World and many more.</li><li>• Provision to trace the file Status of the patient.</li><li>• Provision to enter the Diagnosis of the selected patient.</li><li>• Provision to see the details report of the Disease Statics for the OP and IP patient with the standards of the ICD and ICP.</li><li>• Provision to see the In Patient Statics on the basic of the Department Wise, Diagnosis Wise and specialization wise with the date and standards parameters.</li><li>• Provision of Cut off time for the diagnosis entry</li><li>• Option will be available to upload and view patient scanned files.</li><li>• Provision for Inter facility document viewing option</li><li>• Provision to generate Nationality wise,Agewise,Gender wise disease statistics Report</li></ul>
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## Screen 14.1 (Death Register)

From Date  To Date  [Print Report](#)

1 of 3 [Select a format](#) [Export](#)

Sno.	IP No	Admission Date	Discharge Date	Deceased Name	Gender	Address	State/country	Cause Of Death	Consultant	LOS	Remarks
1	13/3314	04/04/2013 22:03:00	06/04/2013 10:30:00	Baby Of Manisha	Male		HARYANA / INDIA		Dr. UNIT3 (MANISH MANNAN/MAYANK GOEL )	2	
2	13/3224	02/04/2013 13:51:00	11/04/2013 02:00:00	Mr. Sube Singh	Male		HARYANA / INDIA		Dr. ALOK KR GUPTA/ RAKESH	8	
3	13/3590	12/04/2013 20:52:00	13/04/2013 04:00:00	Mrs. Poonam	Female		HARYANA / INDIA		Dr. MK Singh	1	
4	13/3471	09/04/2013 14:20:00	13/04/2013 05:05:00	Mrs. Ram Piri	Female		HARYANA / INDIA		Dr. CARDIO UNIT ADr JHAMB/Dr PANKAJ	3	
5	13/3519	10/04/2013 19:48:00	17/04/2013 15:44:00	Mr. LALA ASHIM KUMAR	Male	A-701 HUDA CO-OPERATIVE SOCIETY PLOT NO. 1 SEC-56 GURGAON	HARYANA / INDIA		Dr. NEURO UNITA(DR.KAPIL/RAJESH GARG)	7	
6	13/3848	20/04/2013 10:36:00	21/04/2013 19:10:00	Mr. Muni Ram	Male		HARYANA / INDIA		Dr. RAJIV GAUR	1	
7	13/3903	22/04/2013 00:25:00	22/04/2013 07:30:00	Mr. Ghanshyam Dass	Male		HARYANA / INDIA		Unit GASTRO TEAM	1	

## Screen No 14.2 (Disease Statics)

From Date  To Date  [Print Report](#)

1 of 1 [Select a format](#) [Export](#)

Sno	DOB	IP No Mother	IP No Baby	Gender	Mother Name	Father Name	Address	Consultant	Delivery Type
1	04/07/2013	13/6609	13/6630	Female	Mrs. Reena Chauhan	Mr. DEVENDER CHAUHAN	216 VASANT APARTMENT SEC 12 GURGAON HARYANA INDIA	Dr. UNIT1 (DR A SENGUPTA/ADITYA DIXIT )	Normal
2	23/08/2013	13/8433	13/8434	Male	Ms Nirmala Devi	Mr. Kumud Prasad	H-10A GURGAON HARYANA INDIA 120032	Dr. AMIT SRIVASTAVA	Normal

## Screen No 14.3 (Disease Statics)

Visit Type  Date From  To  ICD/ICP

Report Type ☒ Diagnosis Wise ☐ Doctor Wise ☐ Specialisation Wise

1 of 1 [Select a format](#) [Export](#)

### DEMO HIS

Ph. : , Fax :

### Diseases Wise Statistics (OPD-Patient)

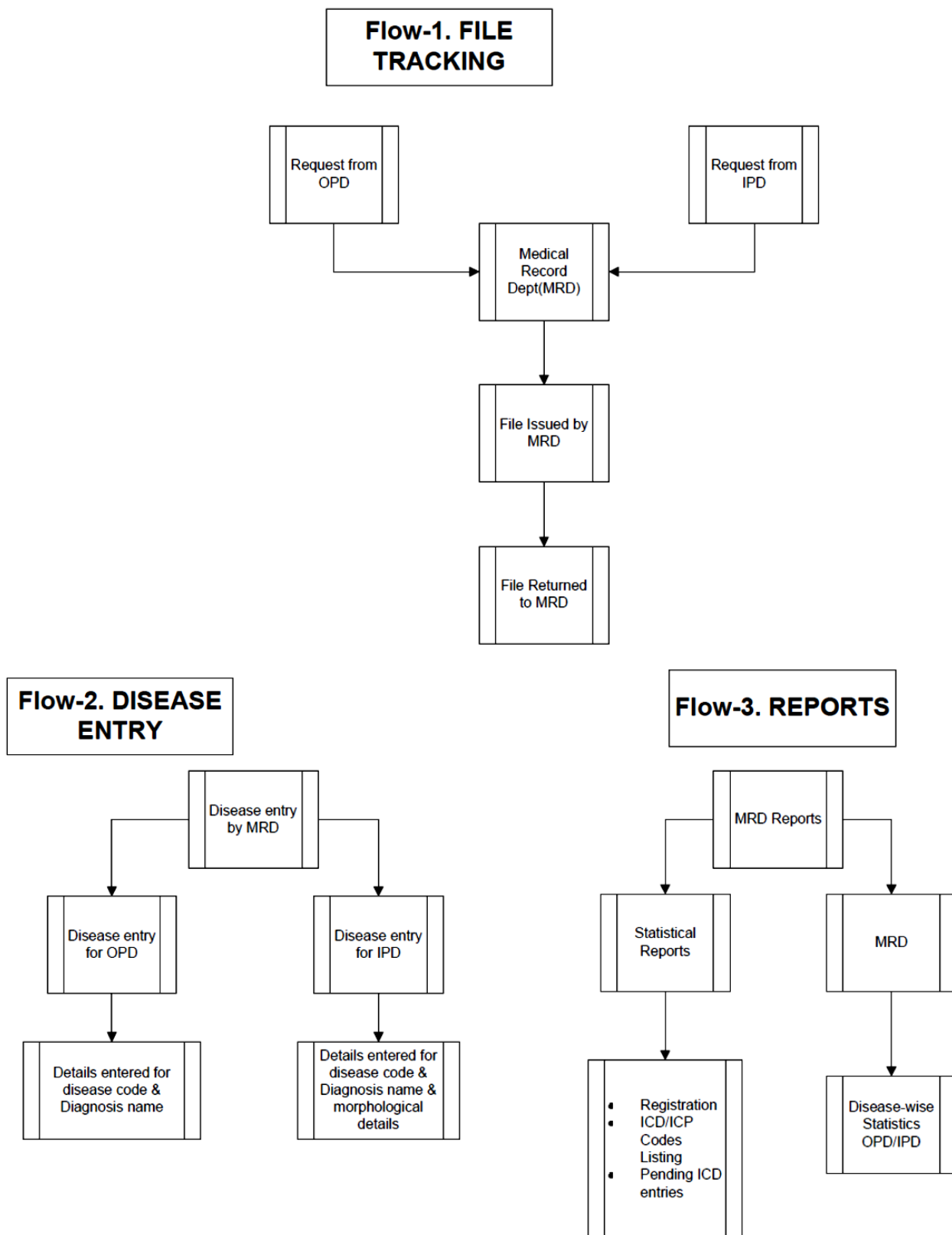
From : 06/05/2013 To : 30/09/2013

ICD	SNo.	ICDCode	Description	Female	Male	Child	Total
	1	A17.8+G05.0+	abdcderggjb	2	0	0	2
	2	A42.1	Abdominal actinomycosis	0	1	0	1
	3	A48.4	Brazilian purpuric fever	1	1	0	2
	4	A90	Dengue fever [classical dengue]	0	4	0	4
	5	A93.2	Colorado tick fever	1	1	0	2
	6	A98	Arenaviral haemorrhagic fever	0	2	0	2
	7	B78.7	Disseminated strongyloidiasis	1	0	0	1
	8	C15.2	Abdominal part of oesophagus	0	2	0	2
	9	C76.2	Abdomen	2	2	0	4
	10	D17.0	Benign lipomatous neoplasm of skin and subcutaneous tissue of head	0	1	0	1
	11	I71.3	Abdominal aortic aneurysm ruptured	1	2	0	3
	12	I71.4	Abdominal aortic aneurysm without mention of rupture	1	1	0	2
	13	M24.9	Joint derangement unspecified	0	1	0	1
	14	O00.0	Abdominal pregnancy	0	2	0	2

**Following Option is available in MRD**

<b>S. No.</b>	<b>Option</b>	<b>Description</b>
1.	<b>File Request</b>	This option is used get the information of the requested file which was send by the other department to MRD department.
2.	<b>File Issue</b>	This option allows users to Issue the selected patient files to the other department.
3.	<b>File Return</b>	This option is used to return the selected patient files to a selected department delegates or may be the department directly.
4.	<b>Death Register</b>	This option is used to get the report of the death Patient in the IP department of the hospitals on the basic of the date and the associated details.
5.	<b>Birth Register</b>	This option is used to get the report of the new born baby Patient in the IP department of the hospitals on the basic of the date and the associated details.
6.	<b>File Status</b>	From this given option the users able to trace the patient's file status.
7.	<b>Diagnosis Entry</b>	From this option users are allowed to make the entry of the Diagnosis code wise for the selected patient.
8.	<b>Disease Statics</b>	This option here allows the users to get the report of the Disease static.
9.	<b>In Patient Statics</b>	This option allows the users to get the statics of the diagnosis in the IP patient on the basis of the date.

## 14.2 Process Flow MRD



## 15. Dietary Management

### 15.1 Proposed System

15	Diet Screen 15.1	<ul style="list-style-type: none"><li>• Provision to see the List of the patient in form of the 3 different selections that is Registration, Admission and Discharge.</li><li>• Provision to make the Master of the Diet Type Master like the Category and the sub Category and under the one define category users allow for creating multiple sub categories.</li><li>• Provision to create the Diet Master which is associated and tagged to the Diet Type Master.</li><li>• Provision to create the Masters of Precaution / Food Habit Master.</li><li>• Provision to get the Census and the ATD List related the Diet Module and in the same option the patient diet which acknowledge by the Dietician is indicated separately with the color coding.</li><li>• Provision to give the diet order in the single screen of the different diets.</li><li>• Provision to get the report of the diet order date wise and also different filters for the fast searching of the records.</li><li>• Provision to see the Diet List of the Patient in one single screen which is ordered from the ward management.</li><li>• Provision to find out the BMI and BEE of the patient on the basic of some input parameter.</li><li>• Provision of the RT Feed for the Users.</li><li>• Provision to prepare the Meal card for the patient based on the diet type ordered by the doctors. The F&amp;B department can get printed list of meal wise details of each ward or floor for easy preparation of delivery of meals.</li><li>• Provision to make the Extra Diet Order with provision for charging those extra meals to the patient.</li></ul>
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## Screen Number 15.1

☐ Census ☒ ATD Report

ATD Criteria  
☒ Admission Date ☐ Transfer Date ☐ Discharge Date

From Date: 12/05/2013 00:00 To Date: 30/09/2013 14:08

Search By: Reg No   Total Census Till Now : 3795 ☒ Acknowledge

Acknowledged success

Reg No	IP No	ward Name	Bed No	Patient	Age/Sex	Admission Date	Acknowledged By	Acknowledge Date	Acknowledgment
240510	13/8470	Third Floor	353	Rohit	26 Yrs/Male	20/09/2013 17:12			<a href="#">Acknowledge</a>
240500	13/8469	Third Floor	317	Vijya Kumrai	29 Yrs/Female	09/09/2013 18:36	ADMIN ASPL	30/09/2013 14:10	
240411	13/8468	Third Floor	316	Naveen Kuamr	31 Yrs/Male	09/09/2013 17:14			<a href="#">Acknowledge</a>
1254	13/8467	Third Floor	311-B	Swetha Polana	28 Yrs/Female	09/09/2013 14:00			<a href="#">Acknowledge</a>
240394	13/8466	Fourth Floor	455	Anchal	27 Yrs/Female	09/09/2013 09:59			<a href="#">Acknowledge</a>
240493	13/8465	Fourth Floor	454-B	Rakesh	29 Yrs/Male	07/09/2013 17:14			<a href="#">Acknowledge</a>
240448	13/8464	Third Floor	308	Sumit Kumar Singh	31 Yrs/Male	07/09/2013 12:29			<a href="#">Acknowledge</a>
240446	13/8463	First Floor	CCU01	Ravi Kumar	29 Yrs/Male	07/09/2013 10:57			<a href="#">Acknowledge</a>
240447	13/8462	Fourth Floor	450-A	Mauri Gupta	24 Yrs/Female	07/09/2013 10:39			<a href="#">Acknowledge</a>
1542	13/8461	Ground Floor	DAY-03	ANIRUDH DUTTA GUPTA	9 Yrs/Male	07/09/2013 02:40			<a href="#">Acknowledge</a>
240443	13/8460	First Floor	NSCU03	Gynae Patient 3	32 Yrs/Female	07/09/2013 00:20			<a href="#">Acknowledge</a>
6598	13/8459	Third Floor	304	RENU KAUL	37 Yrs/Female	05/09/2013 16:16			<a href="#">Acknowledge</a>
240438	13/8458	Fourth Floor	PICU04	Vinish Gupta	3 Yrs 9 Mths/Male	04/09/2013 12:35			<a href="#">Acknowledge</a>
240437	13/8457	Fourth Floor	447--A	Patient 1	24 Yrs/Male	04/09/2013 12:32			<a href="#">Acknowledge</a>
240437	13/8456	First Floor	SICU07	Patient 1	24 Yrs/Male	04/09/2013 10:01			<a href="#">Acknowledge</a>
2334	13/8454	First Floor	CCU12	Madhulika Sharma	72 Yrs/Female	03/09/2013 16:03			<a href="#">Acknowledge</a>
123	13/8453	First Floor	NSCU05	Asha Bajaj	52 Yrs/Female	03/09/2013 16:00			<a href="#">Acknowledge</a>
240421	13/8452	First Floor	SICU03	Kunal Kumar	2 Mths/Male	29/08/2013 14:43			<a href="#">Acknowledge</a>
332	13/8451	Fourth Floor	451-A	NEELAM NANDAL	30 Yrs/Female	28/08/2013 19:13			<a href="#">Acknowledge</a>

## Screen Number 15.2

From Date: 01/09/2013 00:00 To Date: 30/09/2013 14:18

Legends: New Diet

Search By: Reg No

	Order#	Reg No	IP No	Bed#	Request Date	Patient	Age/Sex	Precaution	Diagnosis	DietOrder	Doctor Name	Entered By	Ack. By	Ack Time	FC
<input type="checkbox"/>	9854	239434	<a href="#">13/8280</a>	307	13/09/2013 16:05	Manasvi Mohan Sharma	25 Yrs/Male	LOW FAT	asa	EXTRA DIET --> PAPAYA PLATTER ->	RR DUTTA	ADMIN ASPL			
<input type="checkbox"/>	9853	183688	<a href="#">13/8373</a>	355	10/09/2013 12:02	Ruchi Shamsha Sinha	32 Yrs/Female	DIABETIC, NEUTROPENIC		NORMAL DIET --> LOW FAT, LOW SALT ->	MK Singh	ADMIN ASPL	ADMIN ASPL	12:03	
<input type="checkbox"/>	9852	239277	<a href="#">13/8187</a>	303	09/09/2013 14:48	Layla Bahlol Sameen	62 Yrs/Female	DIABETIC	fbfg	NORMAL DIET --> LOW FAT, LOW SALT ->	ARUN BHANOT/Dr SANDEEP SINGH/Dr NIPUN BAJAJ	ADMIN ASPL			
<input type="checkbox"/>	9851	54832	<a href="#">13/8403</a>	302	09/09/2013 12:38	Himanshu Anaand	35 Yrs/Male	DIABETIC, NEUTROPENIC		SOFT DIET --> GLUTEN FREE/CELIAC, LOW PROTEIN ->	NEELIMA MISHRA	ADMIN ASPL	ADMIN ASPL	12:53	
<input type="checkbox"/>	9850	240446	<a href="#">13/8463</a>	CCU01	07/09/2013 12:08	Ravi Kumar	29 Yrs/Male			EXTRA DIET --> LASSI, SUJI HALWA/DESSERT ->	RR DUTTA	ADMIN ASPL	ADMIN ASPL	12:10	
<input type="checkbox"/>	9849	240446	<a href="#">13/8463</a>	CCU01	07/09/2013 11:53	Ravi Kumar	29 Yrs/Male	DIABETIC	Abdominal Sterilization	NORMAL DIET --> HIGH PROTEIN, LOW FAT ->	RR DUTTA	ADMIN ASPL	ADMIN ASPL	11:54	
<input type="checkbox"/>	9848	6598	<a href="#">13/8459</a>	304	07/09/2013 06:11	RENU KAUL	37 Yrs/Female	NEUTROPENIC, LOW FAT		NORMAL DIET --> HEPATIC/HIGH CARBOHYDRATE, LOW SALT ->	ADITYA DIXIT	ADMIN ASPL			

## Screen Number 15.3

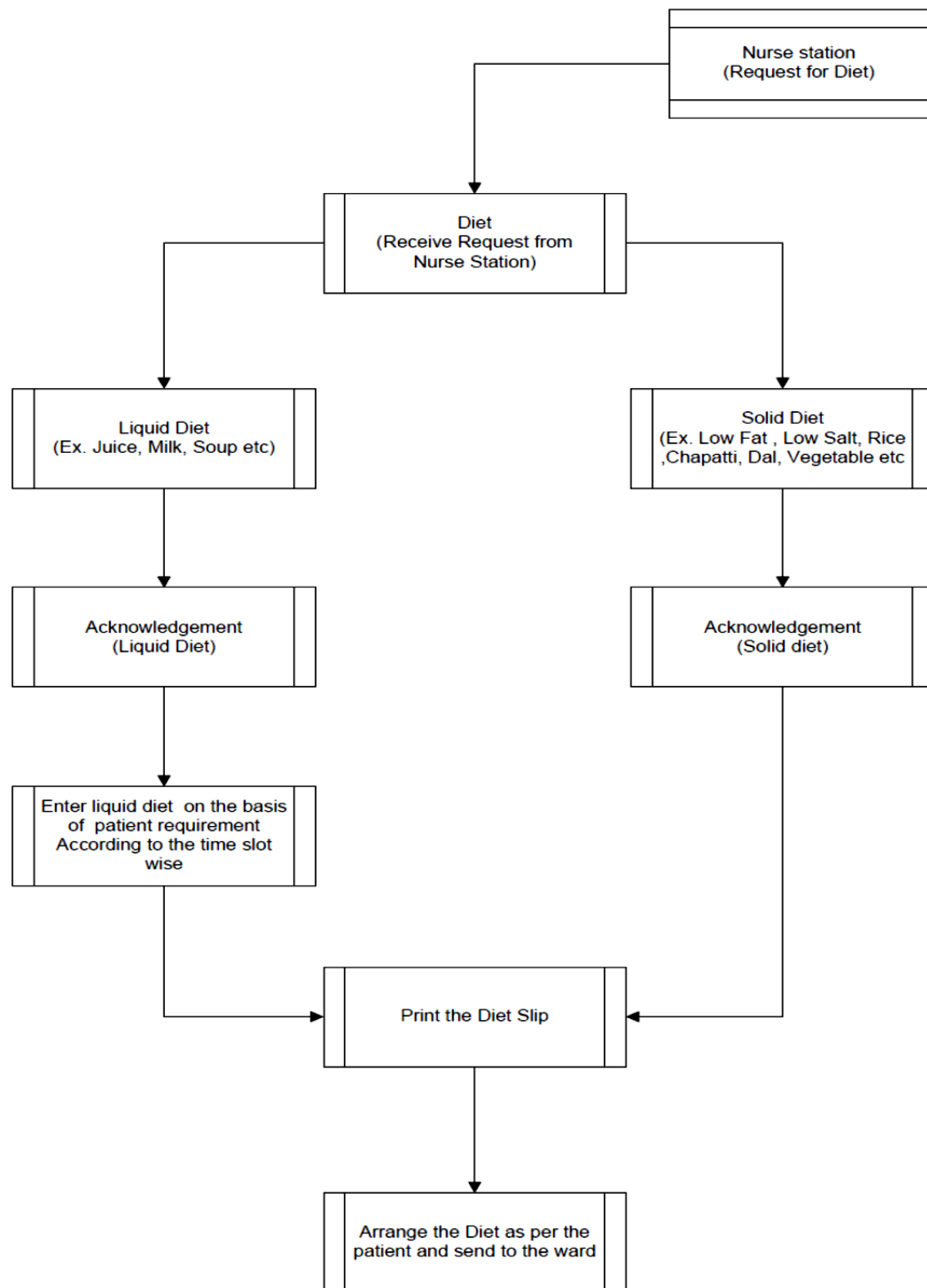
From Date	<div>01/09/2013 00:00</div>	To Date	<div>30/09/2013 14:21</div>	<div>Filter</div>	Legends	<div>New Diet</div>									
Search By	<div>Reg No</div>	<div>Refresh</div>			<div>Charge To Patient</div>		<div>Print</div>								
	Order#	Reg No	IP No	Bed#	Request Date	Patient	Age/Sex	Precaution	Diagnosis	DietOrder	Doctor Name	Entered By	Ack. By	Ack Time	F&A
<input type="checkbox"/>	9854	239434	<a href="#">13/8280</a>	307	13/09/2013 16:05	Manasvi Mohan Sharma	25 Yrs/Male	LOW FAT	asa	EXTRA DIET --> PAPAYA PLATTER ->	RR DUTTA	ADMIN ASPL			13
<input type="checkbox"/>	9850	240446	<a href="#">13/8463</a>	CCU01	07/09/2013 12:08	Ravi Kumar	29 Yrs/Male			EXTRA DIET --> LASSI,SUJI HALWA/DESSERT ->	RR DUTTA	ADMIN ASPL	ADMIN ASPL	12:10	12

Following Option is available in Dietary Management

Task	Dietary Management
	Patient Lists
	Diet Type
	Diet Master
	Precaution / Food Habit
	Census List
	Diet Order
	Patient Diet List
	Calculate BEE / BMI
	RT Feed
	Meal Card
	Meal Card Print
	Extra Diet Order
	Monthly Report



## 15.2 Process Flow Diet



## 16. Blood Bank Management

### 16.1 Proposed System

16	<b>Blood Bank</b> Screen 16.1	<ul style="list-style-type: none"><li>• The Blood bank module integrates donor, unit and patient information.</li><li>• It allows stocking of the Blood Bags/Sachets &amp; issue to Patients or Wards.</li><li>• There is provision to facilitate stocking &amp; issue of Plasma Products converted from the Blood Stock going to expire.</li><li>• Provision for cross matching records is available.</li><li>• Provision for Issue and release of blood component.</li><li>• Provision for maintaining records of transfusion reaction.</li><li>• It includes flagging abnormal test results, reporting of test and transfusion results to minimize product waste, compiling statistical reports.</li><li>• Provision for Inventory control for diagnostic kits and reagent.</li><li>• Provision to issue pending request from ward</li><li>• There are various masters available including Blood Group Master, Donor Type Master, Camp Master, Blood Component Master, Blood screening, Referral Master, Physical/ Screening Parameter, Blood Bank Technician Master, Bag Make Master, Kit Master, etc. to create, edit and save the respective master data.</li><li>• Provision for Screening and stock division option available which includes component division, Infectious screening, Cell &amp; Serum Screening, component conversion and Quality Control Program for Antisera.</li><li>• Provision to capture various transactions within blood bank modules like component request entry, requisition acknowledges cross matching etc.</li><li>• Provision for query related to details of blood bank module.</li></ul>
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## Screen 16.1: Donor Registration

Donor Registration
File Edit Report

Registration for:
WHOLE BLOOD

Donor Type:
AUTOLOGUS

Patient Type:
☒ IPD
☐ OPD

Photo

Donor Detail
D. Reg. No. Title First Name Middle Name Last Name Guardian Name
05/02/2013 17:16 Mr. SUDHIR KUMAR MANISH KUMAR
Date of Donation Date of Birth Year Month Day Gender Height (Cms.) Weight (Kg)
05/10/1984 28 4 3 Male 5.7 72

Patient Detail
For Whom Donate (IP. No.) UHID Name Age Ward Bed No. Blood Group Refer From
12/12 ABC
Diagnosis Relationship With Patient
Dialysis

Donor Details
Blood Group Occupation Nationality E-mail Address
A POSITIVE ADVOCATE Indian sudir34@gamil.com

Contact Address
Building/Street I 65 B
Country State City Area
INDIA New Delhi NEW DELHI
Pin Code Phone ( R ) (Off ) Mobile Fax
110026 635985

Other Detail
Last Date of Donation
05/02/2013

### Following Option Available in Blood Bank Management

Option	Description
<b>Blood Bank Master</b>	Various master creation option available including Blood Group Master, Donor Type Master, Camp Master, Blood Component Master, Blood screening, Referral Master, Physical/ Screening Parameter, Blood Bank Technician Master, Bag Make Master, Kit Master, Hospital Master, Sub component Master, Reason Master, Component Indication Master
<b>Registration</b>	This option includes Donor Registration, Blood Physical Examination & Phlebotomy
<b>Screening and Stock Division</b>	It includes sub option of component division, Infectious screening, Cell & Serum Screening, component conversion, Quality Control Program for Antisera, Adverse Transfusion Reaction workup, component quality control
<b>Transaction</b>	Various transaction included like component request entry, requisition acknowledge, cross matching, Component release acknowledge, component issue, return, discard entry & bulk issue.
<b>Query</b>	There are options available for queries like Donor Search, Blood Stock, Admitted patient, patient registration details, deferred donor list & blood transfusion details.
<b>Reports</b>	Various types of reports can be generated related to blood bank

## 17. CSSD

### 17.1 Proposed System

CSSD MANAGEMENT	<p>In this module we covered the following masters.</p> <ul style="list-style-type: none"><li>• User can create the new machine through the master.</li><li>• User can create the new location.</li><li>• New item creation.</li><li>• Standard check list option also is given in to the master to create the standard check list.</li></ul> <p>In this module we covered the following traction options.</p> <ul style="list-style-type: none"><li>• Receiving of Soft items and Instrument from the different departments.</li><li>• PCD/Bio Test to sterilize the instruments.</li><li>• Entry of the sterilized items.</li><li>• Option to issue the sterilized instruments.</li></ul>
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#### Following options will be present in CSSD Management:

Machine Master	<ul style="list-style-type: none"><li>• In this module Machine Master Option is given which is used to create the master of the machines.</li><li>• Machine master form covered the Machine name, Type of the Machine, Last Preventive, Reminder and Status of the Machine.</li></ul>
Location	<ul style="list-style-type: none"><li>• This option is used to create the new location.</li><li>• This option covers the following fields like Location Name, Short Name of the Location, Type of the Location and Status of the location.</li><li>• In this form search option is also given to search the location.</li></ul>
Item	<ul style="list-style-type: none"><li>• This option is used to create the new item for CSSD module.</li><li>• User can create and edit the items and also can search the saved items.</li><li>• To create the item user need to fill the following fields Name, Item Group, Group, Location and Status.</li></ul>
Standard Check List Master	<ul style="list-style-type: none"><li>• This master form is used to create the Standard check list.</li><li>• To create the standard check list user need to fill the description of the standard check list and the status.</li><li>• Encoded by and Encoded date also given on to this form.</li></ul>
Receiving	<ul style="list-style-type: none"><li>• This form is used to enter the received soft items and instrument detail.</li><li>• In this form Save, Modify, Search and print option is given.</li><li>• On this form user need to fill the following details Soft Items or Instruments Location, Received By, From To and Received Item Description.</li></ul>

	<ul style="list-style-type: none"> <li>This form covers the Following Fields. Document, Remarks Date, Location Received By, From To, Check List Transaction and Received Item Description.</li> </ul>
PCD/Bio Test	<ul style="list-style-type: none"> <li>This form is used to PCD/Bio test of the instruments.</li> <li>New, Edit, Undo, Search, and print option given on to this form.</li> <li>User need to fill the following details to save the PCD/Bio test Sterilizer name, Cycle Start Time, Cycle End Time, Jacket Presser, Chamber Presser and Temperature.</li> </ul>
Sterilization	<ul style="list-style-type: none"> <li>This form is used to save the sterilized data.</li> <li>New, Edit, Undo, Search and print option is available on to this form.</li> <li>User need to fill the following field to save the record Machine Name, Load No, Time In, Time Out, Machine Type, Program, Total Time and Temp.</li> <li>Following option given on to this form Machine, Load No, Packed by, Operator Cleaned By, Dried by, Time In, Time Out, Jacket Presser, Machine Type, Total Time, (Aerate/Dry) Time, Date, Program Checked By, Operator Unload, Disinfected By, Chamber Pressure, Temp, Location Name, Item Description, Quantity and Expiry Date.</li> <li>Status also available on to the top of the screen Open or POST.</li> </ul>
Issuance	<ul style="list-style-type: none"> <li>This option is used to issue the Sterilized or non-sterilized items.</li> <li>On this form New, Edit, Undo, Search and print option is given.</li> <li>To issue the Sterilized item user need to fill the following fields Issued item name, Quantity, Location and employee name.</li> <li>This form covers the following fields Document, Remark, Issued Date, Location, Employee Name, Issued Item Description and item quantity.</li> </ul>

## 18. Equipment Maintenance

### 18.1 Proposed System

<b>18 Equipment Maintenance</b>	<p><b>This module covers the following masters:-</b></p> <ul style="list-style-type: none"><li>• User can create new Complaint Category.</li><li>• In this module provision to create the new Complaint Type.</li><li>• User can create new Physical Location and also provision to create new Physical Sub Location into this module.</li><li>• Option given to create new Equipment through Equipment Master.</li><li>• Provision to create the new AMC.</li><li>• Master form given to create new CMC.</li></ul> <p><b>In this module we covers the following options:-</b></p> <ul style="list-style-type: none"><li>• Sending the equipment complaints to the respective departments.</li><li>• Checking the complaint status.</li><li>• Option to see the pending complaints.</li><li>• Assigning the job orders.</li><li>• Making the preventive maintenance schedule of the machines.</li></ul>
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#### Following options will be present in Equipment Maintenance:

Complaint Category (Master Form)	<ul style="list-style-type: none"><li>• Complaint Category option is used to create master of Complaint Category.</li><li>• In this form New, Save, Undo, Search, Print and close button is given which is respectively used to Add new Complaint Category, Save the Complaint Category, undo, Search the saved complaint category, print and close the complaint category screen.</li><li>• Complaint Category form covers the following fields: - Category Code, Category Name, Is Complaint Category, Status and Encoded By.</li><li>• To create the Complaint Category user need to fill the Category Name, Is Complaint Category, Status and click on to the Save button.</li></ul>
Complaint Type(Master Form)	<ul style="list-style-type: none"><li>• This option is used to create new Complaint Type</li><li>• This form covers the following fields like Complaint Category, Complaint Type Code, Complaint Type Name, and Status.</li><li>• New button given to start with fresh<ul style="list-style-type: none"><li>○ New screen.</li></ul></li><li>• Save button is given to save the Complaint Type.</li><li>• In this form search button is also given to search saved Complaint Types.</li><li>• Print button is given to print the complaint Types.</li><li>• Close button given to close the Complaint Type screen.</li></ul>
Physical Location (Master Form)	<ul style="list-style-type: none"><li>• This option is used to create the new physical location.</li></ul>

	<ul style="list-style-type: none"> <li>• User can create, edit and search the Physical Location.</li> <li>• Provision to In Active the wrong physical location.</li> <li>• To create the physical location user need to fill the following fields Hospital Location, Department, Location name and Status.</li> </ul>
Physical Sub Location (Master Form)	<ul style="list-style-type: none"> <li>• This option is used to create the physical sub location.</li> <li>• In this form option available to create, modify and search the physical sub location.</li> <li>• To create the physical sub location user need to choose the Hospital Location, Department, Area of Location, Area Location and Status.</li> <li>• To create the standard check list user need to fill the description of the standard check list and the status.</li> </ul>
Equipment Master (Master Form)	<ul style="list-style-type: none"> <li>• This option is used to create the new equipment's.</li> <li>• In this form Save, Modify, Search and print option is given.</li> <li>• On this form user need to fill the following details first select the item the fill the SL No, Tag No, Equipment Model, Physical sub Location.</li> <li>• Item Search button is available to see the item list or fetch the item detail.</li> </ul>
AMC (Master Form)	<ul style="list-style-type: none"> <li>• This option is used to create the new Annual Maintenance Contract (AMC).</li> <li>• New, Edit, Undo, Search, and print option given on to this form.</li> <li>• User need to fill the following details to save the AMC Maintained By, Contact Person, Mobile or Phone No, AMC Begin Date, Ending Date, AMC Amount, AMC Type, Payment Terms, First Payment, No of PM, Payment Detail and Preventive Maintenance Schedule.</li> <li>• Equipment List option also available.</li> </ul>
CMC (Master Form)	<ul style="list-style-type: none"> <li>• Through this option user can create new Comprehensive Maintenance Contract(CMC)</li> <li>• New, Edit, Undo, Search and print option is available on to this form.</li> <li>• User need to fill the following details to save the AMC Maintained By, Contact Person, Mobile or Phone No, AMC Begin Date, Ending Date, AMC Amount, AMC Type, Payment Terms, First Payment, No of PM, Payment Detail and Preventive Maintenance Schedule.</li> <li>• Equipment List and Spare Parts option also available on this form.</li> </ul>
Complaint	<ul style="list-style-type: none"> <li>• This option is used to send the complaints to the department.</li> <li>• On this form New, Edit, Undo, Search and print option is given.</li> <li>• To send the application user need to fill the following fields Complaint(Urgent/Routine/Preventive), Department From, Department To, Complaint Category Complaint Type,</li> </ul>



	Equipment Detail like Tag No, Sub Tag No, Equipment Name, Complaint Description and Complaint By.
Complaint Status	<ul style="list-style-type: none"> <li>This option is used to see the status of the complaints either open or closed.</li> <li>To see the status of the complaints option available on to this screen Date Range, Open Job Order, Closed Job Order and Show All Jobs.</li> </ul>
Pending Complaints	<ul style="list-style-type: none"> <li>This option is used to see the pending complaints.</li> <li>Option available on to this screen Date Range, Refresh button and Search On based on to the selected criteria.</li> <li>We select the date range and click on to the refresh button pending complaints filtered on to the screen.</li> </ul>
Job Order	<ul style="list-style-type: none"> <li>This option is used to allot the complaints.</li> <li>On this form New, Edit, Undo, Search and print option is given.</li> <li>To allot the complaint to the person user need to search the complaint from the list then choose the allotted person name and click on to the save button.</li> </ul>
Job Order Detail	<ul style="list-style-type: none"> <li>Through this option user will enter the details of the allotted job like done, pending or on hold.</li> <li>Fields available on this screen; Search On, Date Range and Refresh button.</li> <li>To save the job order detail user search job then enter the status and click on to the save button.</li> </ul>
Schedule Wizard	<ul style="list-style-type: none"> <li>This option is used to schedule the preventive maintenance of the machines manually.</li> <li>Provision to Save, Edit, Search and print.</li> <li>Fields available on this screen Tag No., Equipment, Major Group, Minor Group, Equipment Model, Physical Location, Physical Sub Location, Requested By, Select Month, Select Day of Month, Starting Date and End Date.</li> </ul>
Schedule Job Order	<ul style="list-style-type: none"> <li>This option is used to see the PM due Or PM done if PM Due then can be allotted from here.</li> <li>User can Search, Save and print the Schedule Job Order.</li> <li>Fields available on to this screen Schedule No, From Date, To Date, Due Date, Done Date and refresh button.</li> </ul>
Schedule AMC/CMC	<ul style="list-style-type: none"> <li>This option is used to see the AMC and CMC, Due Date, Performed, Not Performed status.</li> <li>Fields available on to this screen, Schedule No, From Date, To Date, AMC, CMC, Due Date, Performed, Not Performed and Refresh button.</li> </ul>

## 19. E-claims

### 19.1 Proposed System

19 E-Claims	Claim Submission	Provision for generation of claim XML as per the DHA directives.
	Remittance Advice	Online remittance advice is received by the DHA which has details of rejections. The online remittance advice application reads the remittance xml and settles the Invoices.
	Re-Submission	Based on rejections necessary modification are done or credit notes are entered and then the e-Claim XML is generated again and uploaded again to the Dubai Health Post Office.

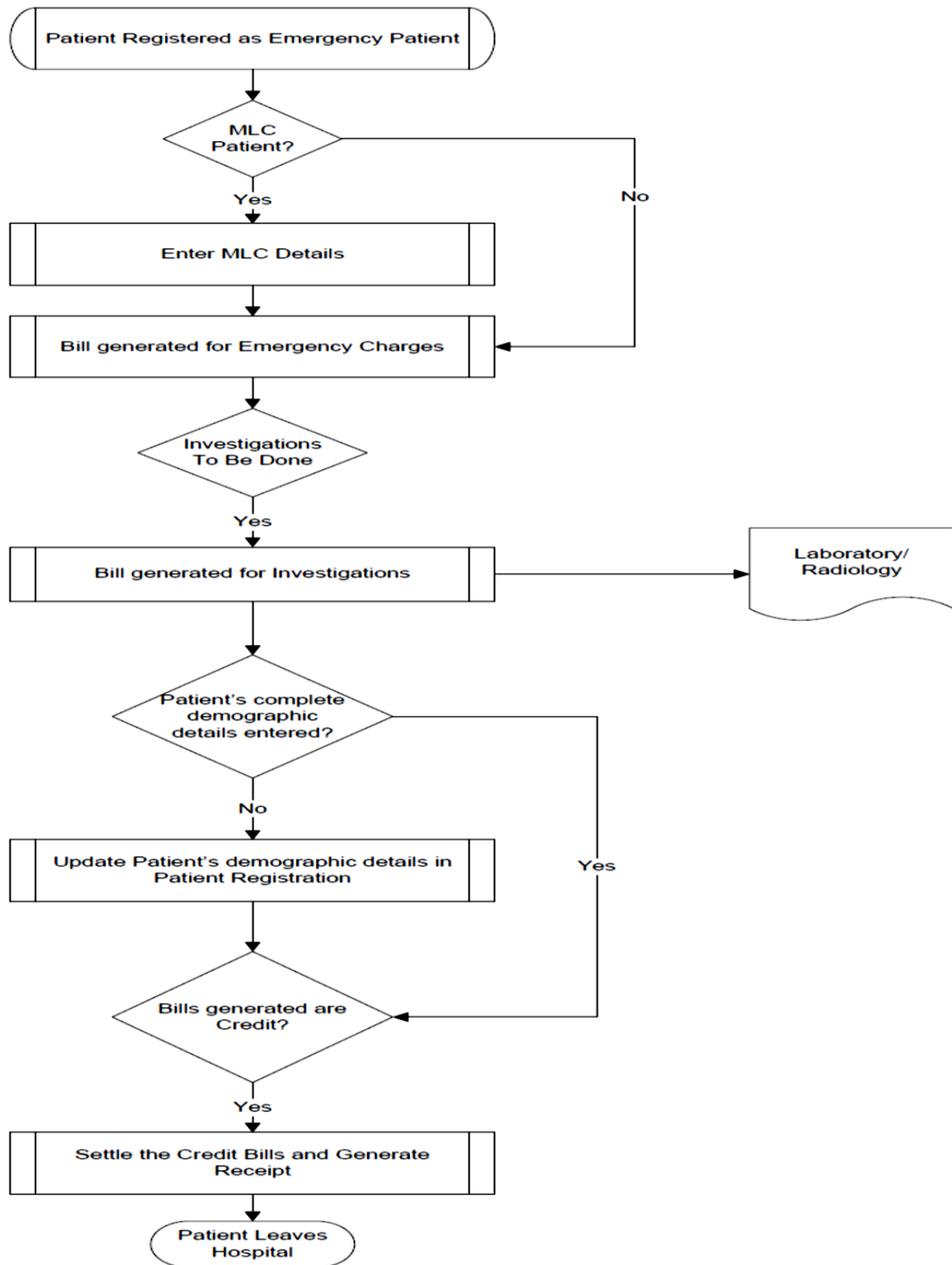
**Note:** In India E-claims will be available as per Indian Directives whenever this process is applicable.

## 20. Emergency Module

### 20.1 Proposed System

20 Emergency	<ul style="list-style-type: none"><li>• Provision to register a patient as Unknown without entering other details which can be filled up later.</li><li>• Provision to register MLC</li><li>• Provision for outpatient sale and return of material and pharmacy items as ER order.</li><li>• Provision to view the list of the patient in Emergency.</li><li>• Provision for bill clearance.</li><li>• Provision to send the patient to IP is available which will open the admission form to admit the patient. Also provision to send to OT/ICU or any ward for further treatment and the Emergency services will carry forward.</li><li>• Discharge summary for emergency patient can be created.</li><li>• There is provision to change the store for item order.</li><li>• Provision to view reports related to emergency department.</li></ul>
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## 20.2 Process Flow of Emergency



Following options are available in Emergency:

Option	Description
<b>1. Patient List</b>	It will show the patient list. In this by clicking on patient option available to send ER Order, ER Drug Order, Discharge Summary, Bill Clearance, Discharge Patient, Send to IP.
<b>2. Demographics</b>	In this patient can be registered as unknown patient and later other details can be filled.
<b>3. OP Order</b>	Through OP Order lab/radiology services can be requested
<b>4. OP Sale</b>	Through OP sales material / pharmacy items can be sold
<b>5. OP Return</b>	Through OP sales material / pharmacy items can be returned
<b>6. Report</b>	Reports related to emergency can be viewed

## 21. Master HealthCheckup

### 21.1 Proposed Systems

<b>21 Master Health Checkup</b> <b>Screen 21.1</b> <b>Screen 21.2</b>	<ul style="list-style-type: none"> <li>• Provision for appointment of health checkup. Appointments are given as per the service like consultation, Radiology etc. is rendered. Provision for rescheduling the appointment in case of break in package services.</li> <li>• Provision for billing health checkup package and package rendering is available.</li> <li>• Refund for billed health checkup package is available if there is discontinuation in the package service in between due to any reason like doctor notification etc.</li> <li>• Encounter is created after/before billing and provision for doctor to view the health checkup package under package request in EMR. Then patient consultation is done and sent for package services.</li> <li>• It includes various packages like Pre-employment health package, Antenatal Package etc.</li> <li>• In rendering health checkup package the service is saved as per the service utilized by the patient and the amount for the service utilized will be deducted from the total amount of Health checkup package.</li> <li>• Also provision to prescribe medicine if required is available through EMR during doctor consultation.</li> <li>• Provision for Annual Health package.</li> </ul>
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## Screen 21.1: Health Package Billing

Welcome! ADMIN ASPL Logout Help

Find Patient Patient Details

Patient Lists Patient History Master Activity List IP Order Create OP Visit OP Order OP Billing IP Billing Billing Dashboard Refund Advance

OP BILL Reg No 153 Enc # Bill No OPCA14/70927 New Save Print Print OPCard

**Patient Details**

PHOTO NOT AVAILABLE

Treatment / Available Limit 0.00 / 0.00  
Advance / Outstanding 0.00 / 0.00

**Bill Details**

Year 13-14  
Type Cash  
Bill# OPCA14/70927  
Date: 26/11/2013 16:26

**Payer Details**

Type Direct Patient  
Payer Self Pay  
Sponsor Self Pay  
Network

**Other Details**

Prescribing Doctor ASTHA MISHRA  
Referred Type Self  
Referred by Name Select  
Facility Select

Co-Pay Disc. Remove Disc

Service Payment Adjustment Outstanding Checklist Patient Diagnosis Entry

Sno	Service Name	Provider	Unit	Charge	Disc Amt	Patient Amt	Payer Amt
1	ASTER PRE-EMPLOYMENT PACKAGE		1.00	300.0000	0.0000	300.0000	0.0000
2	BP MONITORING		1.00	16.1300	0.0000	16.1300	0.0000
3	HIV (ELISA)		1.00	112.8900	0.0000	112.8900	0.0000
4	HBsAg (ELISA)		1.00	87.0900	0.0000	87.0900	0.0000
5	XRAY CHEST PA		1.00	83.8600	0.0000	83.8600	0.0000
6	CONSULTATION FEE - NEW VISIT	GANGA THANKAPPAN	1.00	0.0000	0.0000	0.0000	0.0000
Totals:			1.00	0.00	300.00	0.00	

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## Screen 21.2: Health Package Service Rendering

Welcome! ADMIN ASPL Logout Help

Find Patient Patient Details

Patient Lists Patient History Master Activity List IP Order Create OP Visit OP Order OP Billing IP Billing Billing Dashboard Refund Advance

Package Details Reg No 153 Enc # Package Name ASTER CLASSIC GOOD HEALTH PACKAGE New Save Print

**Patient Details**

Test 1 Singh  
Male/20 Yr  
Dubai

PHOTO NOT AVAILABLE

Invoice Amount 250.00  
Advance / Outstanding 0.00 / 0.00

**Bill Details**

Year 13-14  
Bill# OPCA14/70923  
Date: 22/11/2013 2:29PM

**Payer Details**

Type Cash  
Payer Self Pay  
Sponsor Self Pay  
Card Name

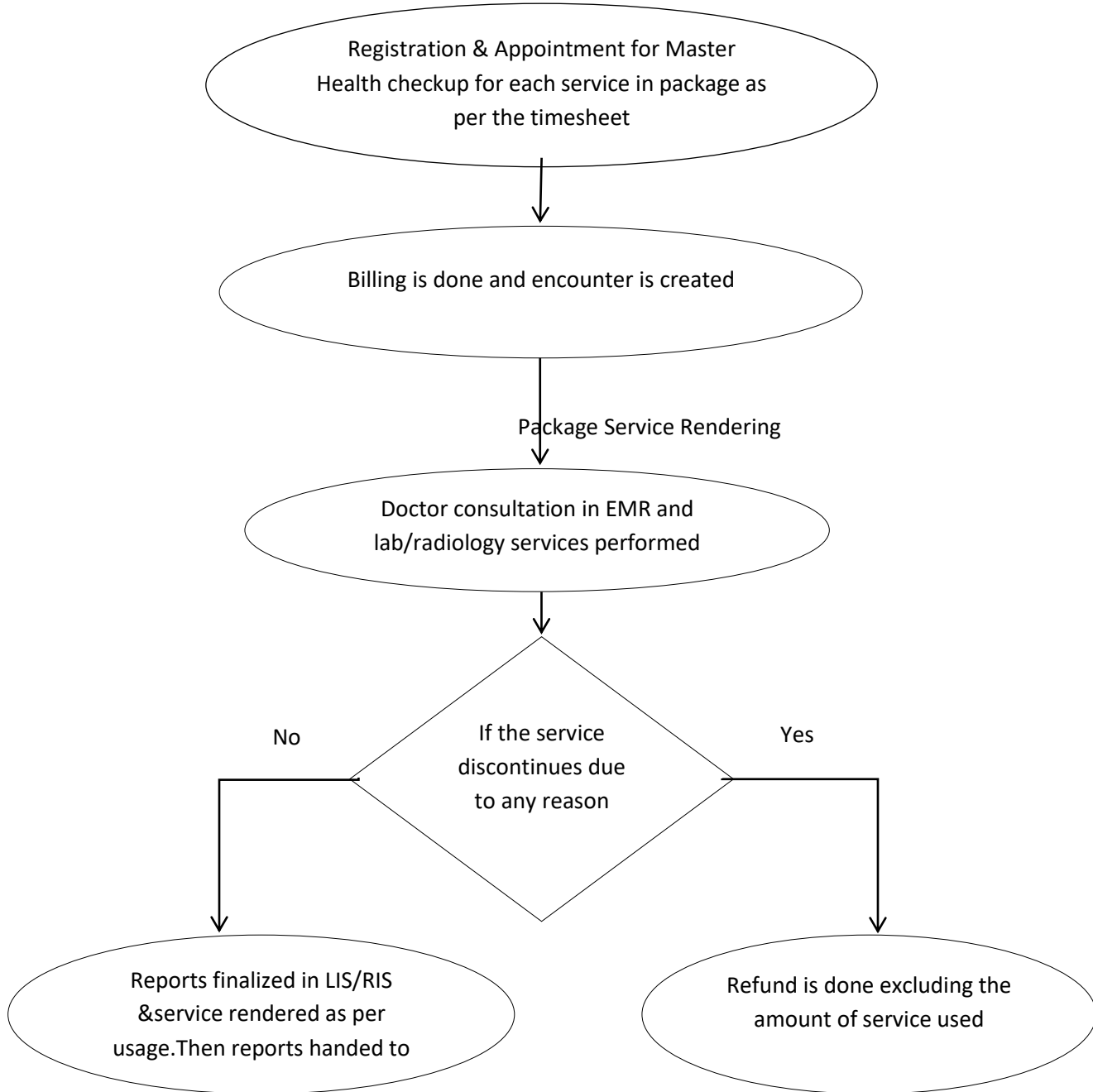
**Other Details**

Facility Al Rafa Hospital  
Package Name ASTER CLASSIC GOOD HEALTH PACKAGE  
Package Status OPEN

Data Saved

Sno	Service Name	Doctor Name	Total Units	Units Consumed	Balance Units	Package Amount	Actual Amount
1	BP MONITORING		1	0	1	0.00	0.00
2	CBC - COMPLETE BLOOD COUNT		1	0	1	0.00	0.00
3	CONSULTATION FEE - NEW VISIT	Select	1	1	0	0.00	0.00
4	CREATININE SERUM		1	0	1	0.00	0.00
5	ECG		1	0	1	0.00	0.00
6	F B SINUS EXPLORATION - LA	Select	1	1	0	173.60	1000.00
7	URINE ROUTINE ANALYSIS		1	0	1	0.00	0.00
8	WIDAL SLIDE METHOD		1	0	1	0.00	0.00
Total						173.60	1000.00

## 21.2 Process Flow of Master Health Checkup



## 22. Physiotherapy

### 22.1 Proposed System

22.	Physiotherapy	<ul style="list-style-type: none"> <li>• Provision to create physiotherapy packages and included in billing.</li> <li>• Provision for appointment for physiotherapy sessions. The appointment will be done as per the number of sittings. Recurring appointment can be done based on physiotherapy sitting on daily, monthly and annual basis.</li> <li>• Provision for billing the physiotherapy sessions after appointment. Generally provision for advance payment is available.</li> <li>• Doctor Consultation as per sitting appointment for physiotherapy in EMR</li> <li>• Doctor can view case sheet of the patient in EMR and can use physiotherapy assessment template for clinical examinations</li> <li>• Alert for payment status on every sitting.</li> <li>• The module can provide assessment of both OP and IP patient.</li> </ul>
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The screenshot displays the EMR system interface for a patient named Mrs. Cecilia Obafemi, 36 Yrs/Female, Managed Care. The interface includes a menu on the left with options like Subjective Assessment, Objective Assessment, Physical Examination, Assessment, and Plan of Treatment. The main area shows the 'Objective Assessment' form with a table for recording values.

**Objective Assessment**

Property Name	Values
Emotional/Mental Status	<input type="text"/> H
Orientation Time	<input type="text"/> H
Orientation Place	<input type="text"/> H
Orientation Person	<input type="text"/> H
Communication	<input type="text"/> H
Visual Acuity	Select <input type="button" value="Print"/>
Palpation	<input type="text"/> H
Posture	Select <input type="button" value="Print"/>

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## CASE STUDY

### PERSPECTIVES ON USING SOCIAL MEDIA FOR ORAL HYGIENE

#### PROBLEMS AMONG SCHOOL CHILDREN

**Background :** Oral health problems is one of the major problems among children globally. According to a survey conducted by WHO ,60%-90% of school children worldwide, have dental cavities. Developing countries like India are not exempted from this. There are numerous studies which indicate high prevalence of oral health problems among children between 5-15 years. Oral hygiene can be the major cause of non communicable diseases like () which is a major concern in India.

Portable computing devices and internet have become widely accessible and provide entirely new avenues to learn, create awareness, connect and communicate. In order to create awareness about the oral health, we need to select a platform which can be both educational, interesting or in other words a mode with deep proliferation, speed connectivity and has reflexivity of knowledge. Considering the statistics social networking provide a luring mode to create awareness among children about oral hygiene. Statistics suggest that 5 million facebook users are children. Social networking sites can prove to be extremely useful in creating awareness among children about oral health

So the study identifies that a framework where social networking can be used to create awareness among children can be extremely in fulfilling in agenda of creating awareness. An online game on the popular social networking sites like facebook, can be extremely helpful in educating children about oral hygiene.

**OBJECTIVE:** Perspectives on using social media for oral hygiene problems among school children



### **Situational analysis:**

A situational analysis was done to understand the current level of awareness among school going children, between age group of 7-18 years, the extent to which they use social networking sites and the level of interest they have in gaining knowledge about oral hygiene through social networking sites. It revealed that- about 60% of children were aware that poor oral hygiene can lead to non-communicable disease and tooth loss, 94% of children were interested in knowing about how to maintain good oral health. About 84% of school going children use social networking sites and from that 75-80% children played online games and were interested in knowing about oral hygiene through social networking sites.

### **Methodology:**

a) Primary study

b) Secondary study

#### **a) Primary study-**

i) Study area- Pune and New Delhi

ii) Study population- Student from Bhartividyapeeth English School, Pune.

iii) Sample size- 30

iv) Sampling method- Random sampling

v) Study-design- Descriptive Cross-sectional

vi) Tools- Semi structured questioner

vii) Techniques- Online survey and face to face interview

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## **Result (of the survey)**

1) We considered 3 age groups and total 30 people-

In 7-10 years age group= 9 people (30%)

In 10-15 years age group= 14 people (46.6%)

In 15-18 years age group= 7 people (23.3%)

2) Out of 30 people there were-

13 female (43.33%)

17 male (56.66%)

3) All 30 people brush but number of times and brushing duration were different

In terms of time

1 time- 12 people (40%)

2 time- 16 people (53.33%)

More than 2 times- 2 people (6.6%)

In terms of duration-

1-2 min- 16 people (53.33%)

1 min or less than that- 14 people (46.66%)

4) 20 people (66.66%) wash their mouth after meal and 10 people (44%) do not.

5) 11 people ( 36.6%) visit their dentist once in a 6 months

12 people (40%) visit their dentist when required

4 people (13.3%) visit their dentist once in a year

3 people (10%) visit their dentist once in a 3 months

6) 16 people ( 53.3%) clean their tongue daily

11 people (36.6%) not clean their tongue daily

03 people (10%) people clean their tongue sometime

7) 90% people aware about the factor like food and bacteria combination, poor oral hygiene, smoking causes tooth decay.

8) 90% people aware about poor oral hygiene, gingivitis, non-nutritious diet, bleeding disorder leads to bleeding gums.

9) 18 people (60%) aware about poor oral hygiene can lead to non-communicable diseases and tooth loss

10) 28 people (93.33%) were interested in knowing about how to maintain good oral health

11) 25 people (83.33%) use social networking sites

12) 5 people (16.6%) spend 10-15 hrs on facebook in a week

11 people (36.6%) spend 0-5 hrs on facebook in a week

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5 people (16.6%) spend more than 20 hrs on facebook in a week

4 people (13.3%) spend 6-10 hrs on facebook in a week

13) 23 people (76.6%) playing online game

14) 24 people (80%) were interested in knowing the oral hygiene through social networking sites

15) 23 people (76.6%) were interested in playing a free downloadable game related to oral hygiene

## **Review Of Literature**

### **Social networking sites : Emerging and essential tools for communication in dermatology**

The use of social media by dermatology journals and professional and patient-centered dermatology organizations remains largely unknown and, to our knowledge, has yet to be fully evaluated.

OBJECTIVE- To evaluate and quantify the extent of involvement of dermatology journals, professional dermatology organizations, and dermatology-related patient advocate groups on social networking sites.

### **Parents of adolescents with type 1 diabetes- their views on information and communication needs and internet use. A qualitative study**

Little is known about parents' views on the use of online resources for information, education and support regarding childhood type 1 diabetes (T1DM). Considering the rapidly evolving new communication practices, parents' perspectives need to be explored. The main purpose of this paper was to explore parents' perceptions of their information-seeking, Internet use, and social networking online. This applied to their everyday life, including the contexts of T1DM and contact with peers. A second aim was to identify implications for future development of Internet use in this respect.

### **Facebook as a platform for health-information and communication a case study of a diabetes group**

As one of the largest social networking sites in the world, Facebook holds a great potential for promoting health. In this exploratory study, we analyzed 1352 messages posted to an active Facebook diabetes group to identify the characteristics of the group. The results revealed that the group was international in nature. Users overcame language barriers to communicate with people with similar conditions. Users' interactions were structured around information, emotion, and community building. They exchanged medical and lifestyle information, and highly valued their peers' personal experiences, opinions, and advice. They also demonstrated a positive attitude toward the reality of living with

diabetes and generously provided encouragements and affirmations to one another. Great efforts were made to maintain the proper operation of the community by the administrator and a group of core members. As a result, the group was shaped as a social network where peer users share social support, cultivate companionship, and exert social influence. Based on the results, we discussed future directions for research of health communities in a highly connected world.

### **Social networking and understanding alcohol associated risk for people with type 1 diabetes: friend or foe**

Online communication has become popular in recent years, especially for young people. Limited research exists into how people with type 1 diabetes mellitus (T1DM) discuss risks about diabetes. Alcohol use by people with T1DM, as in the rest of society, is common and may adversely affect diabetes management. This study reviewed the literature on social networking as a communication tool and conducted a systematic search of social networking sites to determine whether people with T1DM use them to discuss risks associated with diabetes and alcohol consumption.

### **Avatars using computer / smart-phone mediated communication and networking in prevention of sexually transmitted diseases among North-Norwegian youngsters**

Sexually transmitted diseases (STDs), especially the Chlamydia trachomatis bacterial infection, a common cause of infertility, are highly prevalent in developed countries, and a worrying problem in North Norway, where the incidence of chlamydia twice the Norwegian average. Seventy percent of reported chlamydia cases are found in people below 25 years of age, and although its spread could be controlled with proper prevention, young people are more aware of the risks of unwanted pregnancy than their risk of acquiring a STD. Information and Communication Technologies, including, the Internet, social media and/or smartphones, should be valued for sexual health promotion for their potential to engage young audiences. And in these media, avatars guarantee anonymity to users when

handling sensitive information. The main objective of this project is to achieve that North Norwegian youngsters become more aware of STDs through the use of popular technologies among young people.

**Online social networking by patients with diabetes: a qualitative evaluation of communication with facebook**

Several disease-specific information exchanges now exist on Facebook and other online social networking sites. These new sources of knowledge, support, and engagement have become important for patients living with chronic disease, yet the quality and content of the information provided in these digital arenas are poorly understood.

OBJECTIVE: To qualitatively evaluate the content of communication in Facebook communities dedicated to diabetes.

**Social media technologies for HIV prevention study retention among minority men who have sex with men**

This brief report describes results on study retention among minority men who have sex with men (MSM) from a 12-week, social networking-based, HIV prevention trial with 1-year follow-up. Participants, primarily minority MSM, were recruited using online and offline methods and randomly assigned to a Facebook (intervention or control) group. Participants completed a baseline survey and were asked to complete two follow-up surveys (12-week follow-up and 1-year post-intervention). 94 % of participants completed the first two surveys and over 82 % completed the baseline and both post-intervention surveys. Participants who spent a greater frequency of time online had almost twice the odds of completing all surveys. HIV negative participants, compared to those who were HIV positive, had over 25 times the odds of completing all surveys. HIV prevention studies on social networking sites can yield high participant retention rates.

## **Lessons learned from use of social network strategy in HIV testing programs targeting African American men who have sex with men**

We report lessons derived from implementation of the Social Network Strategy (SNS) into existing HIV counseling, testing, and referral services targeting 18- to 64-year-old Black gay, bisexual, and other men who have sex with men (MSM).

## **Care net: A solution for non-communicable diseases prevention through the use of social marketing**

We report lessons derived from implementation of the Social Network Strategy (SNS) into existing HIV counseling, testing, and referral services targeting 18- to 64-year-old Black gay, bisexual, and other men who have sex with men (MSM).

The SNS procedures used in this study were adapted from a Centers for Disease Control and Prevention-funded, 2-year demonstration project involving 9 community-based organizations (CBOs) in 7 cities. Under the SNS, HIV-positive and HIV-negative men at high risk for HIV (recruiters) were enlisted to identify and recruit persons from their social, sexual, or drug-using networks (network associates) for HIV testing. Sites maintained records of modified study protocols for ascertaining lessons learned. The study was conducted between April 2008 and May 2010 at CBOs in Washington, DC, and New York, New York, and at a health department in Baltimore, Maryland.

Conclusion: Social networking can be an extremely useful tool to create awareness among children regarding oral hygiene considering the level of engagement of social networking sites with children and the potential of oral health problems to cause non communicable diseases.



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## **Appendix**

### **Questionnaire Regarding Promotion of Oral Hygiene through Social Network**

#### **Media**

The following survey is being done to gather your inputs regarding use of social network for creating awareness regarding oral hygiene. Kindly provide your responses with appropriate choice

**Note : Place a tick on your choice**

1. How old are you?
  - a. 7-10 years    b. 10 – 15 years    c. 15- 18 years
2. Gender
  - a. Male
  - b. Female
3. Are you school going boy/girl?
  - a. Yes
  - b. No
4. Do you brush your teeth daily?
  - a. Yes    Skip to **Q.No 6**
  - b. No    Reason \_\_\_\_\_
  - c. Sometimes
5. Do your parents say anything to you regarding your poor oral hygiene?
  - a. Yes, but I do not listen to them    b. No, they do not    **Skip to Q.No 16**

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6. How many times do you brush your teeth, in a day?
- a. 1 time
  - b. 2 times
  - c. More than 2 times
7. What is the duration of brushing, on average?
- a. <1 min
  - b. 1 min
  - c. 1-2 min
  - d. >2 min
8. What are the brushing aids do you use for oral hygiene?
- a. Toothbrush
  - b. Toothpaste
  - c. Dental floss
  - d. Toothpick
9. From which sources do you get to know about oral hygiene?
- a. Parents
  - b. Teachers
  - c. Friends or classmates
  - d. Advertisements
  - e. Social media
  - f. Other( specify)
10. Do you wash your mouth after meals?
- a. Yes   b. No
11. How often do you visit your dentist?
- a. Once a month
  - b. Once in 2 months

- c. Once in 3 months
  - d. Once In 6 months
  - e. Once in year
  - f. Only when required
12. What is the reason behind your visits to the dentist?
- a. Any dental problem(eg. Tooth decay, bleeding gums,etc.)
  - b. Regular check up
  - c. Any tooth treatment
  - d. Other( specify)
13. Do you fear before visiting dentist?
- a. yes    b. no
14. What are your feelings about your dentist?
- a. On providing oral knowledge
  - b. Regarding the treatment
15. Do you clean your tongue?
- a. Yes    b. No    c. Sometimes
16. How is your parents' attitude towards your oral hygiene?
- a. Casual    b. Strict
17. Do your parents say anything to you regarding your poor oral hygiene?
- a. Yes, but I do not listen to them
  - b. No, they do not
18. Are you aware of the factors that cause tooth decay? **(Pick all that apply)**
- a. Food and Bacteria Combination    b. Poor Oral Hygiene    c. Smoking    d. Dry mouth
  - e. High Carbohydrates and starchy food    f. Don't Know

19. Do you know what causes bleeding gums? **(Pick all that apply)**

- a. Poor Oral Hygiene/ Plaque   b. Gingivitis / Inflamed Gum   c. Periodontal Disease
  - d. Bleeding Disorder   e. Non Nutritious Diet   f. Stress   g. Family History of Bleeding
  - h. Sharing tooth brush   i. Medication   j. Grinding habit   k. Don't Know   l. other
- \_\_\_\_\_

20. Do you know that having lots of sweets and soft drinks can lead to tooth problems?

- a. Yes   b. No

21. Are you aware that poor oral hygiene can lead to non-communicable diseases and tooth loss?

- a. Yes   b. No **(Skip to Q.No 23)**

22. What are the diseases that are susceptible to poor oral hygiene **(Pick all that apply)**

- a. Heart   b. Diabetes   c. Stroke   d. Systemic Inflammation   e. HIV/AIDS   f. Other

23. Do you know the measures you should take to maintain good oral health?

- a. Yes   b. No **(Skip to Q.No 25)**

24. Can you name the measures to be adopted to maintain good oral health? **(Pick all that apply)**

- a. Brush your teeth at least twice a day.
- b. Use the proper equipment.
- c. Practice good technique.
- d. Keep your equipment clean.
- e. Know when to replace your toothbrush.
- f. Flossing
- g. Other \_\_\_\_\_

25. Are you interested in knowing about oral hygiene and how to maintain good oral health?

- a. Yes   b. No

26. Do you use social networking sites ( eg. Facebook)?

- a. Yes   b. No

27. Roughly how many hours a week do you spend on facebook?

- a. 0-5 hrs   b. 6-10 hrs   c. 11-15 hrs   d. More than 20 hrs

28. What is your main purpose of using Facebook? (can choose more than 1 choice)

- a. Playing online games  
b. Make new friends  
c. Messaging  
d. Health information  
e. Update events  
f. Others

29. What type of social networking sites do you use? (can choose more than 1 choice)

- a. Facebook   b. Twitter   c. Gmail   d. other   specify \_\_\_\_\_

30. Will you be interested in knowing about oral hygiene through social network sites?

- a. Yes   b. No

31. Will you be interested in receiving messages through social network sites?

- a. Yes   b. No

32. Will you be interested in playing a free downloadable game related to oral hygiene?

- a. Yes   b. No

33. Will you suggest to friend information regarding oral hygiene like messages/ mailers/ games if you come across them in social networking sites?

- a. Yes   b. No

Thank you for participating in the survey. All information will be kept confidential. It is for research purposes only.