STUDY ON THE OPTIMIZATION OF THE SCOPY BILLING DEPARTMENT

Dissertation Submitted to

The IIHMR University, Jaipur
for the partial fulfillment for the award of the degree of

Master of Business Administration (MBA)
in
Hospital and Health Management

by

Kirti Chauhan

Under the Supervision and Guidance of

Dr. Seema Mehta

2022

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DECLARATION

I hereby declare that this dissertation titled '**Study on the Optimization of the Scopy Billing Department at Hinduja Hospital'** is the bonafide record of my original research work. I declare that it has not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been duly acknowledged in the text.

Kirti Chauhan

28/06/2022

Completion Certificate

P. D. HINDUJA NATIONAL HOSPITAL
& MEDICAL RESEARCH CENTRE
(Established and managed by the National Health & Education Society)
VEER SAVARKAR MARG, MAHIM, MUMBAI - 400 016, INDIA
PHONE : 2445 1515, 2445 2222, 2444 9199 FAX : 2444 9151

June 18, 2022

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ms. Kirti Chauhan a student of MBA- Health and Hospital Management, from IIHMR University, Jaipur did her project in our Hospital from 21st March 2022 to 18th June 2022.

During this period her assignment was as follows:

- Study in the Scopy Department
  - Study on the Billing discrepancies.
  - Redesigning the Scopy Chargesheets.
  - Creating Package billing for various procedures of the department.
- Patient Experience Mapping (During Booking and Admissions).
- Revising and Updating the Patient brochures and Patient email.

I wish her all the success in future endeavours.

JOY CHAKRABORTY
Chief Operating Officer

DR. PREETI GORAKSHA
Assistant Director Quality & Clinical Administration

CERTIFICATE

This is to certify that dissertation titled **'Study on the Optimization of the Scopy Billing Department at Hinduja Hospital'** is a record of the research work undertaken by **Kirti Chauhan** in partial fulfillment of the requirements for the award of the degree of MBA (Hospital and Health Management from the IIHMR University, Jaipur under my guidance and supervision and her approach to the research study has been sincere, scientific, and analytical.

Faculty Guide
IIHMR University, Jaipur

Date

School Dean
IIHMR University, Jaipur

Date

ABSTRACT

Background: A Multispecialty hospital comprises of various departments such as General medicine, ENT, Ophthalmology, Cardiology, Pulmonology, Neurology, Endoscopy, Bronchoscopy and so on. A hospital provides a wide range of services, including Inpatient and Outpatient medical treatments, prevention and diagnostic services, research, education, and Rehabilitation services. Wherein here, Billing department plays crucial role in hospital management. The study is related to the billing discrepancies in PD Hinduja Hospital.

Methods: Data was gathered from the chargesheets, for checking the discrepancy, patient chargesheet was considered which was tallied with the final bills. Materials, consumables, Hospital service charge, Theatre charges, Doctor charges from the chargesheet had to be billed properly in the final bill so that the bill is error free. Any discrepancy found would be identified through this and proper corrective and preventive actions would be taken.

Conclusion: From the collected data it could be observed that the compliance rate of the billing department was 98% with 2% of discrepancy rate. It is a positive result for the hospital to have such a compliance rate. And to achieve 100% compliance rate the hospital is already making interventions through the study which will help the hospital achieve it. And it is important for the hospital to maintain this compliance rate.

ACKNOWLEDGEMENT

The Summer Training was a great learning experience for me which provided me with knowledge and insights of the daily managerial skills of this renowned hospital. I am very grateful to interact and learn with the higher authorities and staff members of the hospital, who always encouraged and guided me with support and knowledge.
At the outset of the project, I would like to express my sincere gratitude to the people, without their help, completion of the project would not have been possible.
Firstly, I would like to express my thanks to **PD Hinduja Hospital and Research Institute** to give me this opportunity to work with them.
I am very grateful to **Dr.Preeti Goraksha** , through her I could work in this organization, thank you for giving me this opportunity. I would like to thank **Dr Seher Mukkadam**, my organization mentor, who guided and assisted me in the whole journey. I would like to thank her to help me in my project work. I would like to thank all the staff members in departments I worked including Scopy department, the Billing department, all the nurses and staff in the wards who would cooperate during my learning process.
I would like to thank the whole medical and non-medical staff of the Hospital for showing immense support during my learning period.
I would like to thank my college **(IIHMR University)** for giving me this opportunity to enhance my learning. I would like to thank my college mentor and guide **Dr Seema Mehta** for guiding me and providing constant support in the whole internship period.
Lastly, I would like to thank my friends and family for their constant support in the whole learning journey and to everyone who directly or indirectly supported me in this journey.

Sincerely,
Kirti Chauhan
(MBA HM-25)

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ABBREVIATIONS

WHO	World Health Organization
TAT	Turnaround Time
IPD	Inpatient Department
OPD	Outpatient Department
RMO	Resident Medical Officer
ERCP	Endoscopic Retrograde Cholangiopancreatography
EBUS	Endobronchial Ultrasound
EUS	Endoscopic Ultrasound
LGI	Lower Gastrointestinal endoscopy
UGI	Upper Gastrointestinal endoscopy

CHAPTER 1: INTRODUCTION

India has a made a great and remarkable political, economic, and cultural transformation over the past few decades has made it a geopolitical force. Healthcare Services is one of the industries that marks this strengthened global presence. Healthcare services are defined as the services aimed at prevention, treatment, and rehabilitation of illness through the services provided by different healthcare practitioners in all settings of care from personal to non-personal where a hospital plays a vital role. Improving access, coverage and quality of services depends on the key resources that are money, staff, equipment, and drugs being available; on the ways services are organized and managed, and on incentives influencing providers and users.

A Multispecialty hospital comprises of various departments such as General medicine, ENT, Ophthalmology, Cardiology, Pulmonology, Neurology, Endoscopy, Bronchoscopy and so on. A hospital provides a wide range of services, including Inpatient and Outpatient medical treatments, prevention and diagnostic services, research, education, and Rehabilitation services.

Billing in the hospital plays one of the major roles. Billing is the process of generating an invoice to recover sales or service price from the customer. This process is the final step in hospital, which is directly proportional to patient satisfaction. It plays a vital role in the discharge process, which involves much of clerical work in the billing office and demands time. Billing documents are important for any hospital, its operations enclose clinical aspect, financial aspect and administration for better functioning and decision making. Billing documents are even legally important. The billing department plays an important role, as liaison office between the management and the patients.

Poor understanding of the system can lead to incorrect documentation, which can result in a claim rejection. The UB-92 form provides hospitals with the proper format to request reimbursement for services provided. To ensure proper reimbursement, appropriate coding of International Classification of Diseases, 9th Revision, Clinical Modification various codes for diagnosis, procedures, and services provided is necessary. Ancillary services, such as pharmacy, play a crucial role in the completion of the bill by ensuring that the charge-master accurately represents the service provided. This information includes identification, charge, cost, and revenue codes. Hospital billing agents must also account for any outpatient visits that may have occurred within three days of admission, since these charges may need to be included on the hospital bill. For the billing process to be effective, it is important that all personnel have a thorough understanding of the billing process and be able to effectively communicate with each other.

The Billing department plays a crucial role in the Scopy department of the hospital.
Scopy department consists of the procedures of Endoscopy and Bronchoscopy.

Endoscopy Unit

The Endoscopy Unit is a dedicated unit for Endoscopy procedures, a minimally invasive surgical or medical procedure utilizing an instrument called an endoscope which is a long flexible tube that has a lens at one end and a fiber optic camera at the other. This allows for the magnification of an image to be projected onto a video screen for viewing and recording. Endoscopy can be used to examine organs or tissue for diagnostic or therapeutic purposes. This procedure may involve the taking of biopsies, dilations, retrieval of foreign objects and removal of stones from the bile duct.

Procedures undertaken in an Endoscopy Unit may include gastrointestinal endoscopy (such as gastroscopy, colonoscopy, ERCP (Endoscopic Retrograde Cholangiopancreatography), endoscopic ultrasound, bronchoscopy, cystoscopy or ureteroscopy, duodenoscopy, hysteroscopy, or other specialties. Endoscopy procedures are generally performed in a controlled aseptic procedure room environment or in an Operating room, using sedation or short acting anesthetic medication. Some procedures, such as ERCP may also involve diagnostic imaging equipment. Most endoscopy procedures are performed on a same-day basis.

Advantages of Endoscopy procedures:

- Reduced demand on operating rooms
- Increased patient throughput as procedures are faster
- Procedures are less invasive (the endoscope is inserted through a natural opening) resulting in reduced scarring, quick recovery time and rapid discharge.

Bronchoscopy Unit

A bronchoscopy is a test that allows the doctor to look directly at the main airways, known as the trachea or windpipe and the bronchi or breathing tubes. The bronchoscope is passed through the nose, or mouth through the larynx or voice box , and the trachea and into the bronchi. The bronchoscope is a long, flexible tube, about the width of a thin pencil, with a bright light at the end. Looking down the tube, the doctor gets a clear view of the airways; this can help to make a diagnosis and can also help to rule out conditions. Various samples may be collected during the procedure.

Bronchoscopy is usually done to find out the cause of chest symptoms. One may also be having the test to check the progress of their condition.

TITLE: Study on the Optimization of the Scopy Department.

AIM:

- To study the trend of errors in the billing procedure.
- To redesign the chargesheet of the Scopy department.
- To create Package billing system in the Scopy department.

OBJECTIVES:

- To study the errors occurring in the billing procedures while entering data through the chargesheet of IPD and OPD patients.
- To study and redesign the Scopy chargesheet.
- To study and create Package billing for the department.

Chapter 2: Review of Literature

Sr no.	Author	Year	Title	Observation
1.	Erdi dasdemir, Guray soydan	**2013**	**Improving hospital billing processes for reducing costs of billing errors.**(1)	The aim of the study is to minimize Hacettepe University Hospitals' billing errors. To realize this aim, Lean Six Sigma framework and problem-solving methods of DMAIC are used. The billing process of the hospital is studied first, and critical points are determined. After meetings with the hospital IT personnel and hospital administration, some important data, including the past billing errors are retrieved. The main billing errors, their reasons and the financial costs of the errors are analyzed with statistical and graphical tools. To solve the problems and remove the errors, workflow and standard operating procedures of the hospital billing process is prepared. After closely studying the issues, proper intervention are applied to overcome the billing issues.

2.	Guy David, Ruslan Horblyuk	**2013**	Economic Measurement of Medical Errors Using a Hospital Claims Database(2)	The current era of health care reform is bringing many changes to health care systems overall and hospitals in particular. Medicare has eliminated payments to hospitals for hospital-acquired conditions. Furthermore, the 2010 Affordable Care Act put into place financial incentives for quality care and financial disincentives for preventable medical errors.. All these factors have led to a significant increase in the financial burden of medical errors, and much of that financial burden has been shifted to hospitals. This comes at a time when Medicare and commercial health insurance plans are reducing reimbursement to hospitals for procedures and shifting care to ambulatory sites of care as cost-saving measures. Because medical errors are preventable, hospitals must rigorously analyze the causes of medical errors and implement comprehensive preventative programs to reduce their occurrence. Hospitals must rigorously analyze causes of medical errors and implement comprehensive preventative programs to reduce their occurrence as the financial burden of medical errors shifts to hospitals.
3.	Nur Hidayah, Arlina Dewi	**2019**	The need to reform the hospital payment system in Indonesia(3)	According to the authors One of the crucial health policies in hospitals is about physician payment methods. Indonesia had implemented the National Health Assurance since 2014 to achieve Universal Health Coverage by 2019. Most of the hospitals use the pure FFS for self-employee physicians (part timer employee). For full time employee, they applied FFS mixed with salary, or remuneration. To improve

				employee satisfaction and performance, the hospitals should make a policy to link the FFS to pay for performances. The hospital should make the tailoring program by involving the physician in a designing method of the hospital remuneration.
4.	Robert I. Sutton, Kristine E. Principe	**2014**	Averting Expected Challenges Through Anticipatory Impression Management: A Study of Hospital Billing(4)	According to the authors, This study uses a qualitative and inductive study of billing procedures at three large hospitals to develop theory about how organization members use impression management tactics to fend off specific, expected challenges to organizational practices that are ambiguously negative. Hospitals appear to use such anticipatory obfuscations both to fend off patients' initial challenges and to prevent their existing challenges from escalating. We discuss these findings in terms of their contributions to theories of symbolic management, social influence, and routine service encounters.
5.	Harrold B. Wieuss and Susan M. Dill	2008	The Potential of Using Billing Data for Emergency Department Injury Surveillance(5)	The Objective of the study was to determine the availability of, and sample state-wide ED injury information obtained from hospital billing data for the purpose of demonstrating the feasibility of information acquisition for subsequent data linkage. A retrospective, database investigation was conducted

				to obtain data describing a state-wide stratified sample of ED patients. More than two-thirds of the sampled records had a social security number, and total charges were recorded >90% of the time. Other variables such as name and address were contained in <50% of the records submitted. E-codes were usually not available. It could be concluded that Retrospective compilation of multihospital ED billing data to create a statewide ED data sample—with the potential for injury research and probabilistic database linkage—can be accomplished; there are, however, important limitations.

Chapter 3: Methodology

a) Research Design:

The research design selected for the study was **"Convenient Sampling"**. Convenience sampling is a type of non-probability sampling that involves the sample being drawn from that part of the population that is close to hand. This type of sampling is most useful for pilot testing.

b) Research question:

- What are the major errors occurring in the billing procedures while entering data through the chargesheet?
- What are the problems faced by the patient and the organization due to these errors?
- What measures can be implemented to avoid these errors?

b) Setting of the Study:

The study was conducted in P.D Hinduja Hospital in the **Scopy Department**.

c) Study Tool:

The department chargesheet and final bills were used as reference tool and Google forms to collect data.

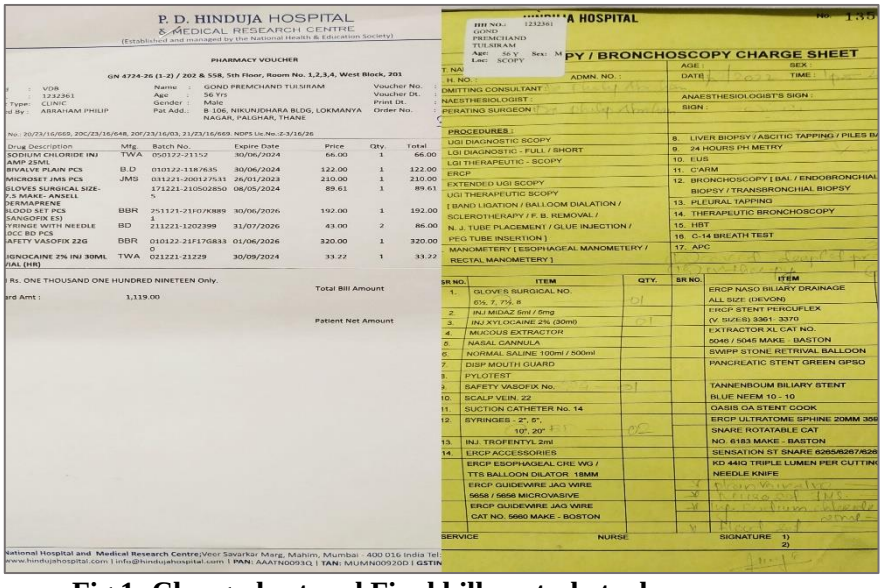


Fig 1: Chargesheet and Final bill as study tool

d) Duration of the Study:

To study the trend in the errors data of two weeks was studied from 28 March to 2 April 2022 and 4 April to 9 April.

To study for the Package billing and redesigning the chargesheets retrospective data of February 2022 was considered.

e) Data Collection Procedure:

Data gathered from the chargesheets, for checking the discrepancy, patient chargesheet is considered which is tallied with the final bills. Materials, consumables, Hospital service charge, Theatre charges, Doctor charges from the chargesheet should be billed properly in the final bill so that the bill is error free. Any discrepancy found would be identified through this and proper corrective and preventive actions can be taken.

For Package billing, All the materials and pharmacy were studied of the February month procedure wise. From there all the regularly used item which are required in procedure is to be added in the package. Hence procedure wise group of required materials creates a bundle or package of a specific procedure.

To Redesign the chargesheet, the February data was studied to create a list of maximum used materials and pharmacy. To identify the materials and consumables which are updated in use but not in the chargesheets, to remove the items which are not in use, to add items which are of regular use, to create rows and selections for quantity of items, extended row for consignment or highly valuable items, a designated row for extra items and voucher numbers. Main aim was to reduce the written hassle on the chargesheet so that it would be concise and easier to understand for billing which would create less errors.

f) Data Analysis:

Quantitative data analysed using MS excel whereas the data collection done in Google forms.

g) Implication of Research:

The study will help in identifying the various loopholes contributing to the errors occurring in the billing procedure of Scopy Department. After the identification of the errors proper suggestions to optimize the whole procedure can be made.

Package billing will help in the billing procedure to become more error free and save time. This will help the patients to get an estimate of the amount of money for the procedure.

Redesigning and updating the chargesheet will make it look more precise and easier to understand for billing. The need to write extra on the sheet will be reduced which will reduce the chances of the error to occur.

Chapter 4:Results

- **Study of Discrepancies in the Scopy Billing Department.**

The Scopy department of the hospital treats patients on OPD as well as IPD basis. Most of the treatments done here are not done with prior booking and they are walk-in patients, because of this they don't have any idea of the foot fall of patients of the coming day. They (billing department)have to face many issues because of this, as the patients there come on OPD basis, but they need to get admitted for the treatment. Here, if they use trofentyl drug, the patient is considered as ambulatory or admitted. For billing, considering each and every drug in the chargesheet is very important for the billing personal as item left out to bill can be a loss to the hospital, in other case if any item is charged extra, the patient can point it out and billing can create many issues for the hospital's reputation. Hence it is very important that billing discrepancies, in the department are not occurring.

Steps involved in the whole Scopy procedure:

- Patient comes to the hospital with prior booking for the concerned doctor.
- After doctors' prescription for the treatment the patient is sent to the Scopy department, with or without prior booking.
- The Nurse incharge there does the formalities related to form fillings etc
- The patient is sent in the procedure room for the treatment.
- Meanwhile the patient relative is given chargesheet by the nurse consisting of the items to bill and the final bill to be billed by the Billing department.
- The Chargesheet is billed by billing department and the payment is done by the patient relative.
- The final bill is sent to the Scopy department again by the patient relative where one copy is given to them, and the other copy is kept with the hospital.
- After the procedure the patient is brought in the observation room for 1 hour , after doctors' consultation the patient is discharged.

The major concern that is observed in the billing department is that the billing of Scopy bills take huge amount of time as compared to the other bills. Due to which there are always complains from the patients for long waiting lines, billing taking time etc. To analyze the amount of time taken in the billing of the Scopy bills, a time analyses was done.

During Billing Procedure		
	Average Time	**Maximum Time**
Time Taken	16.3 mins	23.1 mins

Table 1: Time Analyses

From the above table it can be observed that the average time taken for billing procedure is **16.3 mins**, whereas the maximum time taken for the procedures was observed as **23.1 mins**. The time taken in the billing procedure depends on the amount of pharmacy, consumables, and list of services available in the chargesheet.

A study of two weeks from 28 March to 2 April and 4 April to 9 April was done to analyze the discrepancy rate, trends in the billings department. Through which the above graph can be observed.

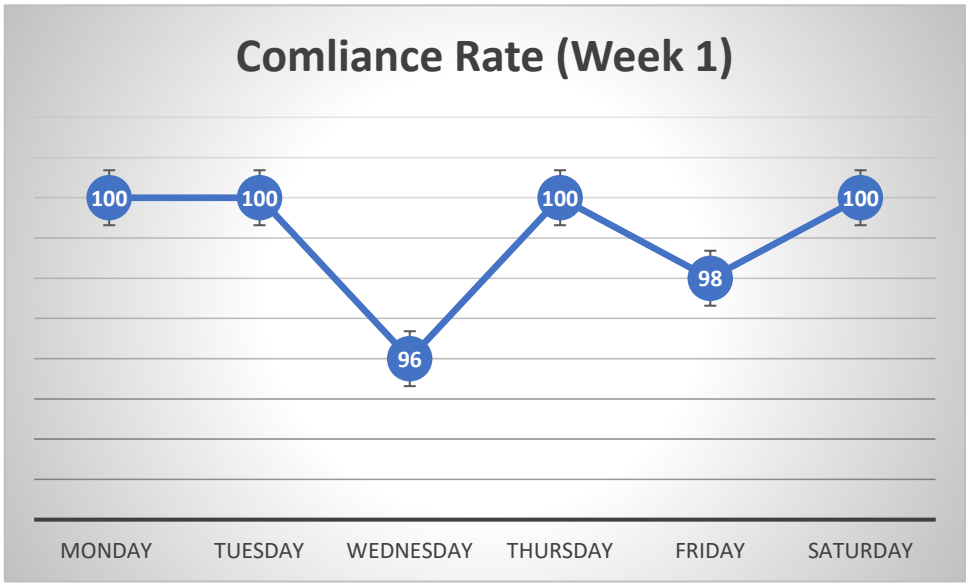


Fig 2: Compliance Graph Week 1

In week1 it could be observed that on Monday there were no discrepancies, and the compliance rate was 100%. On Tuesday there were no discrepancies observed, whereas on Wednesday the compliance rate was 96% with discrepancy of 4%. On Thursday and Saturday, the compliance rate for 100% with no discrepancies and on Friday it was observed that the compliance rate was 98% and the 4% of discrepancy rate.

On Wednesday it was observed that 2 syringes were charged extra in the bill which were not mentioned in the chargesheet, it was later specified that the marked syringes were not available in the stocks and hence other size of syringes were billed with prior permission with the nurse incharge. Whereas, on Thursday the billing staff forgot to add gastro doctor charges in the Final bill and realized the mistake once the patient had gone after payment. The patient was called soon and was explained for the mistake and made to pay for the pending doctor bill immediately.

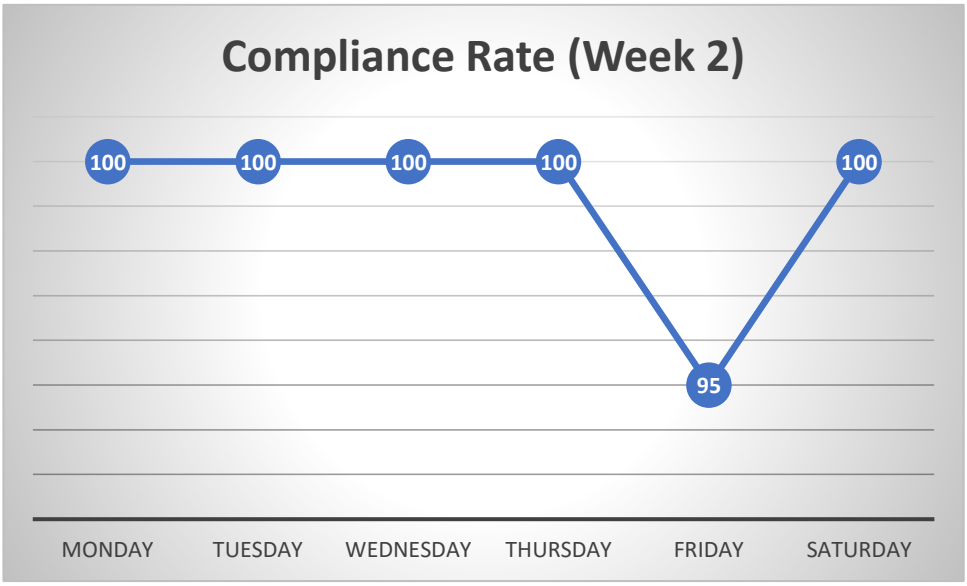


Fig 3: Compliance Graph Week 2

In the second week of observation Monday, Tuesday, Wednesday, Thursday and Saturday showed 100% compliance were as on Friday the compliance rate was 95% were as the discrepancy rate was 5%.
On Friday it was noticed that a patient was admitted in the Scopy department from the IPD ward and after the procedures were done it was observed that the theatre charges were repeated twice in the bill. It was due to lack of communication between the management as the theatre charge were put by the OPD billing department and IPD billing department as well. This confusion resulted in a discrepancy which if not observed on time could lead patient dissatisfaction regarding the billing procedure. But as the patient was admitted for long duration of time the discrepancy could be rectified.

- **<u>Redesigning and Updating the Chargesheets of the Scopy department</u>**

In Scopy department chargesheets play very important role as it used by the doctors and the nurses to mark the list of items required for a certain procedure. This list is marked by the doctors as well as the nurse's patient wise and accordingly the bill is made, it is crucial because items marked here will only be billed in the final bill of the patient.
The Chargesheet of the Scopy department was not updated since many years, because of which many medicines were of no use in the list, whereas many were updated with new codes and names. Because of which these medicines had to be written separately I the extra

column which created confusion for the billing department to understand. So, redesigning the chargesheets with the updated lists of items and pharmacies was done.

The format of the chargesheet was changed by updating few more procedures in the procedure list, Adding all the commonly used materials and consumables with updated names and quantity. Use of various columns and selections is done to make it easier to mark the sizes and quantities which will avoid confusion and scribbling. Segregating the materials, consumables, injections, drugs etc. for easy marking. The Ercp (Endoscopic retrograde cholangiopancreatography)materials are removed from the original Scopy chargesheet and a separate chargesheet is created for it with all the updated list of materials and stents. This would make the marking in the chargesheet easier and error free as there would not be need of writing the names of stents in the chargesheet in the extra column which would help in mentioning the size easily and billing error free.

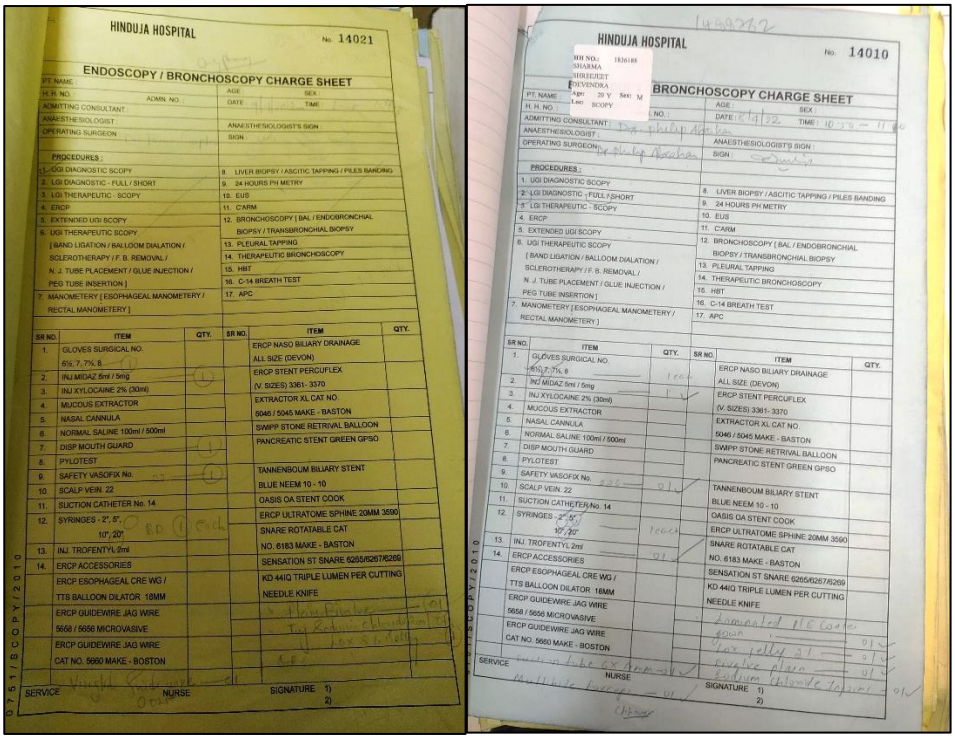
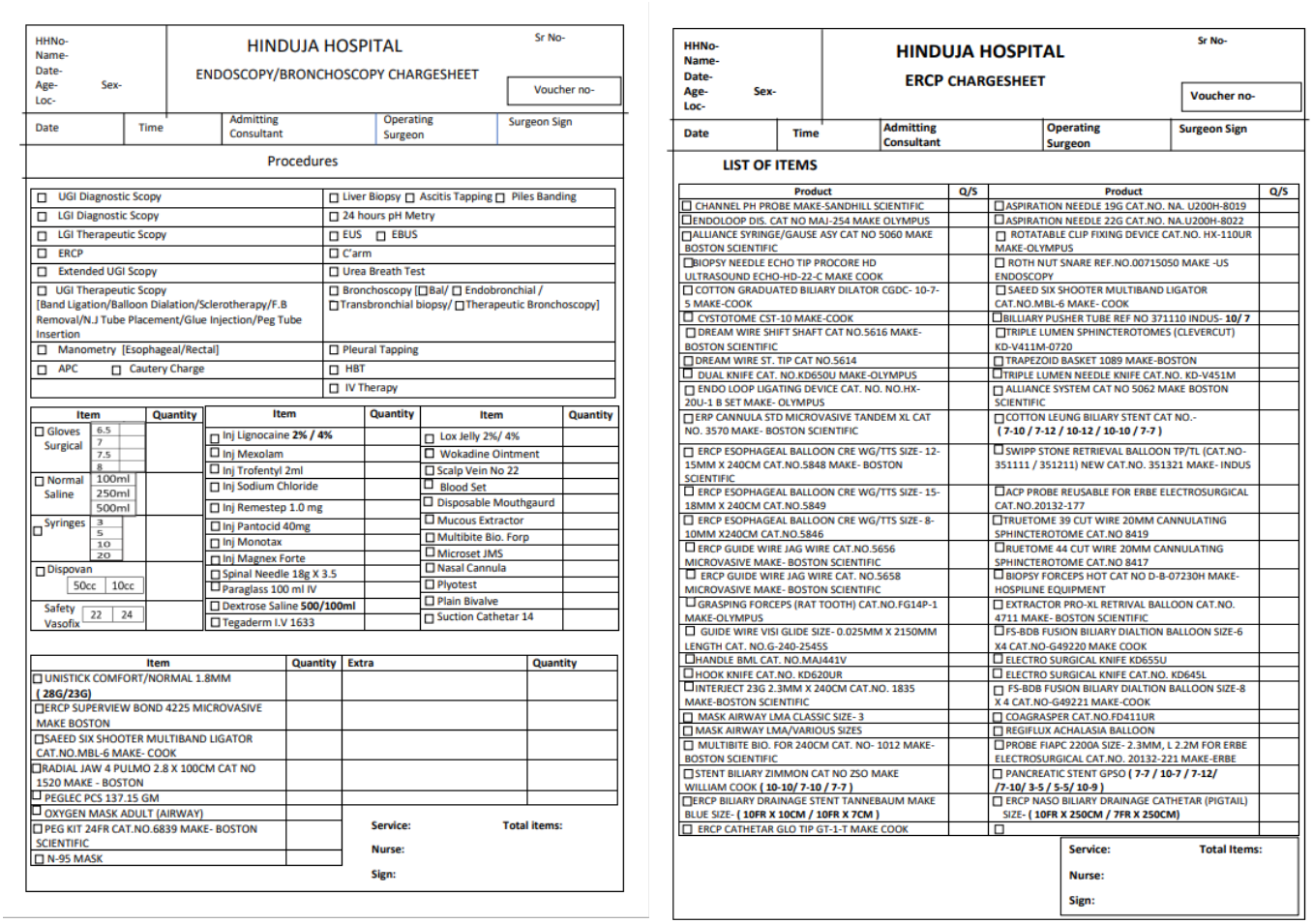


Fig 4: Design of Chargesheets Before



HHNo-
Name-
Date-
Age- Sex-
Loc-

HINDUJA HOSPITAL

ENDOSCOPY/BRONCHOSCOPY CHARGESHEET

Sr No-

Voucher no-

Date	Time	Admitting Consultant	Operating Surgeon	Surgeon Sign

Procedures

☐ UGI Diagnostic Scopy	☐ Liver Biopsy ☐ Ascitis Tapping ☐ Piles Banding
☐ LGI Diagnostic Scopy	☐ 24 hours pH Metry
☐ LGI Therapeutic Scopy	☐ EUS ☐ EBUS
☐ ERCP	☐ C'arm
☐ Extended UGI Scopy	☐ Urea Breath Test
☐ UGI Therapeutic Scopy [Band Ligation/Balloon Dialation/Sclerotherapy/F.B Removal/N.J Tube Placement/Glue Injection/Peg Tube Insertion	☐ Bronchoscopy [☐Bal/ ☐ Endobronchial / ☐Transbronchial biopsy/ ☐Therapeutic Bronchoscopy]
☐ Manometry [Esophageal/Rectal]	☐ Pleural Tapping
☐ APC ☐ Cautery Charge	☐ HBT
	☐ IV Therapy

Item	Quantity	Item	Quantity	Item	Quantity
☐ Gloves Surgical 6.5 / 7 / 7.5 / 8		☐ Inj Lignocaine **2% / 4%**		☐ Lox Jelly 2%/ 4%	
☐ Normal Saline 100ml / 250ml / 500ml		☐ Inj Mexolam		☐ Wokadine Ointment	
☐ Syringes 3 / 5 / 10 / 20		☐ Inj Trofentyl 2ml		☐ Scalp Vein No 22	
☐ Dispovan 50cc / 10cc		☐ Inj Sodium Chloride		☐ Blood Set	
Safety Vasofix 22 / 24		☐ Inj Remestep 1.0 mg		☐ Disposable Mouthgaurd	
		☐ Inj Pantocid 40mg		☐ Mucous Extractor	
		☐ Inj Monotax		☐ Multibite Bio. Forp	
		☐ Inj Magnex Forte		☐ Microset JMS	
		☐ Spinal Needle 18g X 3.5		☐ Nasal Cannula	
		☐ Paraglass 100 ml IV		☐ Plyotest	
		☐ Dextrose Saline **500/100ml**		☐ Plain Bivalve	
		☐ Tegaderm I.V 1633		☐ Suction Cathetar 14	

Item	Quantity	Extra	Quantity
☐ UNISTICK COMFORT/NORMAL 1.8MM **(28G/23G)**			
☐ ERCP SUPERVIEW BOND 4225 MICROVASIVE MAKE BOSTON			
☐ SAEED SIX SHOOTER MULTIBAND LIGATOR CAT.NO.MBL-6 MAKE- COOK			
☐ RADIAL JAW 4 PULMO 2.8 X 100CM CAT NO 1520 MAKE - BOSTON			
☐ PEGLEC PCS 137.15 GM			
☐ OXYGEN MASK ADULT (AIRWAY)			
☐ PEG KIT 24FR CAT.NO.6839 MAKE- BOSTON SCIENTIFIC		Service:	Total items:
☐ N-95 MASK		Nurse:	
		Sign:	

HHNo-
Name-
Date-
Age- Sex-
Loc-

HINDUJA HOSPITAL

ERCP CHARGESHEET

Sr No-

Voucher no-

Date	Time	Admitting Consultant	Operating Surgeon	Surgeon Sign

LIST OF ITEMS

Product	Q/S	Product	Q/S
☐ CHANNEL PH PROBE MAKE-SANDHILL SCIENTIFIC		☐ ASPIRATION NEEDLE 19G CAT.NO. NA. U200H-8019	
☐ ENDOLOOP DIS. CAT NO MAJ-254 MAKE OLYMPUS		☐ ASPIRATION NEEDLE 22G CAT.NO. NA.U200H-8022	
☐ ALLIANCE SYRINGE/GAUSE ASY CAT NO 5060 MAKE BOSTON SCIENTIFIC		☐ ROTATABLE CLIP FIXING DEVICE CAT.NO. HX-110UR MAKE-OLYMPUS	
☐ BIOPSY NEEDLE ECHO TIP PROCORE HD ULTRASOUND ECHO-HD-22-C MAKE COOK		☐ ROTH NUT SNARE REF.NO.00715050 MAKE -US ENDOSCOPY	
☐ COTTON GRADUATED BILIARY DILATOR CGDC- 10-7-5 MAKE-COOK		☐ SAEED SIX SHOOTER MULTIBAND LIGATOR CAT.NO.MBL-6 MAKE- COOK	
☐ CYSTOTOME CST-10 MAKE-COOK		☐ BILLIARY PUSHER TUBE REF NO 371110 INDUS- **10/ 7**	
☐ DREAM WIRE SHIFT SHAFT CAT NO.5616 MAKE-BOSTON SCIENTIFIC		☐ TRIPLE LUMEN SPHINCTEROTOMES (CLEVERCUT) KD-V411M-0720	
☐ DREAM WIRE ST. TIP CAT NO.5614		☐ TRAPEZOID BASKET 1089 MAKE-BOSTON	
☐ DUAL KNIFE CAT. NO.KD650U MAKE-OLYMPUS		☐ TRIPLE LUMEN NEEDLE KNIFE CAT.NO. KD-V451M	
☐ ENDO LOOP LIGATING DEVICE CAT. NO. NO.HX-20U-1 B SET MAKE- OLYMPUS		☐ ALLIANCE SYSTEM CAT NO 5062 MAKE BOSTON SCIENTIFIC	
☐ ERP CANNULA STD MICROVASIVE TANDEM XL CAT NO. 3570 MAKE- BOSTON SCIENTIFIC		☐ COTTON LEUNG BILIARY STENT CAT NO.- **(7-10 / 7-12 / 10-12 / 10-10 / 7-7)**	
☐ ERCP ESOPHAGEAL BALLOON CRE WG/TTS SIZE- 12-15MM X 240CM CAT.NO.5848 MAKE- BOSTON SCIENTIFIC		☐ SWIPP STONE RETRIEVAL BALLOON TP/TL (CAT.NO-351111 / 351211) NEW CAT.NO. 351321 MAKE- INDUS	
☐ ERCP ESOPHAGEAL BALLOON CRE WG/TTS SIZE- 15-18MM X 240CM CAT.NO.5849		☐ ACP PROBE REUSABLE FOR ERBE ELECTROSURGICAL CAT.NO.20132-177	
☐ ERCP ESOPHAGEAL BALLOON CRE WG/TTS SIZE- 8-10MM X240CM CAT.NO.5846		☐ TRUETOME 39 CUT WIRE 20MM CANNULATING SPHINCTEROTOME CAT.NO 8419	
☐ ERCP GUIDE WIRE JAG WIRE CAT.NO.5656 MICROVASIVE MAKE- BOSTON SCIENTIFIC		☐ RUETOME 44 CUT WIRE 20MM CANNULATING SPHINCTEROTOME CAT.NO 8417	
☐ ERCP GUIDE WIRE JAG WIRE CAT. NO.5658 MICROVASIVE MAKE- BOSTON SCIENTIFIC		☐ BIOPSY FORCEPS HOT CAT NO D-B-07230H MAKE-HOSPILINE EQUIPMENT	
☐ GRASPING FORCEPS (RAT TOOTH) CAT.NO.FG14P-1 MAKE-OLYMPUS		☐ EXTRACTOR PRO-XL RETRIVAL BALLOON CAT.NO. 4711 MAKE- BOSTON SCIENTIFIC	
☐ GUIDE WIRE VISI GLIDE SIZE- 0.025MM X 2150MM LENGTH CAT. NO.G-240-2545S		☐ FS-BDB FUSION BILIARY DIALTION BALLOON SIZE-6 X4 CAT.NO-G49220 MAKE COOK	
☐ HANDLE BML CAT. NO.MAJ441V		☐ ELECTRO SURGICAL KNIFE KD655U	
☐ HOOK KNIFE CAT.NO. KD620UR		☐ ELECTRO SURGICAL KNIFE CAT.NO. KD645L	
☐ INTERJECT 23G 2.3MM X 240CM CAT.NO. 1835 MAKE-BOSTON SCIENTIFIC		☐ FS-BDB FUSION BILIARY DIALTION BALLOON SIZE-8 X 4 CAT.NO-G49221 MAKE-COOK	
☐ MASK AIRWAY LMA CLASSIC SIZE- 3		☐ COAGRASPER CAT.NO.FD411UR	
☐ MASK AIRWAY LMA/VARIOUS SIZES		☐ REGIFLUX ACHALASIA BALLOON	
☐ MULTIBITE BIO. FOR 240CM CAT. NO- 1012 MAKE-BOSTON SCIENTIFIC		☐ PROBE FIAPC 2200A SIZE- 2.3MM, L 2.2M FOR ERBE ELECTROSURGICAL CAT.NO. 20132-221 MAKE-ERBE	
☐ STENT BILIARY ZIMMON CAT NO ZSO MAKE WILLIAM COOK **(10-10/ 7-10 / 7-7)**		☐ PANCREATIC STENT GPSO **(7-7 / 10-7 / 7-12/ /7-10/ 3-5 / 5-5/ 10-9)**	
☐ ERCP BILIARY DRAINAGE STENT TANNEBAUM MAKE BLUE SIZE- **(10FR X 10CM / 10FR X 7CM)**		☐ ERCP NASO BILIARY DRAINAGE CATHETAR (PIGTAIL) SIZE- **(10FR X 250CM / 7FR X 250CM)**	
☐ ERCP CATHETAR GLO TIP GT-1-T MAKE COOK		☐	

Service: Total Items:

Nurse:

Sign:

Fig 5: Redesigned Chargesheets

- <u>To create Package billing system for the various procedures in the Scopy department.</u>

The billing procedure in the Scopy department takes more time than any other procedures in the hospital. It is very important that the billing is done error free as well as without taking time so that there is no waiting lines of the patient, therefore, to overcome this issues package billing system is to be introduced in the hospital. In this system, the billing will not only be error free, but the procedures will be fast as the package details will already be available in the billing system making it easier for the nurses as well as for the billing personals. The Scopy department consists of various procedures such as Ercp, Manometry, Bronchoscopy Bal, EUS, LGI Diagnostic Full, LGI Diagnostic Short, UGI Therapeutic, UGI Diagnostic, I.V Therapy, Urea Breath Test, Ascitis Tapping, Extended UGI Therapy, Liver Biopsy, Piles Banding, C'arm, Bronchoscopy (Endobronchial biopsy, Transbronchial biopsy), Pleural Tapping, Therapeutic Bronchoscopy, HBT, APC etc. Taking all the procedures into consideration, packages of the most used procedures were made. For the procedure

in the Scopy department, after reviewing the trends of materials and consumables used in the month of February list of necessary components was made. The package bills consist of procedure wise segregation of the bills which has the list of all the required Pharmacy, consumables, Surgery charges, Theater charges, Gastro charges if required. Likewise, procedure wise bundle billing is done, so that when implemented it will become easier for the department for the billing procedure with less discrepancies, less time consuming, for pharmacy orders etc.

	ERCP	Manometry	Bronchoscopy Bal	EUS	LGI Daignostic Full	LGI Daignostic Short	UGI Therapeutic	UGI Daignostic
Services	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost
Theatre Charge	8700	9700	7,000	10,900	5100	5100	6,800	6300
Surgery Charge	13,200	5600	8,700	11,300	7400	7400	10,450	4100
Surgery charges GI Assistance	1100	700	N/A	700	700	700	1300	700
Pharmacy and Materials	6449.62	1170.38	2662.29	1409.18	1983.98	1365.98	1162.83	1695.76
Total	**29,450**	**17,170**	**18,362.29**	**24,309.18**	**15,183.98**	**14,565.98**	**19,712 Rs**	**12,795.76**

I.V Therapy	
Service	**Charge**
IV Therapy/Central	600
Pharmacy and Materials	1022.82
Total	**1622.82Rs**

Urea Breath Test	
Service	**Charge**
Dr Charges	3700
Pharmacy and Materials	3386.88
Total	**Rs. 7,087 Rs**

Ascitis Tapping	
Service	**Charge**
Dr charges	3100
Pharmacy and Materials	1340
Total	**4,442 Rs**

Figure 6: Package Billing

Chapter 5: Recommendations

- For billing discrepancies, the chargesheet and the final bills are checked by the billing personnel before handing to the patient. For patients on OPD basis the bill is rechecked by the nurse incharge if there are any discrepancies and for patients on IPD basis the bill and chargesheet is checked twice by nurse incharge and the billing department incharge so that no errors are pointed out in the final bill.
  It can be recommended that when the billing personnel does the billing, the bill can be checked once by the other billing personnel besides them, it will make it easier for them to rectify the mistakes on the spot, making the billing procedures more error free before handing it to the patient.
- There are lots of scribbling in the chargesheet which at times makes it difficult for the billing personnel to understand as they are not of medical background, they need to call in the Scopy department again and again to get their queries resolved. Which consumes lot of time and eventually leads in long waiting line. The redesigned chargesheet will help it being precise and create no confusion while marking in the chargesheet. Making it easier for the nurses to mark in the rush patient hours as well as for the billing department.
- A separate chargesheet for the ERCP items is made, as it contains all the stents and ERCP materials which are highly valuable and are consignments items. Any error in it can cause huge loss to hospital as well as the patient. Hence, to avoid this issue separate chargesheet is designed with all the updated materials and its codes.

Chapter 6: Conclusion

Today's healthcare system is evolving rapidly, not just regarding patient needs and new treatment developments, but also in the often-unseen arena of medical coding and billing. While much of healthcare is front and center between the doctor and patient, much is still left to be done when the patient leaves the doctor's office or hospital. In this Billing process is one of the major department in Hospital services.
Billing process is a part of discharge process but still it is one of the vital functions for maintaining the financial essence of organization. If the billing process system is poorly understood it leads to incorrect documentation, which can result in claim rejection. Hence it is important for billing personnel to understand the billing process and to have good communication skills to have an effective billing process in healthcare organization.

Chapter 7: Reference

1. Mitchell CL, Anderson ER Jr, Braun L. Billing for inpatient hospital care. American Journal of Health-System Pharmacy. 2003 Nov 1;60(suppl_6):S8–11.

2. Hartman SE, Mukamel DB, Panzer RJ. A Hospital Payment System with Incentives for Improvement in Quality of Care: First Lessons. QRB - Quality Review Bulletin. 1990 Jul 1;16(7):252–6.

3. THE NEED TO REFORM THE HOSPITAL PAYMENT SYSTEM IN INDONESIA | Malaysian Journal of Public Health Medicine [Internet]. [cited 2022 Jul 5]. Available from: https://mjphm.org/index.php/mjphm/article/view/197

4. Elsbach KD, Sutton RI, Principe KE. Averting expected challenges through anticipatory impression management: A study of hospital billing. ORGANIZATION SCIENCE. 1998;9(1):68–86.

5. The potential of using billing data for emergency department injury surveillance - PubMed [Internet]. [cited 2022 Jul 5]. Available from: https://pubmed.ncbi.nlm.nih.gov/9107326/

6. https://hciamerica.com/how-does-hospital-billing-work-why-do-hospitals-and-providers-charge-so-much/