ACCESS Health Digital
Powering the Future of Healthcare
A division of ACCESS Health International

Microservice Specification
"Billing"

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Statement of Confidentiality

1. Functional Area- Billing

1.1. Purpose

This document describes the Business Requirements Specifications (BRS) for Billing function in a primary care and specialist care setting.

1.2. Intended Audience

This document is intended for the Product Engineering team to commence development of 'Billing' microservice and the audience would comprise of

1.2.1. Development, Design & Implementation Team which may include Architects, Designers, Developers, and Business Analysts

1.3. Overview

This microservice deals with various functionalities for managing a patient's visit for a primary, secondary and specialist care setting.

1.4. Scope & Not in Scope

Functionality scope includes:

- OP Service Deposit
    - Bill Adjustment
- OP Service Request
- Bill Generation
    - Discounts
    - Refund
    - Write Offs
- Service Cancellation

Functionality scope does not include:

- In Patient Billing

1.5. Bill Generation & payment collection

Description	In a healthcare delivery setting billing is the process of generating an invoice for a patient who has availed a paid service from the facility either remotely or by visiting the facility. The healthcare billing process is mainly to obtain remuneration for the services and materials provided by facility to patients. Remuneration is obtained from different categories of stakeholder. Billing can be of different types depending upon the category of patient who has availed a service. The various types of billing include – a. Cash Billing- Cash billing is applicable to the patients who are required to pay for the rendered service by themselves or have to incur the cost out of pocket. b. Credit Billing- Credit billing is applicable to the patients whose healthcare services are either sponsored or paid by a health insurance payer, an employer, a public health scheme or by any other sponsor. In this case the patient doesn't have to pay for the services that were rendered to him/her by a healthcare setting. Instead, the bills will be generated against the sponsor name and ID, who then will be required to settle the bill payments as per the agreed upon interval and rate contracts. Billing process gets initiated from the instant a patient requests a service he/she wants to avail until the final payment for the service, when the service has been successfully rendered to the patient. A health delivery information system registers that patients' by capturing

	demographics and other financial information about the patient to generate a unique identifier for the patient. The services availed and materials provided to a patient are documented in patients' account against the patient's unique identifier.
Users	OP Registration Clerk, OP billing User
Pre-requisites	Unique Health Identification number, Temporary or local Health ID, Online portal, Patient registration/ Appointment number, Visit Request
Business Process Details	In this scenario a service is requested by a patient visiting a healthcare facility and a bill is generated for the requested services. A healthcare setting can configure the billing workflow as per their internal policy to **a preservice billing** or **post service billing**. In **preservice billing** a patient has to pay for the service before availing the service, while, In **post service billing** a bill is generated post the service has been rendered to the patient. Example- A consultation service is normally a preservice billing, while vaccination service is a post service billing where cost of the vaccine gets added with the consultation or administration charges to the patient. For streamlining billing process, a billing module should support creation of patient categories that can help the billing system auto-pick rates/charges applicable to a particular type of patient. Similarly billing masters are required to be defined for service categories, service items and applicable rate cards. A good billing system supports configuration of different rate card for different payers/sponsors as the terms and agreed upon service rates can be different for different sponsors over and above the base service prize offered by the healthcare setting. For every service for which a bill is generated a patient/sponsor has to pay the amount that is mentioned on the rate master of the facility including the taxable amount if any. It is the choice of the patient to choose the method of payment of the bill amount which can either be – Cash/ Credit Card/ Debit Card/ UPI wallet etc. and hence multiple mode of payments are required to be supported. For every payment made a receipt is generated against the bill and the copy of the receipt to be handed over to the patient and one is kept with the facility for record keeping. Some chronic cases require multiple visits by the patient and thus for those cases rate might vary and a package or composite amount is asked form the patient for the follow up services in advance.
Steps	**Billing triggered by Service Request-Post Billing Scenario** • A patient who has a scheduled appointment visits the facility to avail the service. • User opens the service request screen and searches the UHID and creates a service request for the requested service by entering the service, quantity, responsible resource if applicable, price of service gets auto-filled as per the preconfigured service price master and patient category. • System automatically creates a visit for the patient with date and time log with creation of service request. • System also auto generates an encounter number and episode number which is stored against that visit in the system. • The service request also creates worklist for the billing user for collection of payment post service rendering. • This new visit creation then triggers service rendering workflows for the respective department/user. • Now post service rendering patient will be directed to the billing desk and patient status in the billing worklist will get updated to service completed/rendered and

from the billing que, the associated worklist will move under the bill generation bucket with patient UHID.

- On patient's arrival at the billing desk, the user can directly click on the pending task against the relevant patient or can also search a patient in the "bill generation worklist" in case of high patient footfall.
- This will redirect the user to the bill generation screen where most of the elements will be prefilled as per the service request.
- At this point a billing user can do any prior bill adjustments or provide any discounts to the patient.
- After recording any applicable discounts, a final bill is generated for the respective service, and payment is collected from the patient.
- Patient can choose the mode of payment for the service and the user will capture the mode of payment and the amount received.
- A payment receipt is generated and shared with the patient.

Billing triggered via direct service bill creation

- Patient reaches the billing desk and request for a consultation service.
- The User checks if the patient is a registered patient or a new patient. If he/she is a new patient performs patient registration.
- Now the user will open the bill generation screen and searches the patient using his/her UHID.
- Patient's details like category and type gets automatically are retrieved from the registration microservice.
- User will now enter the requested services details which will include service quantity, code, price etc
- At this point any previous bill gets auto adjusted with the current bill amount, which can be removed or edited as per the authorization and patient request.
- At this point the user can apply any discount/coupons for the patient as per the authorization authority's approval flow.
- User will now request payment from the patient as per the bill calculation.
- Patient can choose the mode of payment for the service and the user will capture the mode of payment and the amount received.
- User prints a copy of receipt and the bill which is handed over to the patient and the details of the payment made is saved against the encounter/ episode id of the patient.

Composite/Packkaged Services

Composite services are defined as a group of same or multiple type of services that are packaged together and defined by a hospital.

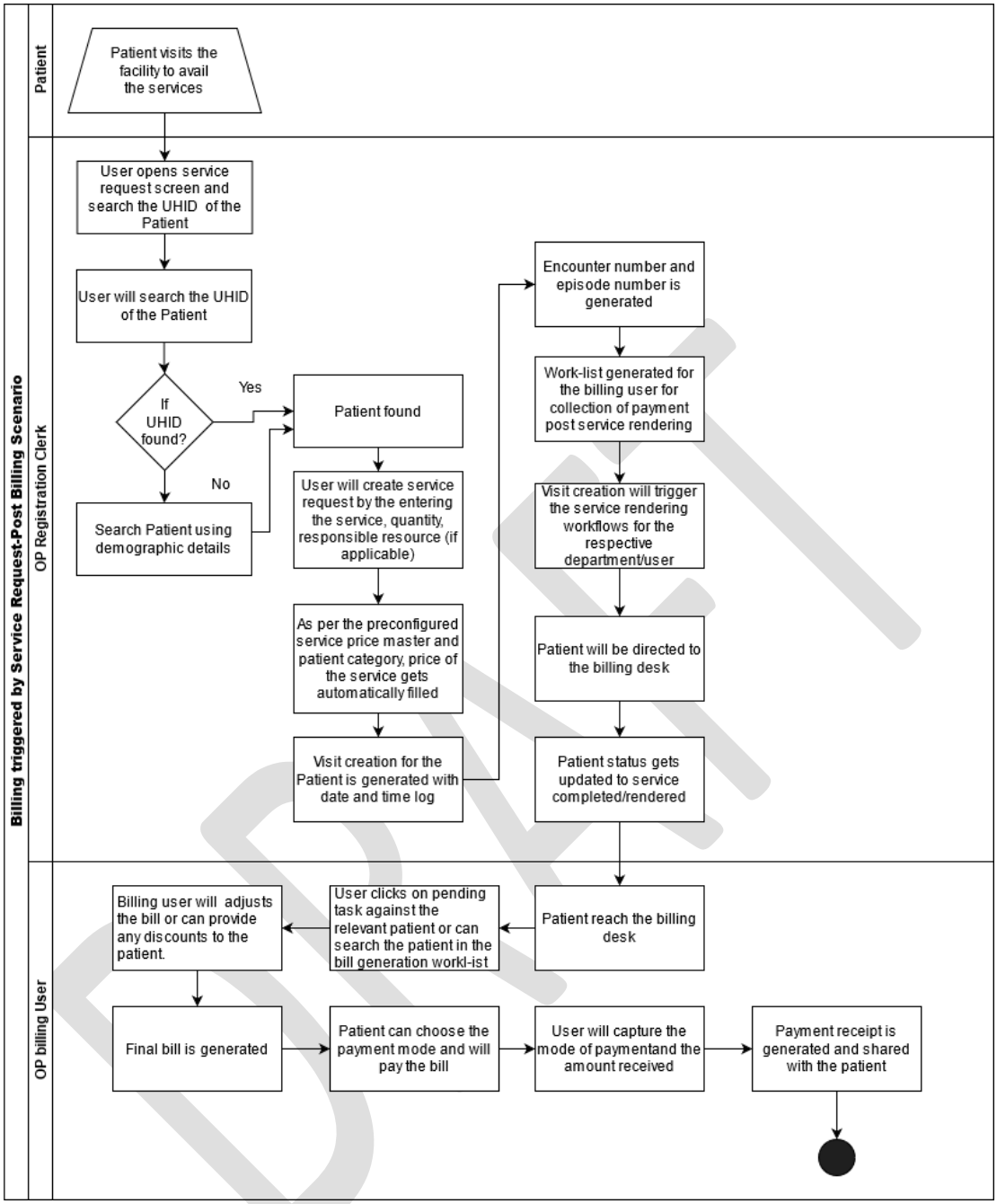
This category includes packaged services like physiotherapy, chemotherapy, dialysis, annual health checkup, lab panels or any healthcare membership plans for chronic disease management etc. which require frequent visits to the healthcare facility.

When a patient requests a packaged or composite service , patient either has to pay in advance for the entire package or group of services or can also provide a prerequisite OP deposit against which the service bill can get adjusted every time patient visits the facility for rendering one or multiple services out of the requested package.

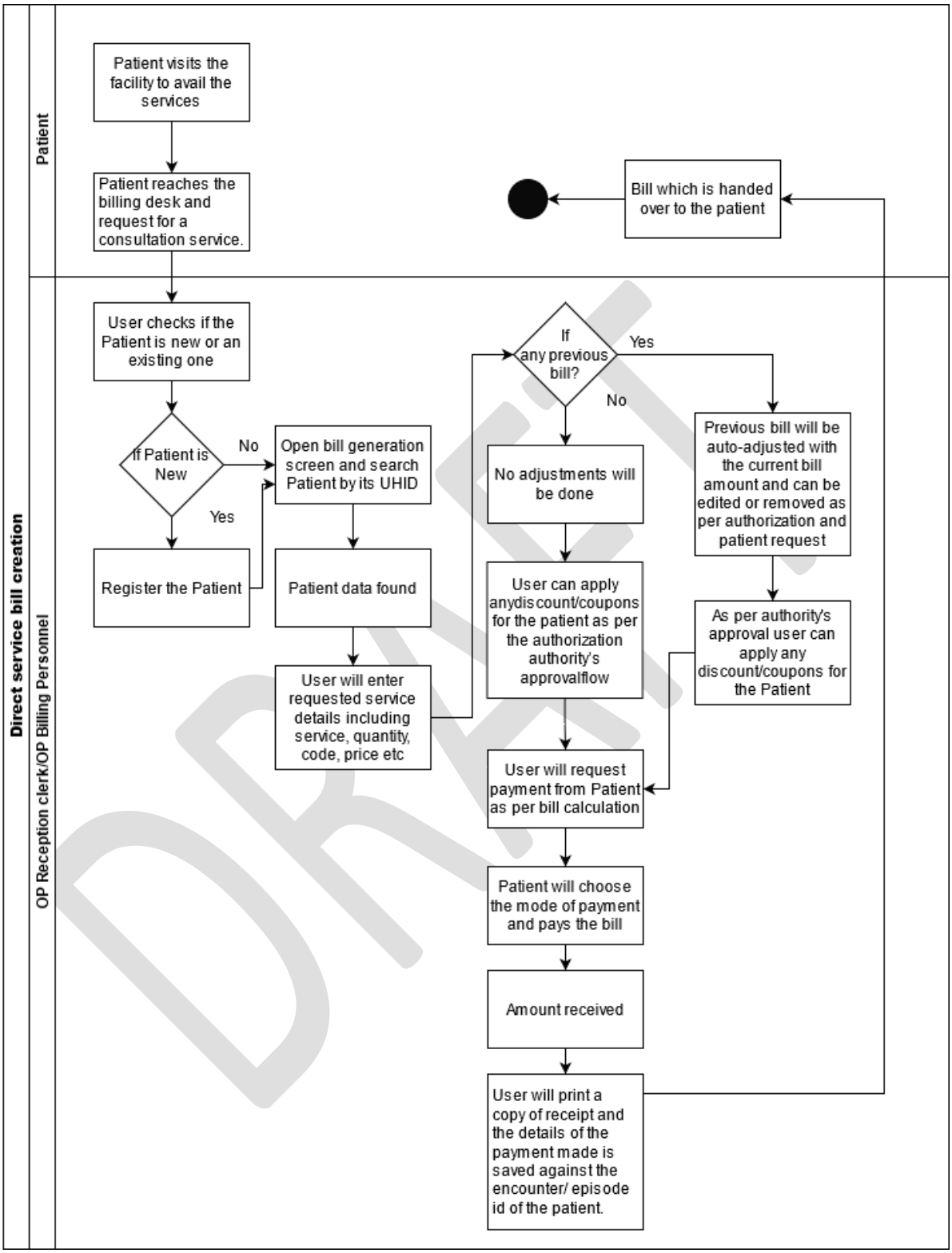
Bill adjustment for a composite/packaged services can be done against a time interval i.e around a validity period or against the quantity of service. For example, an annual health checkup may have doctor's consultations, counselling, lab tests etc grouped together. Once patient pays for the package, he/she needs to avail the services within a time interval/validity period. While for a chemo/dialysis package the services are grouped against quantity of service i.e no. f sittings or no. of chemo therapies on a discounted rate. In this case every time a patient visits the facility to avail the packaged service the quantity

	of service is subtracted from the total no. of services that were defined as part of the package. In some cases a patient can pay in advance the entire package amount and keep availing the service until the validity expires /quantity is consumed. While in some cases the patient pays an advance deposit against his UHID that gets adjusted against the services that were requested as a package and the discounted amount per service is adjusted against the OP deposit. **Steps:-** • Patient request for a composite/packaged service. • Billing user searches patient using UHID or other demographic criteria's. • Now adds the package or composite service group code. • All the service items with their price/quantity gets added in the detailed bill. • Total price gets auto-filled in the billing screen. • User collects payment from the patient and validity period as defined in the master service list gets updated starting from the bill date in the system against patient's UHID. • A patient receipt is generated and provided to patients via email/mobile or hardcopy. **OP Deposit against a package service** • Patient makes an advance payment for the package for a certain number of visits for the requested service. • The user at the billing desk will mark the mode of payment and enters the amount that is paid as advanced and the remaining amount is flagged against the episode ID of the patient with balance amount mentioned in the tab. A temporary bill is generated and handed over to the patient for future reference. • When the patient arrives at the facility for the follow up treatment the reception desk will confirm the appointment for the services against the patient ID and mark the visit in the system and the quantity of service is deducted each time a patient visit. • The remaining amount when received from the patient should be marked against the visit and the final bill and receipt should be handed over to the patient. • The details of the previous payment status can be seen from the previous bill summary in the billing tab. • The bill should contain the package details quantity of services mentioned and if any discount for composite services and the final bill I calculated by the system.
Outputs	• Bill ID • Receipt No. • Payment status • Transaction ID
Messages & Alerts	• System alert for gaps on mandatory fields & validation errors • Payment Details to the patient and service provider. • Reminder for payment

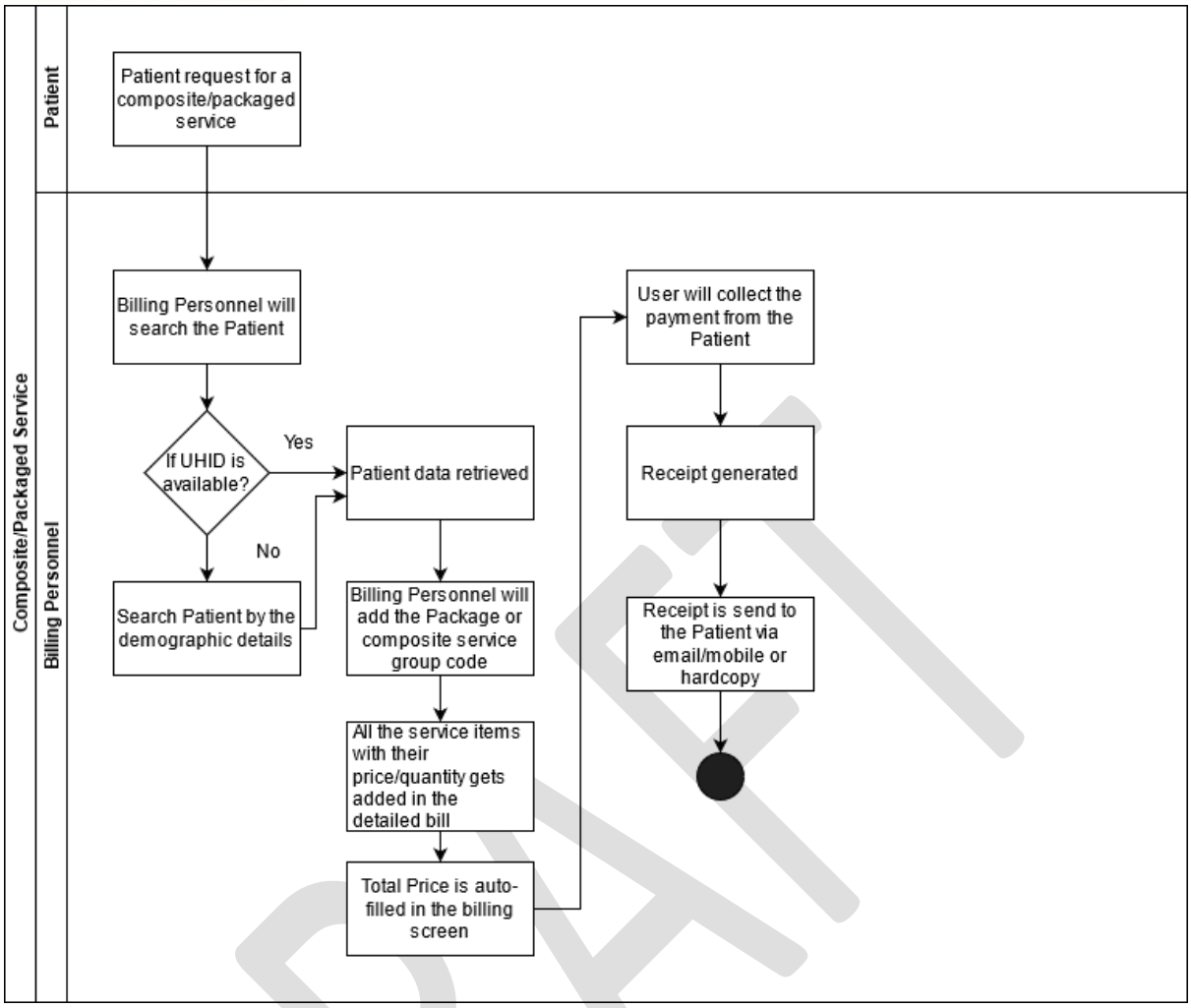
1.5.1 Visio diagram of Billing triggered by Service Request-Post Billing Scenario



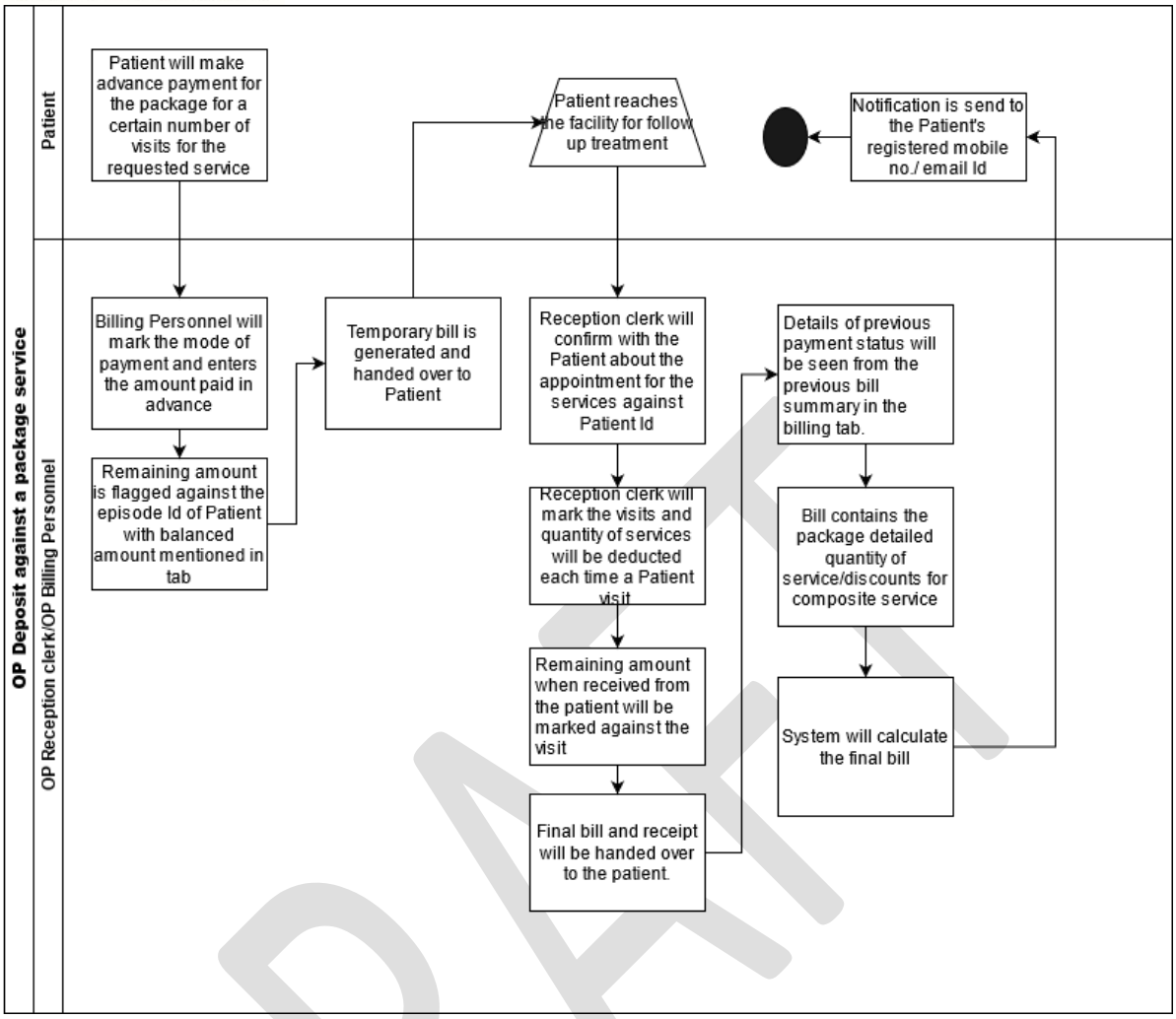
1.5.1.1 Visio diagram of billing triggered by Service Request-Post Billing Scenario-



1.5.1.2 Visio diagram of Composite Package service



1.5.1.3 Visio diagram of OP Deposit against a package service

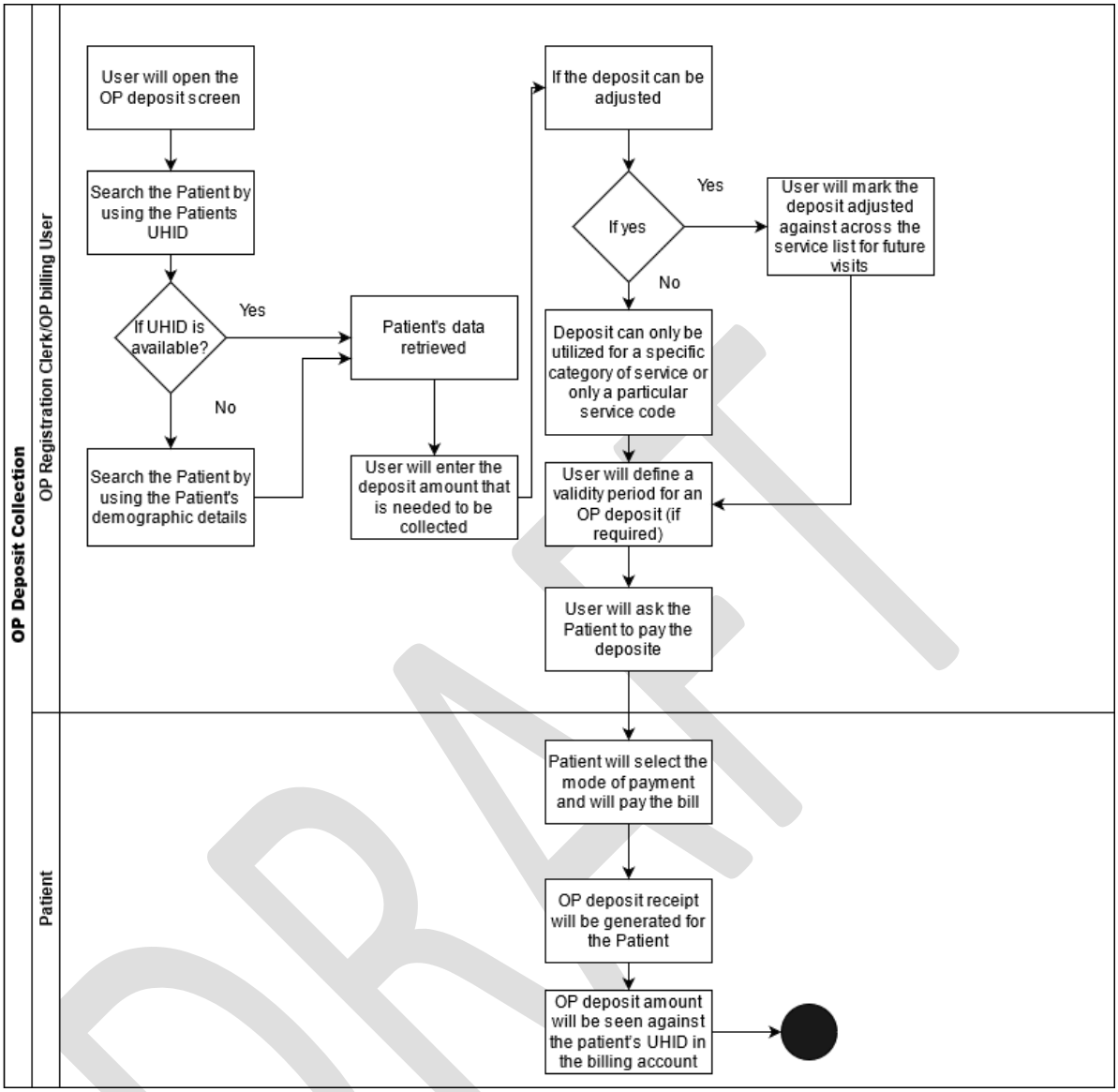


1.5.2 Business Process Flow for Out Patient Service Deposit

Description	For every service a patient receives at a healthcare facility a bill is generated against a service request. In certain scenarios an deposit is taken in advance that can be utilized against one or multiple category of services a patient will undergo in the future. Composite services or a number of tests, dentist appointments that require a number of visits in a defined period of time comes under these categories and a deposit will be taken in advance for the services.
Users	OP Registration Clerk, OP billing User
Pre-requisites	Unique Health Identification number, Temporary or local Health ID, Online portal, Patient registration/ Appointment number, Visit Request
Business Process Details	Billing module should also have a functionality for collecting and adjusting service deposit for a patient against his/her multiple visits. Example- After consultation the treating physician advices the patient for multiple visits that will be required for a particular case (Dentist procedure, Physiotherapy, etc.) particularly composite services that will require more than one services will fall under this category. A deposit made by paying the advance will be marked in the system against the patient UHID and receipt is generated after the patient makes the payment for the OP deposit. Every time the patient visits the facility for a particular service, the billing microservice should also enable a function to make bill adjustments against an OP deposit. At the time of

	deposit collection a user can mark if the OP deposit can be utilized across the services or should only be adjusted against a particular category or against a specific service only. After subsequent visits by the patient the visit is marked against the patients UHID and the payment is deducted from the deposited amount as per the predefined conditions that were marked at the time of deposit collection and a receipt is generated for the particular visit where the deposit was adjusted. Some chronic cases require multiple visits by the patient and thus for those cases rate might vary and a package or composite amount is asked form the patient for the follow up services in advance.
Steps	**OP Deposit Collection** • User opens the OP deposit screen. • Searches the patient with his/her UHID or other demographic parameters. • On retrieving patient's account enters the deposit amount to be calculated. • User also explicitly marks if the deposit can be adjusted against across the service list for future visits. OR • The deposit can only be utilized for a specific category of service or only a particular service code. • If required user can also define a validity period for an OP deposit, so that patient can consume the OP deposit within a defined interval from the date of payment. • Patient can pay the OP deposit through multiple payment modes as per the facility's billing policy. • A OP deposit receipt gets generated for the patient and the OP deposit amount can be seen against the patient's UHID in the billing account.
Outputs	• OP Deposit Receipt • Transaction ID
Messages & Alerts	• System alert for gaps on mandatory fields & validation errors • Payment Details to the patient and service provider. • Reminders for payment /adjustments/refunds/validity

1.5.2.1 Visio diagram of OP Deposit Collection



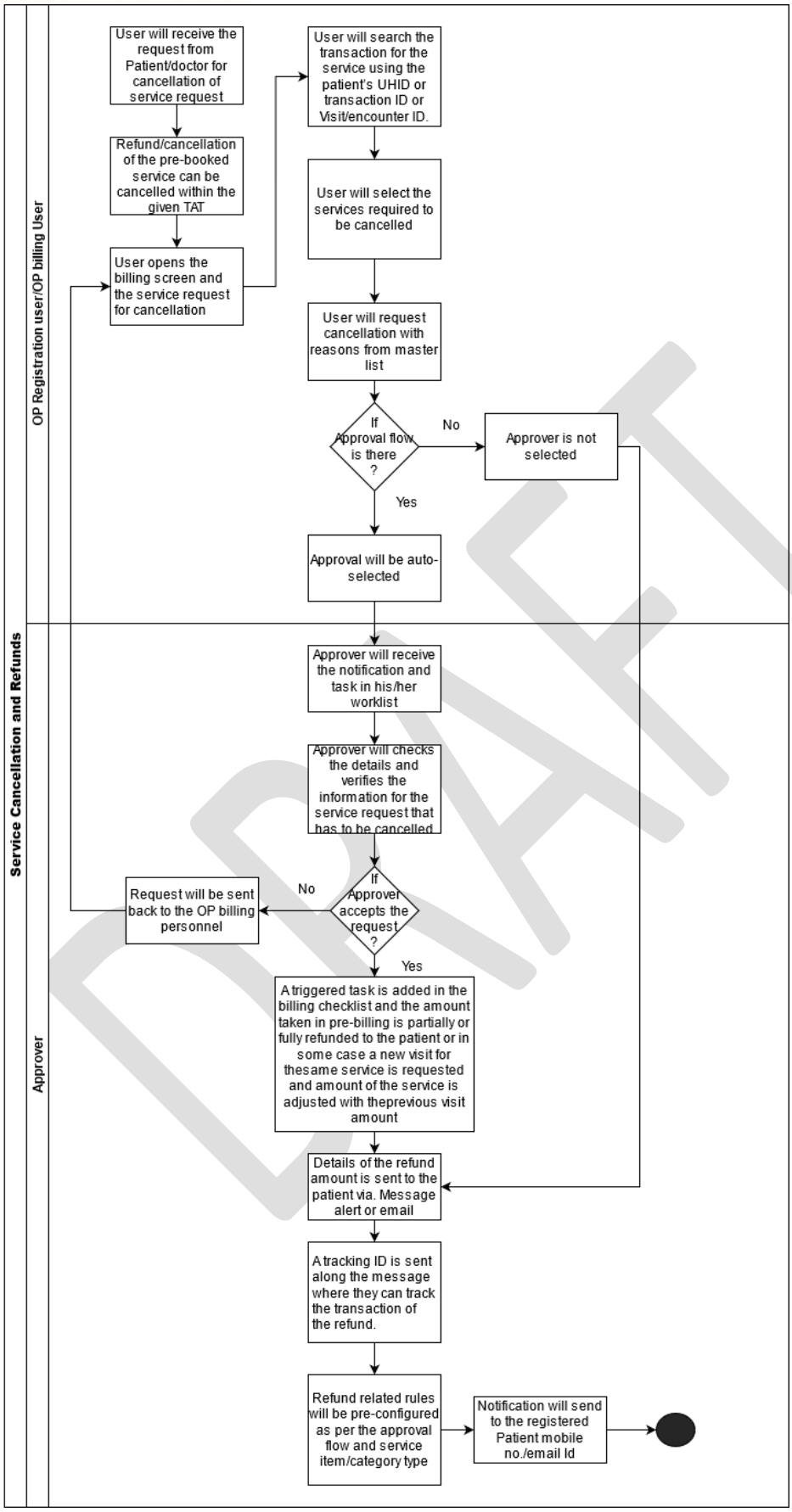
1.5.3 Business Process Flow for Billing Refunds

Description	This process describes the process how refunds are handles in a healthcare facility. A refund can be made against a service for which the patient has already made a payment that may arise due to service cancellations or post billing discounts.
Users	OP Registration user, OP billing User, Approver
Pre-requisites	Generated bill with transaction ID and Bill amount, Master list for approvers master list for cancellation reasons Master list for refund reason
Business Process Details	Bill payment can either be cancelled if the patient does not want to go through with the requested services at that healthcare facility or if extra amount is pending against the

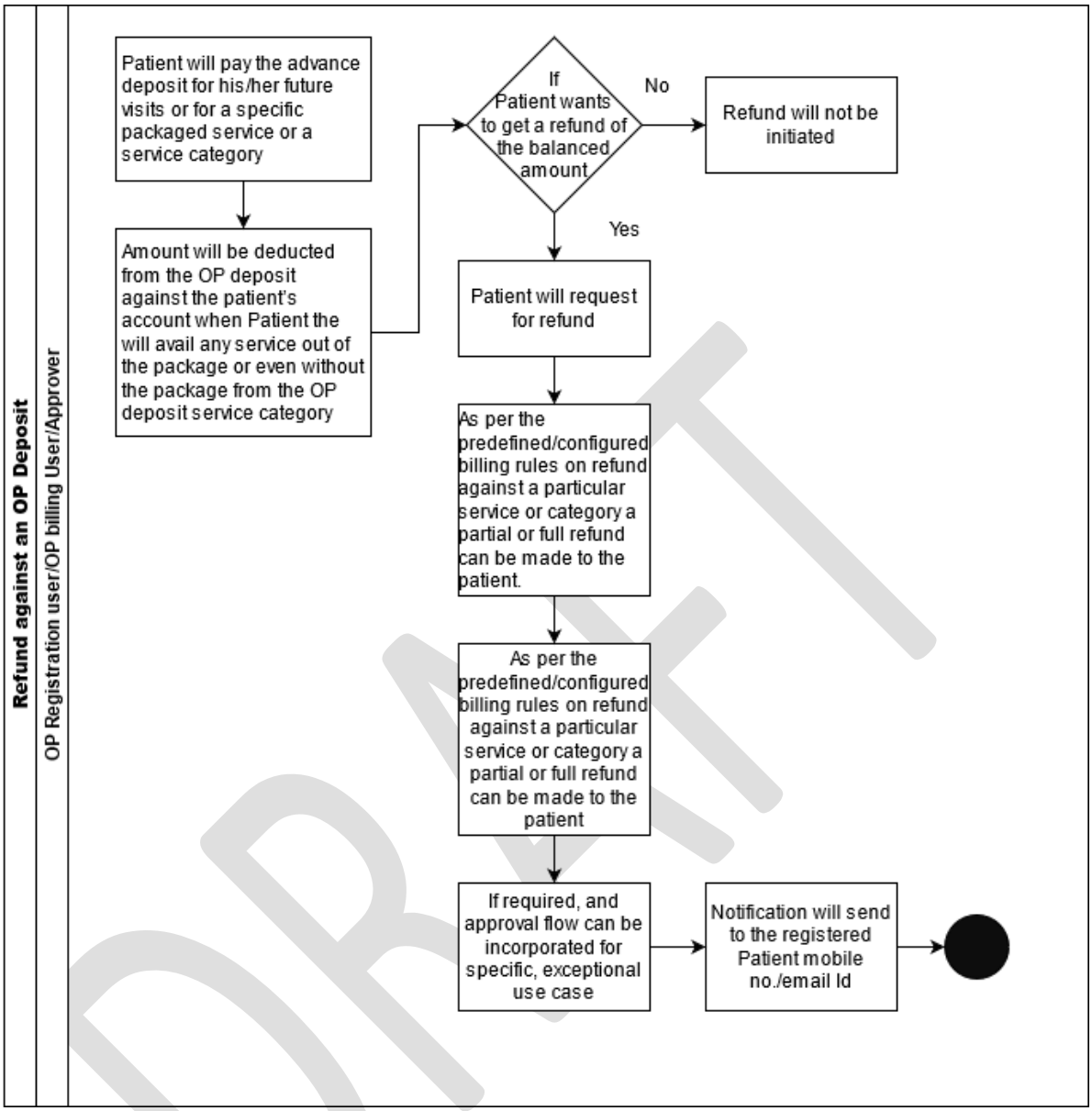
	patient's account which was taken from the patients as advance or OP deposit but wasn't consumed. Most of the refund is Initiated at the time of pre billing when the patient pays in advance the amount to the Facility for a service and would not like to continue with the process and demands a refund instead of future bill adjustments. Then the paid amount needs to be refunded to the patient amount and a refund receipt gets generated as the proof of refund that was made against a patient's ID. In case of service cancellations due to quality issue or partial service rendering on patient request or circumstances then a provision of full or partial refund should be made available to the patient and the episode should be closed. Billing/refund workflow is dependent on the visit cancellation and service cancellation processes. Some of the reasons of visit cancellation can be extended waiting time, on patient request or on doctor's request, nonpayment or unsatisfied patient post service rendering. In such tricky scenarios an approval flow has to be incorporated to maintain a two level scrutiny and auditing of the refund policy. The billing department should have a direct link with the finance/ accounts department to initiate the refund procedure. Payment refund policies vary from department to department and hospital to hospital. System should be configurable enough to handle such cancellation and refund policies. E.g.: A refund for a lab test can be requested in case a patient decides to pursue the process elsewhere due to the price suitability of the patient or the quality of sample collected wasn't maintained and the lab analysis unit rejects the sample .
Steps	**Service Cancellation and Refunds** • User has received a request from the patient/doctor or a service area to cancel a Service request that was created in the given TAT. • Any refund and cancellation of the pre booked service can be cancelled within the given turnaround time decided by the facility. • User opens the billing screen and searches the transaction for the service using the patient's UHID or transaction ID or Visit/encounter ID. • Selects the service that is required to be cancelled. • Request cancellation with reasons from the master list and an approver is automatically selected if there is an underlying approval flow for cancellation and refund of that service which is decided whether it is a rendered service or partially rendered service or a non-rendered service visit. • Approvers usually the finance department/ head of the department receives the notification and task in his/her worklist. • Approver checks the details and verifies the information about the service request that has to be cancelled. • Approver denies or accepts the request. • If approver accepts the request a triggered task gets added in the billing checklist and the amount taken in prebilling is partially or fully refunded to the patient or in some case a new visit for the same service is requested and amount of the service is adjusted with the previous visit amount. • Account details are taken from the patient to which they want to receive the refund amount. • The details of the refund amount are sent to the patient via. Message alert or email and the refund is initiated by the approver to the patient's account. And a tracking ID is sent along the message where they can track the transaction of the refund. • Refund related rules are normally preconfigured as per the approval flow and service item/category type. **Refund against an OP Deposit**

	• A patient had paid an advance deposit for his/her future visits or for a specific packaged service or a service category like physiotherapy sessions. • In such cases every time patient avails a service out of the package or even without the package from the OP deposit service category the amount is deducted from the OP deposit against the patient's account. • In between or any time patient feels he may want to get a refund of the balanced amount he/she may request a refund. • As per the predefined/configured billing rules on refund against a particular service or category a partial or full refund can be made to the patient. • An approval flow can be incorporated if required for specific, exceptional use cases. **Refund against a post billing discount** • There are scenarios where a post billing discounts can be done on Doctor's request or any quality issue like longer waiting time or a unsatisfied patient etc which are dealt as exceptional scenarios in a healthcare facilities. • In such scenario a patient is guided to reach out to the billing desk for post billing discount. • User will search the patient using his/her UHID or other demographic details and retrieve the information about the service against which a post bill discount has to be processed. • Initiate a post bill discount with percentage or amount to be discounted with the approval flow and captures the approver's ID with post billing discount reason. • Once the discount is approved and finalized the discounted amount can be seen under patient's pending refunds. • Here a patient can choose to keep the refund against his/her UHID and agrees to use the amount for any future bill adjustments. • While in some cases patient would request to refund the amount to the source of payment. • After processing the refund, the user will generate a refund receipt with refund receipt ID and transaction ID against which the refund was processed. • A message can be triggered to patient's contact no. or email and to the approver if required.
Outputs	• Refund Note/receipt with service cancellation slip • Refund Note/Receipt with discount slip • Refund note with OP deposit details • Unique Transaction ID • Refund Note/receipt ID
Messages & Alerts	• System alert for gaps on mandatory fields & validation errors • Worklist created for the relevant service area/dept or resource • Worklist for billing • Notification to the Patient.

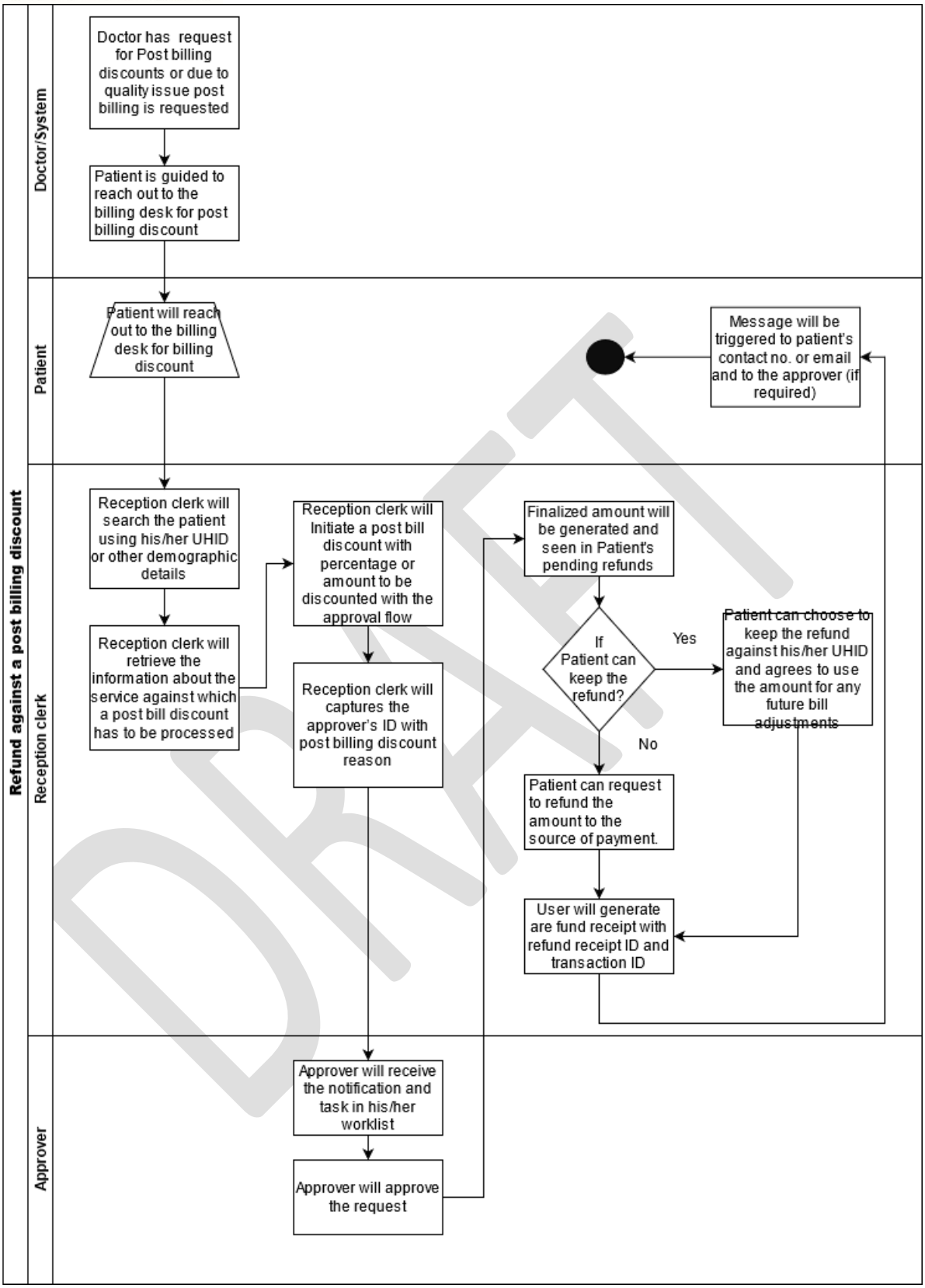
1.5.3.1 Visio diagram of Service Cancellation and Refunds


Service Cancellation and Refunds
OP Registration user/OP billing User
Approver
User will receive the request from Patient/doctor for cancellation of service request
Refund/cancellation of the pre-booked service can be cancelled within the given TAT
User opens the billing screen and the service request for cancellation
User will search the transaction for the service using the patient's UHID or transaction ID or Visit/encounter ID.
User will select the services required to be cancelled
User will request cancellation with reasons from master list
If Approval flow is there ?
No
Approver is not selected
Yes
Approval will be auto-selected
Approver will receive the notification and task in his/her worklist
Approver will checks the details and verifies the information for the service request that has to be cancelled
If Approver accepts the request ?
No
Request will be sent back to the OP billing personnel
Yes
A triggered task is added in the billing checklist and the amount taken in pre-billing is partially or fully refunded to the patient or in some case a new visit for thesame service is requested and amount of the service is adjusted with theprevious visit amount
Details of the refund amount is sent to the patient via. Message alert or email
A tracking ID is sent along the message where they can track the transaction of the refund.
Refund related rules will be pre-configured as per the approval flow and service item/category type
Notification will send to the registered Patient mobile no./email Id

1.5.3.2 Visio diagram of Refund against an OP Deposit



1.5.3.3 Visio diagram of Refund against a Post billing discount



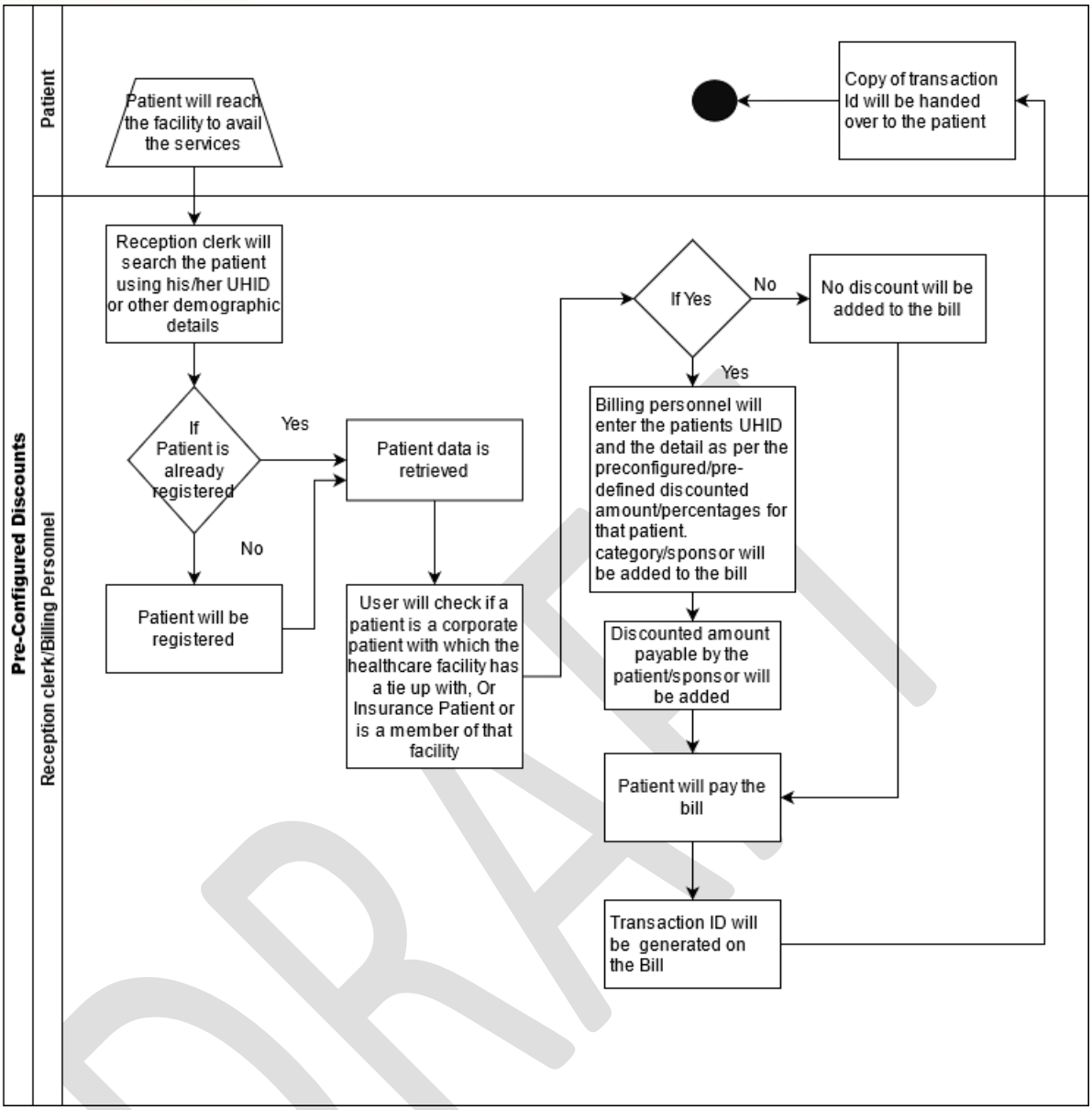
1.5.4 Billing Discount for OP services

1.5.4.1 Business Process Flow for Billing Discount.

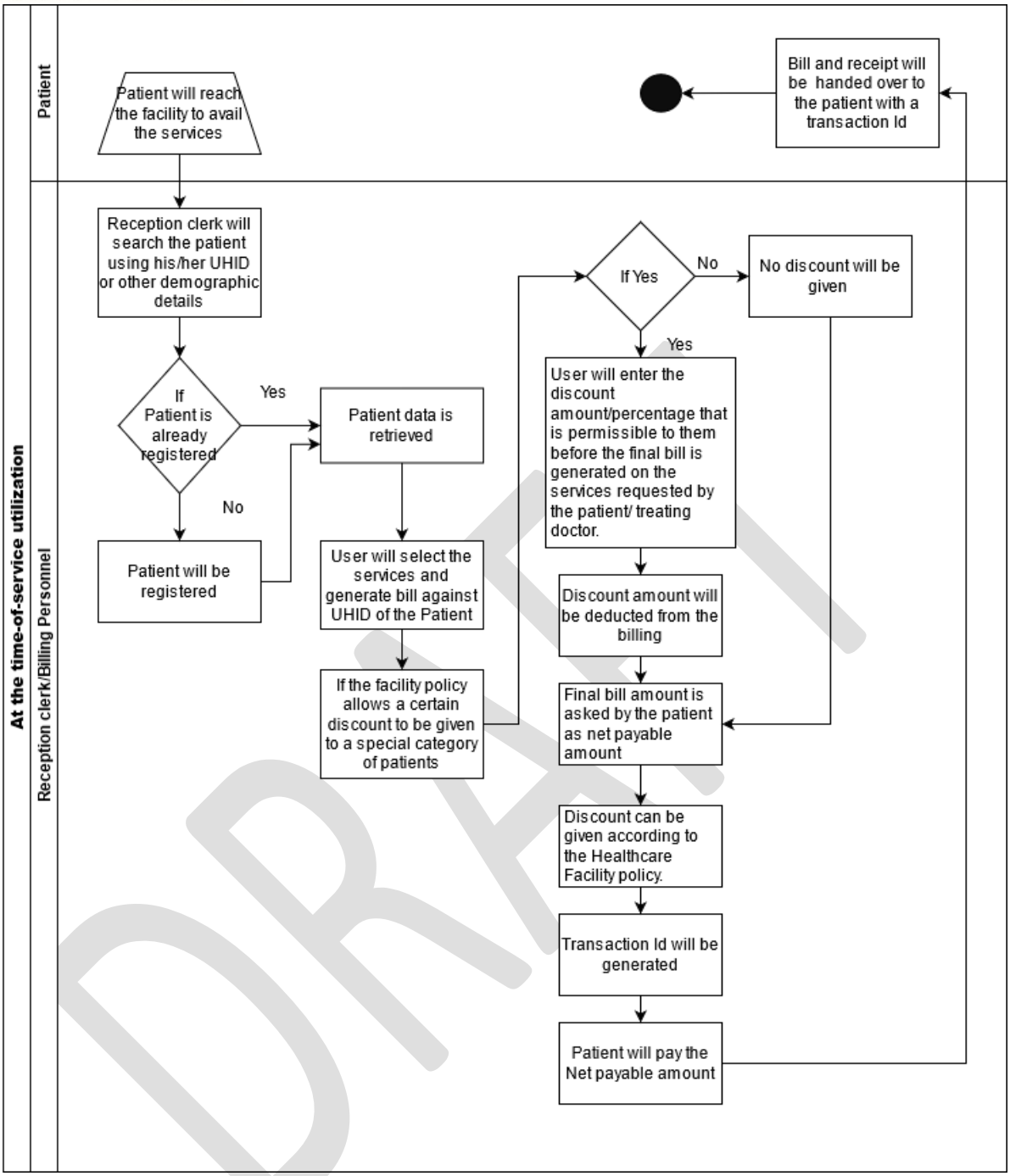
Description	This process describes the process of Discounting in the healthcare facility in order to attract new customer and retain the existing customer to the same facility for treatment. Discount is given on the bill amount for the service which a patient requires. Usually the discount is given to the senior citizens or corporate employees or to special categories like CGHS or BPL patient visiting the facility.
Users	OP Registration user, OP billing User, Approver
Pre-requisites	Alternate ID of the Patient, Employers ID, Discount Coupons
Business Process Details	Patient Discount is some amount of reduction in the actual serviceable bill that a patient pays after deduction in the payable amount. The predefined discounts amount/percentage should be configurable into the system and can be regularly updated to manage patient category or sponsored based discounting on the base service rate card. In this case the billing user may not need to provide any discount upfront to the patient yet the discounting process remains well managed and predefined and helps in streamlining the billing workflow. To enable this when a patient is registered patient category and sponsor details are captured against the patient UHID in the system. Thus, when a patient wants to avail a service the billing system will auto calculate the patient/sponsor payable bill amount by including the discounted amount as predefined in the discount policies and masters. Discount can be of various types such as- • Senior Citizen Discount • Discount coupons in case of new service launch • Corporate/a health insurance payer agreed discount in case of tie ups. There are certain types of discount that are given to the patient in Pre-Payment category are • Pre-Configured Discounts • On Spot Discounts
Steps	**Pre-Configured Discounts** • At the time of Patient Registration, the category of patient is added for example, if a patient is a corporate patient with which the healthcare facility has a tie up with, Or Insurance Patient or is a member of that facility. • At the time of bill generation, the user enters the patients UHID and the detail as per the preconfigured/pre-defined discounted amount/percentages for that patient category/sponsor gets added to the bill and a discounted amount is payable by the patient/sponsor. • After the payment is fulfilled a transaction ID is generated on the Bill and a copy of which is handed over to the patient. **At the time-of-service utilization** • Patient when require to avail a service a bill is generated against the UHID of the patient for the service he wishes to utilize from the facility. • If the facility policy allows a certain discount to be given to a special category of patients an on-spot discount can be given to the patient with an approval flow. • User can enter the discount amount/percentage that is permissible to them before the final bill is generated on the services requested by the patient/ treating doctor. • The discount amount is deducted from the billing and the final bill amount is asked by the patient as net payable amount. • Discount can be given according to the Healthcare Facility policy.

	• Net payable amount is taken from the patient and a bill and receipt is handed over to the patient with a transaction Id. **Post billing discount** • There are scenarios where a post billing discounts can be done on Doctor's request or any quality issue like longer waiting time or a unsatisfied patient etc which are dealt as exceptional scenarios in a healthcare facilities. • In such scenario a patient is guided to reach out to the billing desk for post billing discount. • User will search the patient using his/her UHID or other demographic details and retrieve the information about the service against which a post bill discount has to be processed. • Initiate a post bill discount with percentage or amount to be discounted with the approval flow and captures the approver's ID with post billing discount reason. • Once the discount is approved and finalized the discounted amount can be seen under patient's pending refunds. • Here a patient can choose to keep the refund against his/her UHID and agrees to use the amount for any future bill adjustments. • While in some cases patient would request to refund the amount to the source of payment.
Outputs	• Bill and receipt with the discount amount mentioned.
Messages & Alerts	• System alert for gaps on mandatory fields & validation errors • Worklist created for the relevant service area/dept or resource • Worklist for billing • Notification to the Patient.

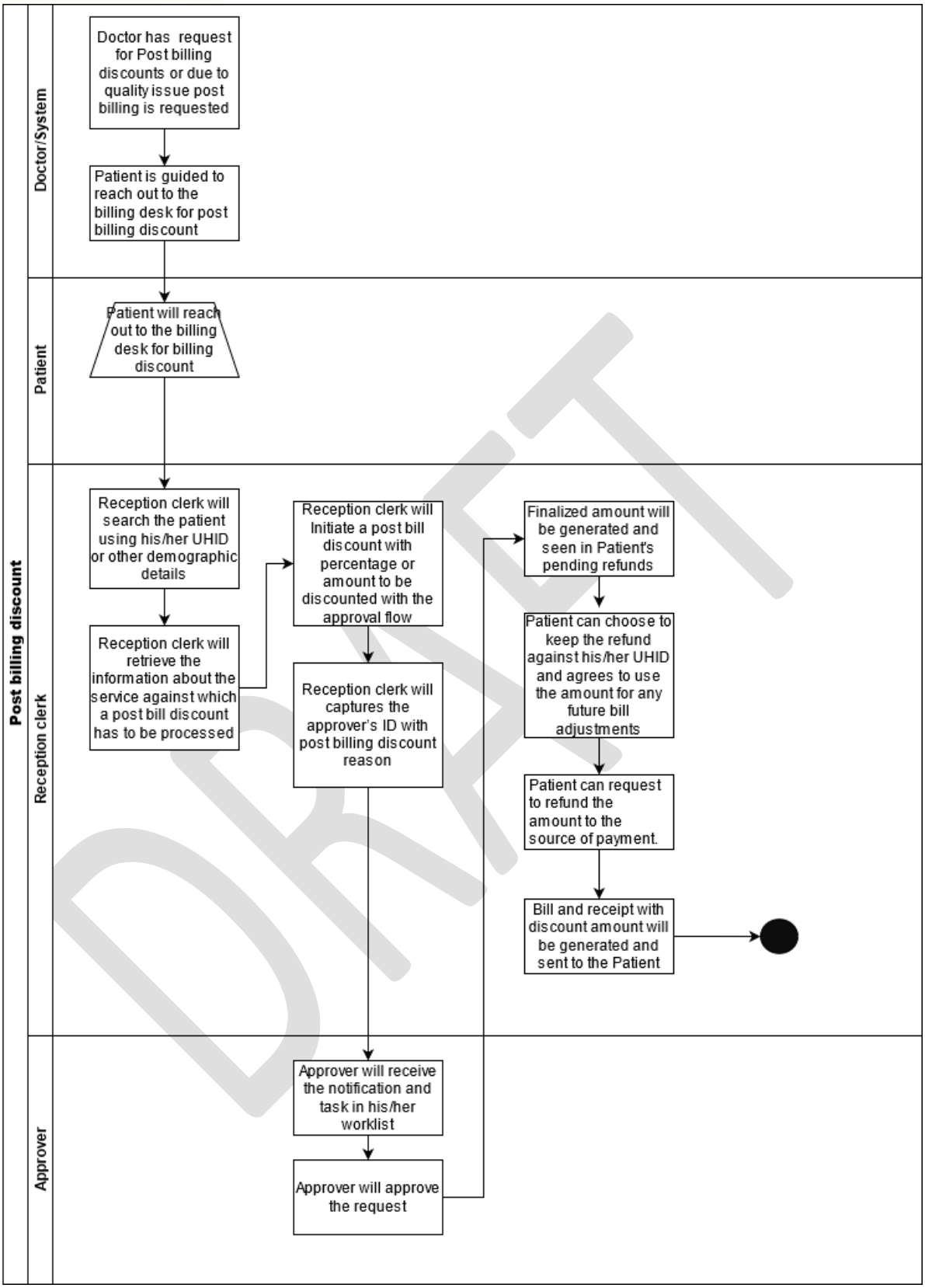
1.5.4.1.1 Visio diagram of Pre-configured discount



1.5.4.1.2 Visio diagram of At the time-of-service utilization



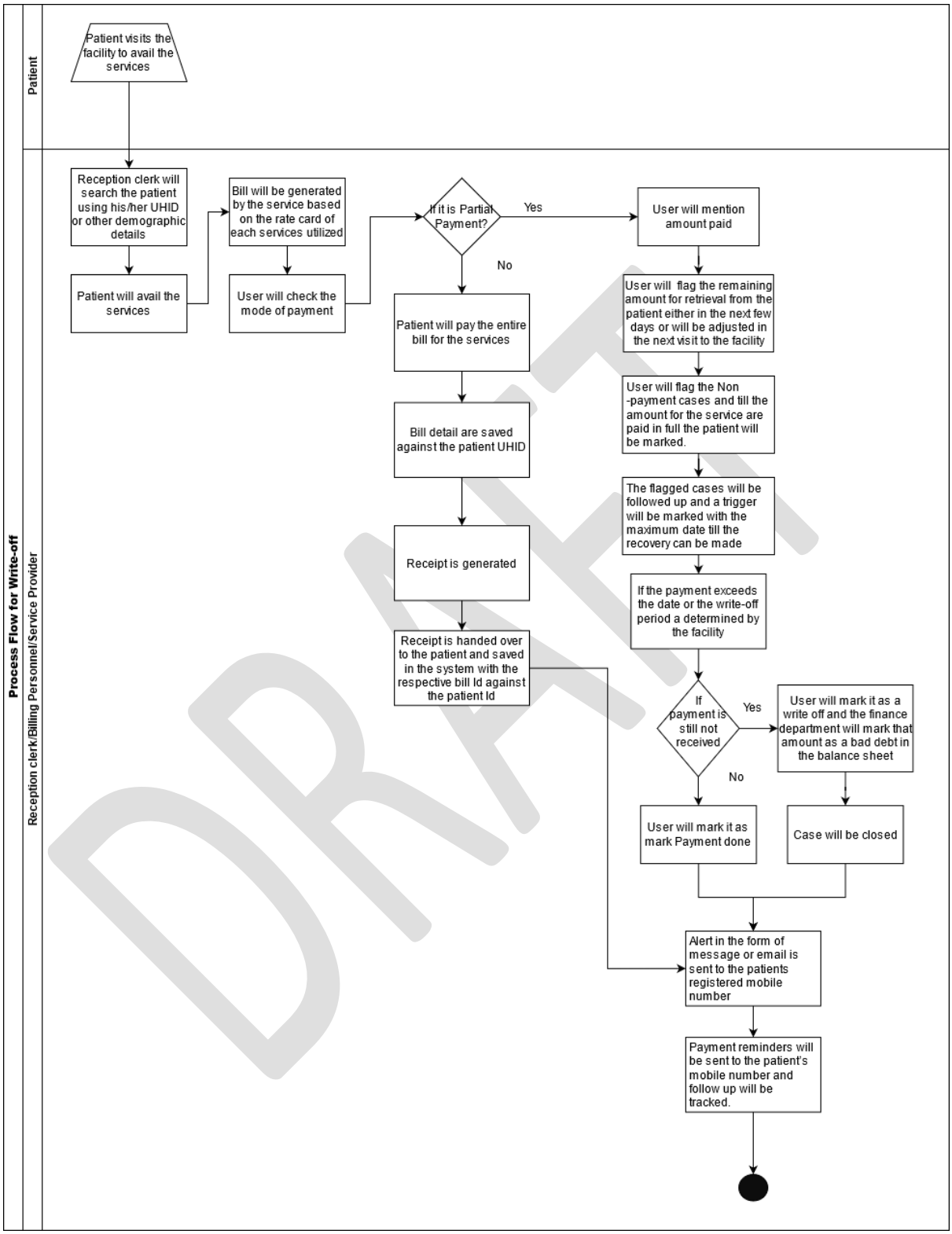
1.5.4.1.3 Visio diagram of Post billing discount



1.5.5 Business Process Flow for Write-off

Description	Sometimes a facility offers some time to the patient to pay the bill amount for the services availed by them or add certain amount to the wallet of the patient to be received during the next visit. This only happens if the policy of the facility allows for the payment to be made later for its regular patients or the service provider on goodwill of the patients. A business may need to do a write-off after determining a customer/patient is not going to pay its bill. Generally, on the balance sheet, this will involve a debit to an unpaid receivables account as a liability and a credit to accounts receivable and marked as bad debts.
Users	OP Registration user, OP billing User, Service provider.
Pre-requisites	Unique Health Identification number, Temporary or local Health ID, Mode of payment
Business Process Details	In this scenario a Bill is created for a patient who walks into the facility and request for a service he/she wants to avail. Either before the service or after the service is rendered the bill has to be paid for the services that were provided by the Healthcare facility. In certain cases, if the patient is unable to pay the entire bill amount they are expected to pay it later or can be adjusted in their next visit to the facility which is an exceptional scenario and only allowed in certain facilities which are either a donor/NGO/socially funded facilities like church funded hospitals etc where most of the time poor patients visits to avail services at a nominal rate. A write-off period is determined by the facility if a patient does not make the full payment of the bill amount then the bill against the UHID of the patient is written- off and mentioned as bad debt in the accounts by the financial department. These cases are flagged and reminder is sent to the patient to make the full payment.
Steps	• A registered patient visits the facility to avail a service. • For the services availed by the patient they have to pay the bill amount that is generated by the service based on the rate card of each services utilized. • In case of partial payment which happens in exceptional cases if the patient does not have the entire amount that has to be paid, the amount paid should be mentioned and the remaining amount should be flagged for retrieval from the patient either in the next few days or adjusted in the next visit to the facility. • Non -payment cases are flagged and till the amount for the service are paid in full the patient has to be marked. • When full payment is selected the billing cycle is completed and the bill detail are saved against the patient UHID and receipt is handed over to the patient and saved in the system with the respective bill Id against the patient Id. • An alert in the form of message or email is sent to the patients registered mobile number. • Payment reminders should also be sent to the patient's mobile number and follow up should be tracked. • The flagged cases should be followed up and a trigger should be marked with the maximum date till the recovery can be made. • If the payment exceeds the date or the write-off period a determined by the facility and if the payment is still not received then it will be marked as a write off and the finance department will mark that amount as a bad debt in the balance sheet. And the case is closed.
Outputs	• Revenue generation • Bill ID • Write-off
Messages & Alerts	• System alert for gaps on mandatory fields & validation errors • Alert to patients and service provider • Worklist for finance department

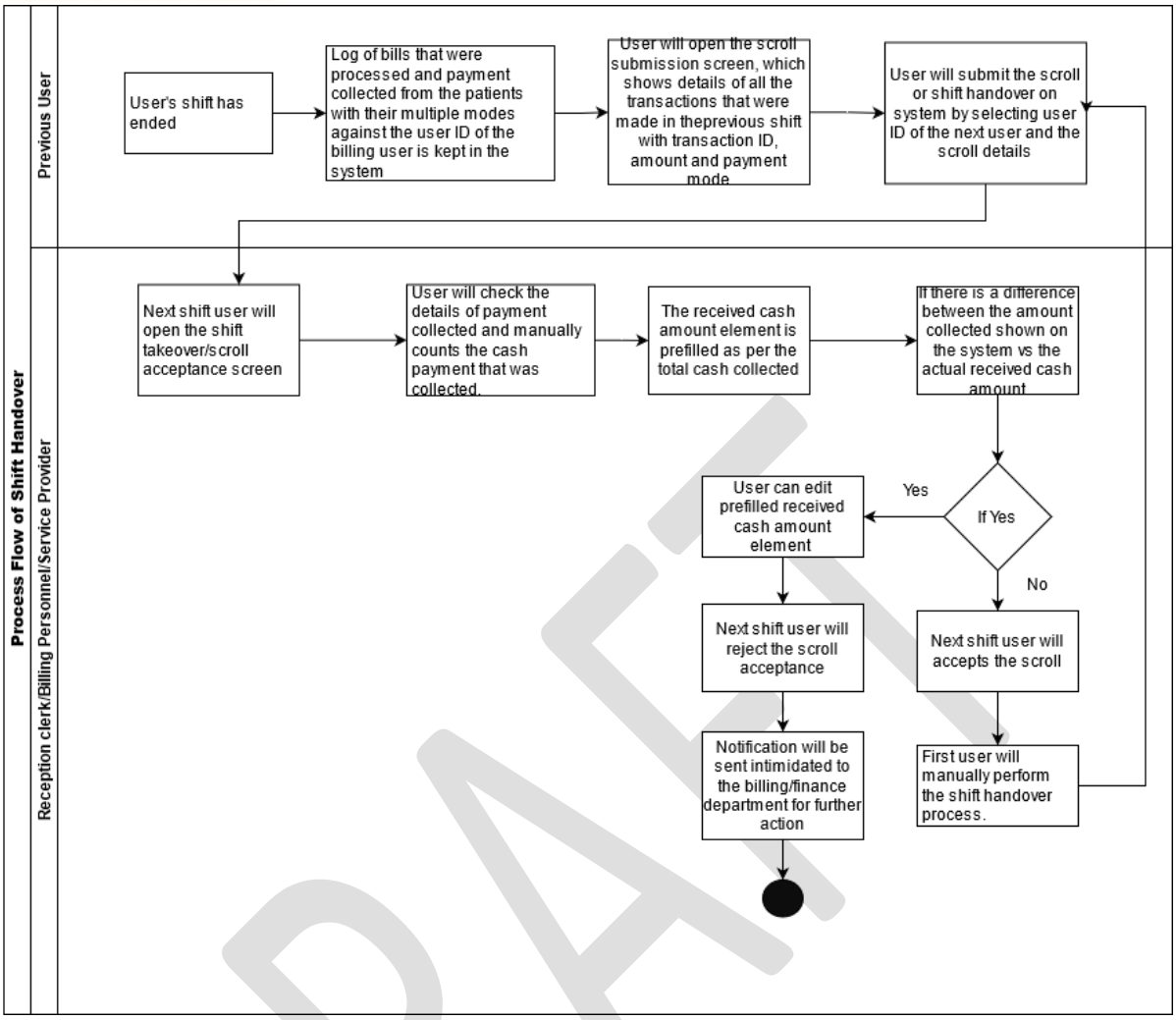
1.5.5.1 Visio diagram of Business Process Flow for Write-off



1.5.6 Business Process Flow of Business Process Flow for Shift Handover

Description	Healthcare Facility operates 24/7 on all 365 Days thus multiple people are working to have a continuously functioning thus people work in multiple shifts and shift handover becomes a major part of the workflow.
Users	OP Registration user, OP billing User, Service provider.
Pre-requisites	Unique Health Identification number, Temporary or local Health ID, Mode of payment, User's ID
Business Process Details	In this scenario when different users work in alternate shifts the workload and the payment collected needs to be handed over to the next user in the following shift. A proper handover needs to happen of the various visits and the payment collected throughout the shift to be handed over to the other user. It becomes extremely important to check for the revenue collection during the process of scroll submission for shift handover.
Steps	• At the moment the user's shift ends, the system should keep a log of bills that were processed and payment collected from the patients with their multiple modes against the user ID of the billing user. • Whenever the next billing desk users arrive and before he/she logs into the system a shift handover also called scroll submission should be done by the previous user. • For shift handover/scroll submission the previous shift user opens the scroll submission screen which shows details of all the transactions that were made in the previous shift with transaction ID, amount and payment mode. • The screen also shows bucket wise allocation of amount that was collected as per the payment modes. • User cannot make changes in the system recorded details but just have to submit the scroll or shift handover on system by selecting user ID of the next user and the scroll details are time and date stamped against the previous user's user ID. • When the next shift user takeover the shifts, he needs to accept the scroll/payment collected from the previous user. • The next shift user will again open the shift takeover/scroll acceptance screen and checks the details of payment collected and manually counts the cash payment that was collected. • The received cash amount element is prefilled as per the total cash collected, but is editable by the user when there is a difference between the amount collected shown on the system vs the actual received cash amount. • In such scenarios the next shift user rejects the scroll acceptance and the same gets immediately intimidated to the billing/finance department for further action. • If the amount that was handed over by the fist shift user was as per the system record, the next shift user usually accepts the scroll and the first user can manually perform the shift handover process. • This process of scroll submission is required to keep a transparent and genuine entry in the system against the services rendered during on any particular date.
Outputs	• Scroll ID • User IDs • Shift handover audit log
Messages & Alerts	• System alert for gaps on mandatory fields & validation errors • Alert to patients and service provider • Worklist for finance department

1.5.6.1 Visio diagram of Shift Handover


Process Flow of Shift Handover
Previous User
Reception clerk/Billing Personnel/Service Provider
User's shift has ended
Log of bills that were processed and payment collected from the patients with their multiple modes against the user ID of the billing user is kept in the system
User will open the scroll submission screen, which shows details of all the transactions that were made in theprevious shift with transaction ID, amount and payment mode
User will submit the scroll or shift handover on system by selecting user ID of the next user and the scroll details
Next shift user will open the shift takeover/scroll acceptance screen
User will check the details of payment collected and manually counts the cash payment that was collected.
The received cash amount element is prefilled as per the total cash collected
If there is a difference between the amount collected shown on the system vs the actual received cash amount
If Yes
Yes
No
User can edit prefilled received cash amount element
Next shift user will reject the scroll acceptance
Notification will be sent intimidated to the billing/finance department for further action
Next shift user will accepts the scroll
First user will manually perform the shift handover process.

1.1. Required MDDS Data Elements

1.1.1. Entity: Generic

Data Elements	MDDS Codes	Primary Care				Specialist Care		
		SCs	HWCs	PHCs	GP Clinics	CHCs	DHs	Hospitals
Time	05.001.0001	1	1	1	1	1	1	1
Date	G01.01	1	1	1	1	1	1	1
Comments	05.001.0007	1	1	1	1	1	1	1
Unit of Measurement	05.001.0018	1	1	1	1	1	1	1
Healthcare Application Number	05.001.0019	1	1	1	1	1	1	1
System of Medicine	05.001.0022	1	1	1	1	1	1	1
Document ID	05.001.0023	1	1	1	1	1	1	1
Reference Document ID	05.001.0024	1	1	1	1	1	1	1
Non-Clinical Document Type	05.001.0025	1	1	1	1	1	1	1
Reference Document	05.001.0026	1	1	1	1	1	1	1
Non-Clinical Document	05.001.0027	1	1	1	1	1	1	1

1.1.2. Entity: Person

Data Elements	MDDS Codes	Primary Care				Specialist Care		
		SCs	HWCs	PHCs	GP Clinics	CHCs	DHs	Hospitals
Unique Health Identification Number	NDHB	1	1	1	1	1	1	1
Person Name Type	05.002.0008	1	1	1	1	1	1	1
Phone Owner	05.002.0009	1	1	1	1	1	1	1
Contact Type	05.002.0010	1	1	1	1	1	1	1
Contact Person Name	05.002.0011	1	1	1	1	1	1	1
Contact Relationship	05.002.0012	1	1	1	1	1	1	1
Contact Person landline telephone number	05.002.0014	1	1	1	1	1	1	1
Contact Person mobile telephone number	05.002.0015	1	1	1	1	1	1	1
Contact Person Email Address/URL	05.002.0016	1	1	1	1	1	1	1
Author Name	05.002.0017	1	1	1	1	1	1	1
Author Landline Telephone Number	05.002.0018	1	1	1	1	1	1	1
Author Mobile number	05.002.0019	1	1	1	1	1	1	1

Author Email Address/URL	05.002.0020	1	1	1	1	1	1	1
Family Member Person Name	05.002.0021	1	1	1	1	1	1	1
Family Member Gender	05.002.0022	1	1	1	1	1	1	1
Family Member Relationship	05.002.0027	1	1	1	1	1	1	1
Family Member Relationship Description	05.002.0028	1	1	1	1	1	1	1
Special Vulnerability	05.002.0030	1	1	1	1	1	1	1

1.1.3. Entity: Patient

Data Elements	MDDS Codes	Primary Care				Specialist Care		
		SCs	HWCs	PHCs	GP Clinics	CHCs	DHs	Hospitals
Provider's Patient ID	05.003.0001	1	1	1	1	1	1	1
Patient Name	05.003.0002	1	1	1	1	1	1	1
Patient Age	05.003.0003	1	1	1	1	1	1	1
Identity Unknown Indicator	05.003.0007	1	1	1	1	1	1	1
Patient Mobile Number	05.003.0012	1	1	1	1	1	1	1
Patient Arrival Time	05.003.0014	1	1	1	1	1	1	1
Patient Arrival Date	05.003.0015	1	1	1	1	1	1	1
Reason for visit	05.003.0016	1	1	1	1	1	1	1
Pregnancy indicator	05.003.0017	1	1	1	1	1	1	1

1.1.4. Entity: Employee

Data Elements	MDDS Codes	Primary Care				Specialist Care		
		SCs	HWCs	PHCs	GP Clinics	CHCs	DHs	Hospitals
Employee Name	05.004.0001	1	1	1	1	1	1	1
Employee Gender Code	05.004.0003	1	1	1	1	1	1	1
Employee Telephone Number	05.004.0006	1	1	1	1	1	1	1
Employee Mobile Number	05.004.0007	1	1	1	1	1	1	1
Employee E-mail Address	05.004.0008	1	1	1	1	1	1	1
Employee ID	05.004.0053	1	1	1	1	1	1	1
Employee Designation Code	05.004.0056	1	1	1	1	1	1	1

1.1.5. Entity: Provider

Data Elements	MDDS Codes	Primary Care				Specialist Care		
		SCs	HWCs	PHCs	GP Clinics	CHCs	DHs	Hospitals
Unique Individual Health Care Provider Number	05.005.0001	1	1	1	1	1	1	1
Unique Individual Health Care Provider Number Type	05.005.0002	1	1	1	1	1	1	1
Care Provider Landline Telephone Number	05.005.0006	1	1	1	1	1	1	1
Care Provider Mobile Number	05.005.0007	1	1	1	1	1	1	1
Care Provider Email Address/URL	05.005.0008	1	1	1	1	1	1	1
Care Provider Name	05.005.0009	1	1	1	1	1	1	1
Health Service Provider Role code	05.005.0010	1	1	1	1	1	1	1
Health Service Provider Role Free Text	05.005.0011	1	1	1	1	1	1	1
Health Service Provider Type	05.005.0012	1	1	1	1	1	1	1

1.1.1. **Entity: Bill** (Applicable when service request is a mandatory step that automatically creates a patient visit)

Data Elements	MDDS Codes	Primary Care				Specialist Care		
		SCs	HWCs	PHCs	GP Clinics	CHCs	DHs	Hospitals
Service Type	05.007.0008	1	1	1	1	1	1	1
Service Item Price	05.007.0019	0	0	0	1	0	0	1
Package Item Name	05.007.0020	1	1	1	1	1	1	1
Package Item Price	05.007.0021	1	1	1	1	1	1	1
Quantity of Service	05.007.0022	1	1	1	1	1	1	1
Total Billed Amount	05.007.0024	1	1	1	1	1	1	1

1.1.2. **Entity: Facility**

Data Elements	MDDS Codes	Primary Care				Specialist Care		
		SCs	HWCs	PHCs	GP Clinics	CHCs	DHs	Hospitals
Unique Facility Identification Number	05.008.0001	1	1	1	1	1	1	1
Facility Type Code	05.008.0002	1	1	1	1	1	1	1

Facility Service Code	05.008.0009	1	1	1	1	1	1	1
Facility Specialty Code	05.008.0010	1	1	1	1	1	1	1
Department Name	05.008.0015	0	0	1	0	1	1	1
Ward Name	05.008.0016	0	0	1	0	1	1	1

1.1.3. Entity: Episode

Data Elements	MDDS Codes	Primary Care				Specialist Care		
		SCs	HWCs	PHCs	GP Clinics	CHCs	DHs	Hospitals
Episode ID	05.009.0001	1	1	1	1	1	1	1
Episode Type	05.009.0002	1	1	1	1	1	1	1

1.1.4. Entity: Encounter

Data Elements	MDDS Codes	Primary Care				Specialist Care		
		SCs	HWCs	PHCs	GP Clinics	CHCs	DHs	Hospitals
Encounter ID	05.010.0001	1	1	1	1	1	1	1
Encounter Type	05.010.0002	1	1	1	1	1	1	1
Encounter Type Description	05.010.0003	1	1	1	1	1	1	1
Encounter Time	05.010.0004	1	1	1	1	1	1	1
Encounter Date	05.010.0005	1	1	1	1	1	1	1

1.1.5. Entity: Emergency

Data Elements	MDDS Codes	Primary Care				Specialist Care		
		SCs	HWCs	PHCs	GP Clinics	CHCs	DHs	Hospitals
Patient Arrival Date	05.013.0001	1	1	1	1	1	1	1
Patient Arrival Time	05.013.0002	1	1	1	1	1	1	1
Patient Status	05.013.0003	1	1	1	1	1	1	1

1.1.6 Entity: Source of Payment

Data Element	MDDS Codes	Primary Care				Specialist Care		
		Sub-Centers	PHCs	HWCs	GP Clinics	CHCs	DHs	Hospitals
Third Party Administrator (TPA) Code	05.006.0001	0	0	0	1			
Third Party Administrator (TPA) Name	05.006.0002	0	0	0	1			
Insured Card ID	05.006.0003	0	0	0	1			
Insurance Policy Type	05.006.0004	0	0	0	1			
Health Plan Type	05.006.0005	0	0	0	1			
Insurance Policy ID	05.006.0006	0	0	0	1			
Insurance Policy Name	05.006.0007	0	0	0	1			
Source of Payment	05.006.0008	0	0	0	1			
Secondary Health Insurance Policy Indicator	05.006.0009	0	0	0	1			
Secondary Health Insurance Policy ID	05.006.0010	0	0	0	1			
Total Claimed Amount	05.006.0021	0	0	0	1			
Claim Bill ID	05.006.0026	0	0	0	1			
Bill Type	05.006.0027	0	0	0	1			
Type of Hospital	05.006.0028	0	0	0	1			
Claims Documents Submission Check List	05.006.0033	0	0	0	1			
Patient Employee ID	05.006.0034	0	0	0	1			

1.1.6 Entity: Bill

Data Element	MDDS Codes	Primary Care				Specialist Care		
		Sub-Centres	PHCs	HWCs	GP Clinics	CHCs	DHs	Hospitals
Bill ID	05.007.0001	0	0	0	1			
Bill Date	05.007.0002	0	0	0	1			
Bill Generation Type	05.007.0003	0	0	0	1			
Bill Copy Type	05.007.0004	0	0	0	1			
Reason for Duplicate Bill Copy	05.007.0005	0	0	0	1			
Approval Indicator for Duplicate Bill Copy	05.007.0006	0	0	0	1			
Tariff Category	05.007.0007	0	0	0	1			
Service Type	05.007.0008	0	0	0	1			
Payment Type	05.007.0009	0	0	0	1			
Sponsoring Entity	05.007.0010	0	0	0	1			
Approving Entity	05.007.0011	0	0	0	1			
Insurance Company Name	05.007.0012	0	0	0	1			
Insurance Company Code	05.007.0013	0	0	0	1			
Sponsor Approval Indicator	05.007.0014	0	0	0	1			
Service Item Name	05.007.0018	0	0	0	1			
Service Item Price	05.007.0019	0	0	0	1			
Package Item Name	05.007.0020	0	0	0	1			
Package Item Price	05.007.0021	0	0	0	1			
Quantity of Service	05.007.0022	0	0	0	1			

Tax	05.007.0023	0	0	0	1			
Total Billed Amount	05.007.0024	0	0	0	1			
Discount Approval Indicator	05.007.0025	0	0	0	1			
Discount Approver Name	05.007.0026	0	0	0	1			
Discount Indicator	05.007.0027	0	0	0	1			
Discount	05.007.0028	0	0	0	1			
Discount Remark	05.007.0029	0	0	0	1			
Advance Deposit Amount	05.007.0030	0	0	0	1			
Balance Payable	05.007.0031	0	0	0	1			
Amount Payable by Patient	05.007.0032	0	0	0	1			
Amount Payable by Sponsor	05.007.0033	0	0	0	1			
Amount Paid by Patient	05.007.0034	0	0	0	1			
Patient Dues	05.007.0035	0	0	0	1			
Transaction ID	05.007.0036	0	0	0	1			

1.1.7 Entity: Employee

Data Element	**MDDS Codes**	**Primary Care**				**Specialist Care**		
		Sub-Centers	**PHCs**	**HWCs**	**GP Clinics**	**CHCs**	**DHs**	**Hospitals**
Employee Name	05.004.0001	1	1	1	1			
Employee E-mail Address	05.004.0008	1	1	1	1			
Employee Age	05.004.0009	1	1	1	1			

Employee ID	05.004.0053	1	1	1	1			
Employment Status	05.004.0054	1	1	1	1			
Employment Type	05.004.0055	1	1	1	1			
Employee Designation Code	05.004.0056	1	1	1	1			
Employee Cadre	05.004.0057	1	1	1	1			
Employee Pay Band	05.004.0058	0	0	0	1			
Employee Grade Pay	05.004.0059	0	0	0	1			
Grievance ID	05.004.0141	1	1	1	1			
Grievance Application Status	05.004.0142	1	1	1	1			
Grievance Application Reason	05.004.0143	1	1	1	1			