

DISSERTATION

at

Attune Technology Ltd., Anna Salai, Chennai

Analysis of the workflow of TPA department after HIS implementation

by

Name : Dr. Alisha Dhanda

Enroll No. PG/13/001

Under the guidance of

Dr. Anandhi Ramachandran

Post Graduate Diploma in Hospital and Health Management

2013-15



**International Institute of Health Management Research
New Delhi**

Completion of Dissertation from the Respective Organization

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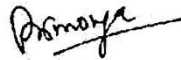
Dr. Alisha Dhanda

In recognition of successfully completed her internship and project on
Analysis of the workflow of TPA department after HIS implementation

May 2015-05-04

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She comes across as a sincere, dedicated and hard working individual with an
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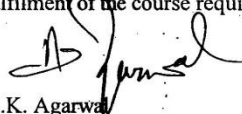


Training and reporting officer

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This is to certify that Dr. Alisha Dhanda, student of Post Graduate Diploma in Hospital & Health Management from IIHMR- Delhi, has undergone internship training in ATTUNE Technologies Pvt. Ltd. from 4th February 2015 to 4th May 2015.

The candidate had successfully carried out the project designated to her during the internship and had used proper scientific methods to carry out the same. The internship is in the fulfilment of the course requirement. We wish her all the best for her future endeavours.



Dr. A.K. Agarwal
Dean, Academics and student affairs,
New Delhi.



Dr. Anandhi Ramachandran,
Mentor IIHMR-Delhi

Certificate Of Approval

The following dissertation titled "**Analysis of the workflow of TPA department after HIS implementation**" at "**Attune Technology Ltd.**" 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.

Dissertation Examination Committee for evaluation of dissertation.

Name

Signature

Dr. Chommen Jom

Chommen Jom

DR. ANANDHI RAMPCHANDRAN

16/11/2022

CERTIFICATE FROM DISSERTATION ADVISORY COMMITTEE

This is to certify that Dr. Alisha Dhanda, student of Post Graduate Diploma in Health & Hospital Management had worked under our supervision and guidance. She is submitting her dissertation titled "Analysis of the workflow of TPA department after HIS implementation" at Attune Technologies Pvt. Ltd. in partial fulfilment of the requirements for the award of Post Graduate Diploma in Health and Hospital Management.

This dissertation had a requisite standard and to the best of our knowledge no part of it has been reproduced from any other dissertation, monograph, report or book.



Dr. Anandhi Ramachandran
Associate professor,
IIHMR-Delhi



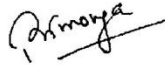
Mrs. Parvinder Kaur
Consultant, ATTUNE Technologies, Pvt Ltd.
Chennai

To Whomever It May Concern

This is to certify that Dr. Alisha Dhanda, student of IIHMR Delhi, has successfully completed her internship program from 04-02-2015 to 04-05-2015 in Attune Technologies Pvt. Ltd.

During her internship she worked on the Implementation of HIS in TPA department of Hospital.

We wish all the best in ~~her~~ future.



Mrs. Paramjeet Kaur
Attune Technologies Pvt. Ltd

CERTIFICATE OF SCHOLAR

This is to certify that the project "Analysis of the workflow of TPA department after HIS implementation" is submitted by Dr. Alisha Dhanda Enrollment no. PG/13/01 under the supervision of Dr. Anandhi Ramchandran for award of Post Graduate Diploma in Health and Hospital Management of the Institute carried out from the period 4-02-2015 to 4-05-2015 embodies my original work and has not form the basis of any award, degree, diploma associate ship, fellowship title in this or any other institute or institution of higher learning.

Alisha Dhanda
Signature

FEEDBACK FORM

Name of the Student: Dr. Alisha Dhanda

Dissertation Organisation: ATTUNE Technology Pvt. Ltd.

Area of Dissertation: Implementation

Attendance: 94%

Objectives achieved:

- Requirement gathering & addressing issues faced by end users.
- Training to end users.
- Monitor user issues
- Increase awareness of software in users.

Deliverables:

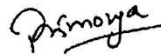
- User training for registration & accession
- Master data for departments
- Bug tracker issues

Strengths:

- Hard working
- Team works
- Motivated & enthusiastic
- Multitasking

Suggestions for Improvement:

- Should do follow up till completion of work
- Learn thoroughly about the system



Signature of the Officer-in-Charge

ACKNOWLEDGEMENT

Undertaking a project is never a one-person job. It's always involves help from other person who are either reviewing your work or teaching you things. Words can never be enough to express my sincere thanks to **ATTUNE Technologies Pvt. Ltd.** and especially **Mrs. Paramjeet kaur**, my reporting officer for her continuous guidance and support.

I convey my gratitude to **Mr. Raghothaman, VP of ATTUNE Technologies Pvt. Ltd.** who gave me the opportunity to be a part of this Project. I express my greatest thanks to **Mr. Aminderbir singh, my senior in ATTUNE Technologies and also a past Alumni of IIHMR-Delhi** for his support and guidance to make this project possible.

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I would also thank **Dr. L.P Singh (Director)** and **Dr.A.K Agrawal (Dean)**.I pay my sincere offering to the almighty without whose grace I would not be able to add a new dimension to my life.

In the end, I am thankful from the core of my heart to my beloved parents and my sister who supported me throughout the course of study. Last but not the least; I am thankful to all the colleagues for their help and cooperation.

Dr. Alisha Dhanda

Health IT

2013-2015

PG/13/01

ABSTRACT

The TPA and Insurance Management module facilitates the process of settlement of the bills of a patient insured or covered by a third party. It records the details of third party payers and insurance companies. It helps to verify the eligibility of the patient for reimbursement by the third party or the insurance company. This module helps the hospital file online claims on behalf of the patient in a prescribed format along with the discharge summary and various bills of the services provided to the patient. It also helps to track the status of the claims and provides a provision for follow up to these TPA and Insurance companies.

Keeping in consideration the requirements the HIS was being implemented with the above salient features. The whole HIS system was being integrated with different departments using software like HL7, Native. The TPA module was integrated with other department module like Billing, IPD.

Scope of the Project:

This study includes analysis of the process of TPA after the successful implementation of integrated HIS in the hospital. By this study we tried to analyze the gaps in the TPA workflow so that a feasible solution can be provided to the problems faced.

Methodology:

The study was conducted in XYZ hospital situated in, Mohali.

This study is an observational study which was conducted with aim to study the workflow.

Study area: TPA department of XYZ hospital

Study population: 20-25 staff members of billing plus TPA department.

Types of data:

Primary Data Collection: There are times when the information must be collected and this approach is known as primary data collection.

Tools used: interviews, observation

Secondary data:

Secondary data is the data that has been already collected by someone else for a different purpose.

Tools used: e-brochure, websites, journals on TPA module in HIS.

Conclusion:

Although the HIS was being implemented keeping in consideration the requirements of the end users of various departments. All the modules were successfully implemented and integrated using software like HL7 but still the end users were facing problems. This present study deals with the same by knowing the present issues the users are facing. As we can see the process of TPA is connected with the billing and IPD process and both the process are now replaced with IT rather manual and paper based. But as per the staff of TPA department process of TPA department is not fasten up because of the time consumed in waiting for the approval from the insurance companies under which the patients are being insured.

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Abbreviations

BHIS- Basic hospital information system

EHR- Electronic health record

HIS- Hospital information system

HL7- Health level7

IHIS- Intermediate hospital information system

IPD- In patient department

IT- Information Technology

MIS-Management information system

SDLC-Software development life cycle

THIS-Total hospital information system

TPA- third pat assurance

INTERNSHIP REPORT

Organization Profile

Attune Technologies Private Limited, a healthcare information technology company, offers Web-based software solutions for healthcare delivery organizations.

The company offers **Attune Health Kernel**, a Web-based solution for hospitals that integrates its departments and branches that are geographically separated; **Attune Lab Kernel**, a Web-based solution for diagnostic and imaging labs that integrates its collections centers, branches, and partner networks; and **Attune Clinic Kernel**, a Web-based solution for clinics that integrates its departments and branches when they are geographically distributed.

It integrates departments from pharmacies, diagnostic labs, imaging units, physiotherapy units, wards, inpatients and outpatients units, and branches and collection centers in various geographic locations. The company was incorporated in 2008 and is based in Chennai, India

Vision:

To manage world's health information

Values includes:

- Transparency: We take utmost care to ensure transparency in all our engagements with all our clients and vendors. We actively share relevant information, enabling them to take informed decisions in all activities pertaining to our operations.

- **Trust:** Trust among various stakeholders is the key driver for a successful business. We, at Attune, strongly believe in this philosophy and leave no stone unturned to establish relationships based on mutual Trust.
- **Respect:** We strongly value the relationships with all our stakeholders and greatly respect their needs and decisions. Mutual Respect and Understanding is the cornerstone of all our relationships.
- **Win-win:** We strongly believe in establishing win-win relationships with all our stakeholders. Our engagements with customers and vendors shall be based on evolving long-term win-win relationships.

Products of Attune:

- **Attune HealthKernel** is a complete state of the art, secure & web-based solution for hospitals that integrates all the departments and branches that are geographically separated. All the hospitals/branches needs are low-end PC's and Internet connectivity with rest of the IT infrastructure and software taken care by us.
- **Attune LabKernel** is an advanced and contemporary software that combines all the collection centers, branches and partner networks into a single platform to facilitate easy functioning.
- **Attune ClinicKernel** is a complete state of the art, secure & web-based solution for clinics and Clinic chains that integrates all its departments and branches that are geographically separated. All the clinics/branches needs are low-end PC's and Internet connectivity with rest of the IT infrastructure and software taken care

Modules in Attune HIS:

- Patient registration
- Billing and revenue cycle management
- Client management and critical control
- Doctor schedule and appointment
- Accident and emergency care
- Day care management system
- In patient management system
- Lab information system
- Radiology and imaging information system
- Pharmacy information system
- Purchase, inventory management and consumption tracking
- MIS ,Dashboard, Business intelligence

Key Learning's:

- Acceptance level towards IT and change in work culture from end users and administration.
- Transcription of data from paper to digital is a tedious job.
- If the organization is using an IT system before hand then the product must be developed such that it is compatible with the old one.
- Old school work culture affect the implementation process adversely.
- Phase wise implementation process is more practical and feasible.
- Managing client feedback is the key of successful implementation
- Step by step approach in training the users
- Changes in the workflow after implementation of integrated HIS
- Various technique to handle the end user at the customer side at the time any issue arises.

DISSERTATION REPORT

Problem Statement:

Analysis of workflow of TPA Department after Implementation of HIS in XYZ hospital in Mohali. Before we move towards the issues here is the brief about XYZ hospital.

This is a chain of hospitals which is running in metro cities in India and the working environment in the hospital is manual. They were using paper based files for keeping records of the patients. Most of the staff is well aware about the usage of computers the available computers are used for performing routine tasks like getting prints of documents, keep staff records, using internet for getting some information.

Billing and the TPA process was also carried out manually so looking into the process flow the hospital decided to have HIS for the hospital. The implementation of the HIS was successful in all the departments with different modules for different departments.

But still there were some issues faced:

- Delay in discharge of medically insured patients
- Delay in the payment by the insurance company

These were the two issues raised by staff of billing department based on which we conducted this research in which we analyzed the workflow of TPA department.

Scope of the Project:

This study includes analysis of the process of TPA after the successful implementation of integrated HIS in the hospital. Through this the gaps in the TPA workflow are identified so that a feasible solution can be provided to the problems faced.

Research Question

This research is based on following research questions:

- What are the reasons for the delay in patient discharge/ payment by the insurance companies.
- What were the issues faced by the TPA department.

Methodology:

The study was conducted in XYZ hospital situated in, Mohali.

This study is an observational study which was conducted with aim to study the workflow of TPA department.

Study area: TPA department of XYZ hospital

Study population: 20-25 staff members of billing plus TPA department.

Types of data:

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Tools used: Interactions, observation

Secondary data:

Secondary data is the data that has been already collected by someone else for a different purpose

Tools used: e-brochure, websites, journals on TPA module in HIS.

Review of Literature

1) Implementation Differences of Hospital Information System (HIS) in Malaysian Public Hospitals

International Journal of Social Science and Humanity, Vol. 3, No. 2, March 2013

Abstract—Hospital Information System (HIS) is important to healthcare sector especially in public hospitals as they need to serve the public with high-quality healthcare treatments. HIS helps to improve patients care services. Thus, the Malaysian Government has introduced three (3) categories of HIS namely Total Hospital Information System (THIS), Intermediate Hospital Information System (IHIS), and Basic Hospital Information System (BHIS) among Malaysian public hospitals. However, only 15.2% of the Malaysian public hospitals are implementing the system. Moreover, there is limited number of empirical studies on HIS implementation in Malaysia. Thus, this paper aims to investigate issues and challenges in HIS implementation for each category of HIS by using in-depth interviews. Nine participants were involved in the interviews. The interview data were transcribed verbatim and analyzed based on Content and Thematic Analysis using NVivo software. The results showed that different category of HIS faced different issues and challenges.

2) Assessment of hospital information systems implementation: a case study.

Zikos D1, Mitsios A, Mantas J.

The use of integrated Hospital Information Systems is related with many benefits for the healthcare system, increasing the effectiveness of the provided services and assuring quality of care. Aim of this study is to investigate the types of Information Systems, the level of integration and the problems identified during the implementation phase, in three public hospitals. The above are expected to contribute to the understanding of the organizational, human resource and technical factors related with the successful implementation of a hospital IS. In order to investigate those elements, an assessment questionnaire was developed and completed by nine hospitals IT employees of the three hospitals. In addition, open interviews were organized with the same employees to further formulate an overall aspect, while in one hospital case, observation and discussion with four different categories of involved staff was undertaken. It was found that the implementation problems are mainly related with the underfunding, inadequate use of standards, lack of skilled IT experts, insufficiently trained personnel and users' reserve. The problems may be tackled with a supportive hospital administration

committed to the successful implementation. The external contracting company working on its own, without any participation of the hospital IT department seems to be a failure recipe. It is evident that an active management support and skillful hospital IT employees, are expected to result to success stories during the implementation of integrated hospital information systems.

3) A Plan for Implementation of Hospital Information System in Developing Country: Recommendation from socio-technical perspective.

Hospital Information System (HIS) is considered as an important factor in health care sector for managing the administrative, financial and clinical aspects of a hospital.

A large number of hospitals from both developing and developed countries are adopting hospital information system to bring efficiency in their current system. Current study is conducted to contribute to the literature regarding HIS implementation in developing country settings as there is scarce literature. This study attempts to improve the understanding of HIS implementation in developing countries.

In this study, socio technical model is used to understand the current working system of cardiology department of Combined Military Hospital (CMH).

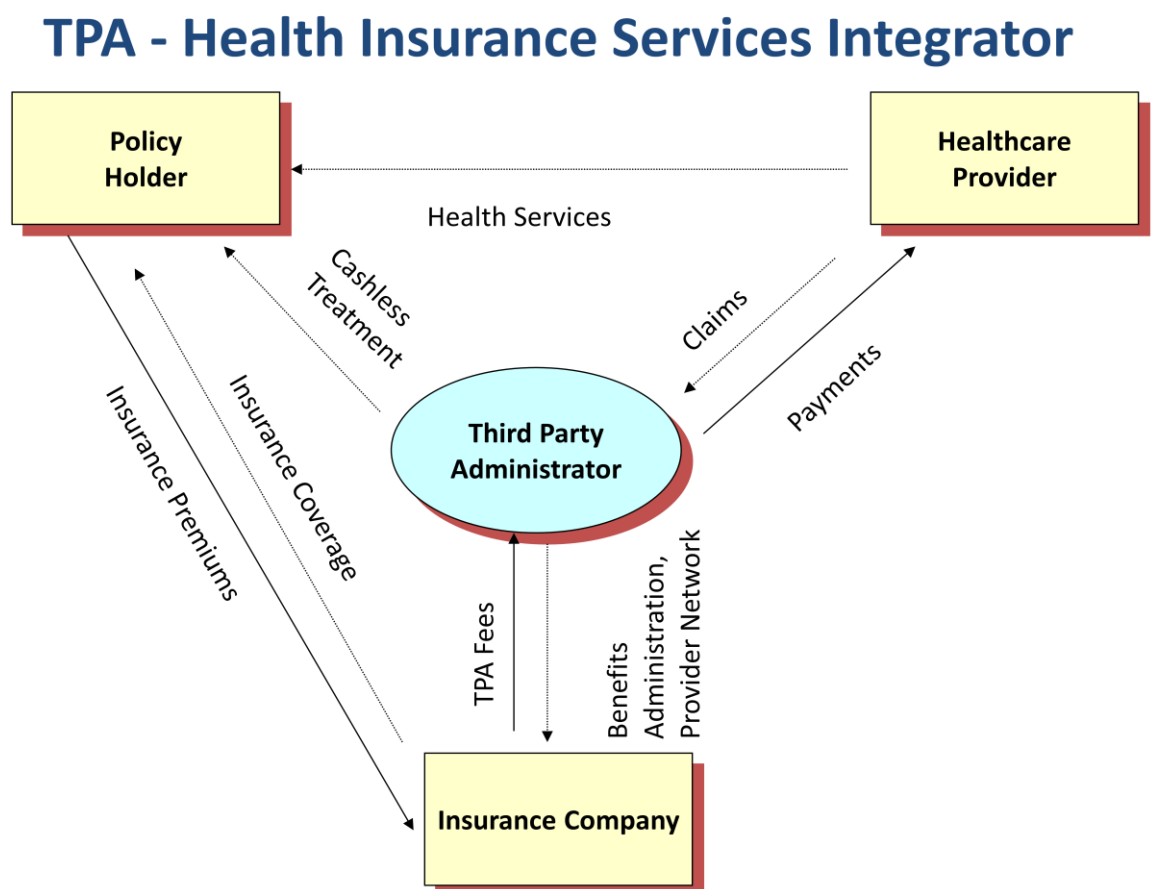
Qualitative case study is conducted for this research. Data is collected with the help of interviews done online via Skype and some secondary data resources to highlight the problems and solutions before HIS implementation. The data collection, generation of results and analysis is done on the basis of structure, people, technology, and process perspective originating from the sociotechnical model. Findings of this study are presented in the form of recommendations which need to be considered for making a HIS implementation plan.

Key Words: Hospital Information System (HIS), Combined Military Hospital (CMH), Socio-Technical Model.

Overview of TPA Department:

Third Party Administrator are the middlemen in the chain of integrated delivery system that brings all the components of health care delivery such as physicians, hospital, insured & insurer into a single entity

Figure1. Basic role of TPA



The TPA and Insurance Management module facilitates the process of settlement of the bills of a patient insured or covered by a third party. It records the details of third party

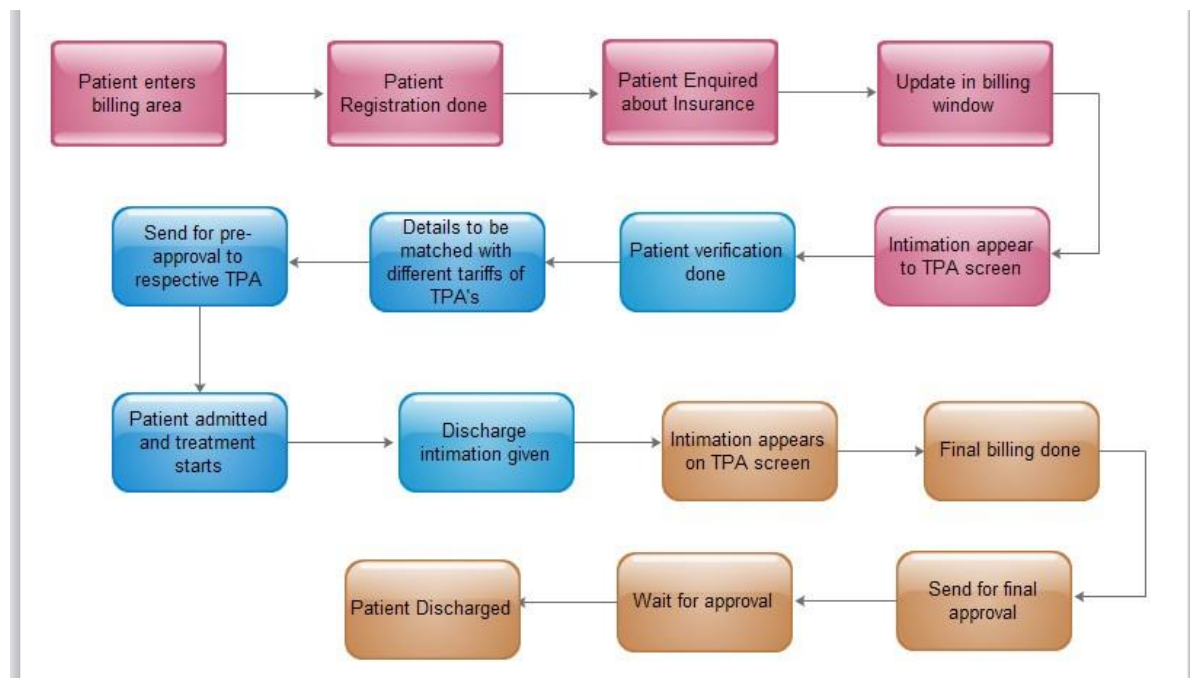
payers and insurance companies. It helps to verify the eligibility of the patient for reimbursement by the third party or the insurance company. This module helps the hospital file online claims on behalf of the patient in a prescribed format along with the discharge summary and various bills of the services provided to the patient. It also helps to track the status of the claims and provides a provision for follow up to these TPA and Insurance companies.

Salient features of TPA:

- Billing to organization, TPA and insurance companies
- Status enquiry of submitted claims and outstanding
- Provision to record the TPA and Insurance details of a patient.
- Instant verification of eligibility of the patient.
- Provision for follow up with the TPA's and Insurance companies.
- Integration with other modules for discharge summary and other details.
- Provision to bill the patient separately for the services provided by the hospital that are not covered by the TPA and Insurance companies.
- Provision for cashless hospitalization.

Keeping in consideration the requirements the HIS was being implemented with the above salient features. The whole HIS system was being integrated with different departments using software like HL7, Native. The TPA module was integrated with other department module like Billing, IPD.

Result:



In the above figure the process which is linked with HIS is in pink colour and the manual process is in blue colour.

The process flow in the TPA department is linked with the two other department processes Billing, IPD. The first point of interaction when patient enters the hospital is the front desk where the patient gets information about the availability of the doctor, from there the patient is being directed to the billing area of the hospital.

Now let us discuss the steps being followed in the TPA process.

1. Patient registration starts with filling up the demographic details as per the screen seen below.

Figure 3: Registration screen of HIS

The image shows a software interface for patient registration. It is divided into two main sections: 'Patient Details' and 'More Details'. The 'Patient Details' section contains two columns of input fields. The left column includes fields for Name (with a dropdown for 'Mr.'), Alias Name, Gender (with a dropdown for 'Male'), Address (a large text area), Mobile, Country (with a dropdown for 'India'), and Place Of Birth. The right column includes fields for DOB / Age (with a calendar icon), Marital Status (with a dropdown for 'Single'), Spouse/Father Name, City, Landline, and State (with a dropdown for 'Select'). Each field has a small red asterisk indicating a required field. Below the 'Patient Details' section is the 'More Details' section, which includes a 'Smart Card' checkbox and an 'Admit Patient' checkbox. At the bottom right of the form are two buttons: 'Finish' and 'Cancel'.

Patient Details	
Name	DOB / Age
Alias Name	Marital Status
Gender	Spouse/Father Name
Address	City
Mobile	Landline
Country	State
Place Of Birth	

☐ More Details
☐ Smart Card
☐ Admit Patient

2. Next is the process of billing being done for the particular doctor consultation/ treatment procedure and while billing the patient is being enquired about if he/she comes under the insurance policy

Figure4: Billing screen of HIS

The screenshot displays the 'Patient quick billing' interface. At the top, there's a search bar with options for Name, Patient Number, and Phone Number. Below this, a form for patient details includes fields for Name, DOB / Age, Gender, Marital Status, Address, City, Nationality, Country, Landline, Mobile, EmailID, Select Visit, Department, PostalCode, Patient category, Visit Purpose, Referring Physician, Referring Hospital, and Visit Type. A 'Client & Insurance / TPA' section allows selecting a payment type and showing mapped items. Below this is a table for adding items with columns for Description, Performing Physician Name, Quantity, Amount, Date, Is Reimbursable, and Remarks. The bottom right shows a summary of charges, including Due Amount, Gross, Eligible Discount(Max), Discount, Total Discount, Tax, Service Charge, Net Value, Round Off Amount, Total Amount, Amount Received, and Paid Against Non-Medications.

Description	Performing Physician Name	Quantity	Amount	Date	Is Reimbursable	Remarks
		1	0	27/04/2015 02:54:37 PM		

Non-Medications : 0.00		Total Amount 0.00
Due Amount	0.00	
Gross		0.00
Eligible Discount(Max)		0.00
Discount		0.00
Total Discount		0.00
Tax		0.00
Service Charge		0.00
Net Value		0.00
Round Off Amount		0
Total Amount		0.00
Amount Received		0.00
Paid Against Non-Medications		0.00

3. Patient details about the insurance with the particular TPA being filled in the screen.

Figure5: Screen showing insurance details

☒ Medically Insured / Corporate Insurance

☒ Is Credit Bill Eligible Room Type

Available: Client Name Select Rate Type

Eligible: Eligible Client Name Eligible Rate Type

Co-Payment Type 0.00 Co-Payment Logic Co-Payment to be deducted from

Pre-Auth Type 0.00 Pre-Auth Amount Pre-Auth Approval Number

Policy No Policy Start Date Policy End Date

☐ All Are Medical Items ?

Client Name	RateType	Copayment	Co-Payment Logic	Co-Payment to be deducted from	Pre-AuthAmount	Pre-Auth Approval Number	All Are Medical Items?	Policy No	Policy From	Policy To	Action
BSNL	CGHS	0.00	--	--	0.00		Y				Edit

Knowledge Of Our Service

Service Provider Name

Information Provided By

☐ Patient Employer Details (Use this block if patient is related to any of the staffs in the hospital)

☐ MLC Formalities ☐ Collect Registration Fee

4. As soon the details are being filled in the screen an intimation goes to the TPA department of the hospital with all the patient details.
5. As the TPA department has details about the different insurance companies and different tariffs are being made according to the policies of different insurance companies.
6. Patient enters the TPA department and being asked about the identity proof and the card provided by the insurance company for which they are insured.
7. Once the details are being verified then all the documents are being forwarded to the particular insurance company for which the person is insured.

8. After this the patient is being admitted and the procedure for which he/ she admitted is carried out.
 9. Once the discharge intimation is being given by the doctor that appear on the TPA screen and the final billing is being done by deduction of non-payable items. Then all the documents with bills, discharge summary are being sent to insurance company for approval.
 10. Once the approval comes from the insurance company then the patient is being discharged from the hospital
- Final bill which is being prepared is a consolidated bill which is being uploaded in the Billing and TPA data.

Figure6: Consolidated bill showing billing details

TPA / Insurance Provider: ICICI Lombard Health Insurance Co. Ltd.

Room Charges

General Ward - A : -Rs 750.00

Description	From	To	Quantity	Unit Price	Amount
ROOM RENT	30/10/2014	30/10/2014	1.00	750.00	750.00

Treatment Charges

Procedures : -Rs 600.00

Description	Date	Quantity	UnitPrice	Amount
Eye wash 500 ml	30/10/2014	1.00	600.00	600.00

Surgery/Intervention : -Rs 25000.00

Description	Date	Quantity	UnitPrice	Amount
C3R per eye-[25000.00]				
Chief Surgeon's Fee : 25000.00	30/10/2014	1.00	25,000.00	25,000.00

Gross Bill Amount26,350.00

Round Off0.00

Net Bill Amount26,350.00

Pre Authorization Amount : 10,000.00

☐ Amount Received From Patient (Incl.Copayment Rs.2,635.00)10,000.00

Rno	Date	Description	Amount
2241	30/10/2014	Bill Payment	10,000.00

Co-Payment2,635.00

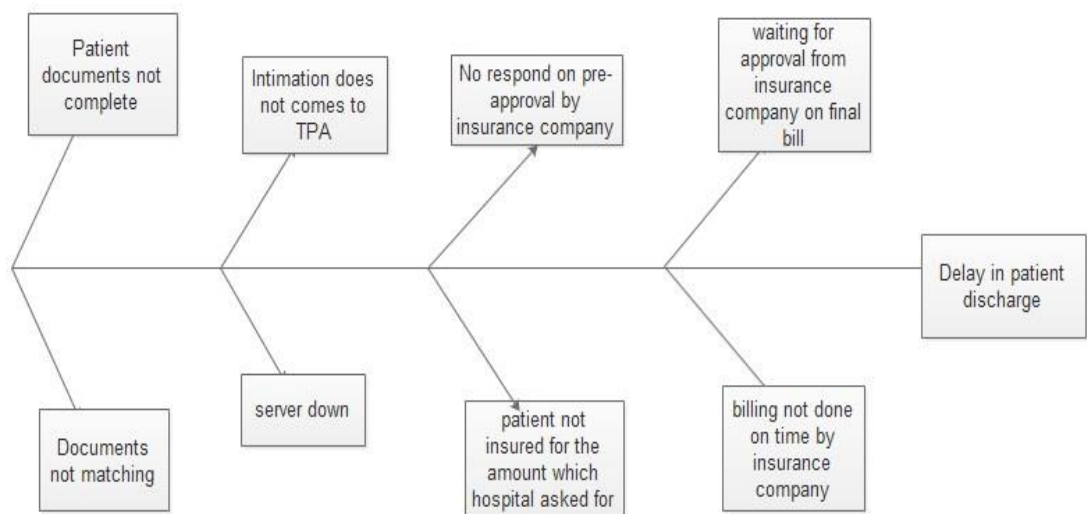
Due From TPA10,000.00

Based on the methodology and the process flow diagram the workflow of TPA department , its integration with HIS few gaps/issues were being identified.

Gaps in TPA Department:

There can be n numbers of issues in the TPA department let us try to analyse them.

Figure 6: Fish bone Diagram for gap analysis



On the basis of above fish bone diagram the reasons for delay in discharge of insured patient /root cause is the delay of response from the insurance company for pre-approval and final approval of bills.

Change Management :

This section focuses on the change management and capacity building approach and plan so as to be able to tackle the issues that might arise due to new processes within the new HIS system. Change management plan was carried out keeping in consideration following points:

1. A smooth transition to the new way of working

2. The organization/people support the changes implemented
3. Individuals know how the changes affect them and the role they have to play
4. Stakeholders to understand the benefits of the changes and internalize it
5. The new system and its underlying concepts are understood
6. People are aware of how roles and responsibilities are changing
7. Everyone is motivated and committed to the change program
8. The success and progress of the program is monitored and measured

Table1: Showing the changes made with various aspects

Change element	Change implication
Process and Procedural	Standardization of procedures Redefined processes and new work methods Elimination of certain activities / functions and addition of new ones Redefined service levels
Technological	Usage of technology and system enabled processes Automated controls and validation Reduction of paper work
Organizational / People	Some change in roles and responsibilities New skill set requirement for staff Introduction of a incentives and reward system

Following were the changes brought in consideration with the following aspects in the hospital after the implementation of the HIS.

Discussion

A thorough observational study was undertaken to understand the workflow of TPA department and to identify the reason for delay in discharge of insured patient in the hospital. Having studied the workflow for a month factors were identified for delay in discharge of insured patient. To identify the root cause the fish bone diagram was drawn. On basis of the fish bone diagram the root cause identified was no timely response from the insurance companies on pre-approval and final approval of bills. Apart from this there were many other reasons that could have been responsible.

Delay in response from the insurance company on pre approval and on final bill is being considered the main cause for delay in discharge of insured patient. Despite of providing them all documents timely the response is delayed therefore, a solution was recommended.

Recommendation:

The process of TPA should be made online so that timely approval can be received from the insurance this would reduce the time taken to discharge the patient and even the payment can received on time.

Limitations:

- Small sample size so it is difficult to get the quantitative data.
- Available data cannot be shared due to clause of confidentiality.
- This study is limited to limited geographic location.
- Time to conduct the study is very less for the analysis of the outcome result

Conclusion:

Although the HIS was being implemented keeping in consideration the requirements of the end users of various departments. All the modules were successfully implemented and integrated using software like HL7 but still the end users were facing problems.

This present study deals with the same by knowing the present issues the users are facing. As we can see the process of TPA is connected with the billing and IPD process and both the process are now replaced with IT rather manual and paper based. But as per the staff of TPA department process of TPA department is not fasten up because of the time consumed in waiting for the approval from the insurance companies under which the patients are being insured.

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