A STUDY OF FINANCIAL COUNSELLING ON THE RATE OF CONVERSION FROM OUTPATIENT TO INPATIENT AND VARIANCE BETWEEN ESTIMATED BILL AND FINAL BILL OF CORONARY ANGIOGRAM/ANGIOPLASTY IN SELF-PAY

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INTRODUCTION

- As per the NABH accreditation standards for hospitals, in patient rights and education (PRE) chapter in standard six says that **“Patients and families have a right to information on expected costs”.**
- The objective elements of standard are the patient and family members are made aware of the pricing policy in different setting (emergency, ICU, in-patient).
- All the expected cost should be explained to them to avoid the financial constraints in the last minute of the IP admission.
- Any changes in treatment plan and new estimated cost should be informed.
- Patient’s satisfaction does not end in the IP admissions itself it ends at the time of billing final bill and at discharge of the patient.
- Patients make their financial planning according to the estimated cost by financial counselling and get admitted for the procedure.

REVIEW OF LITERATURE

1.The research study explains the positive outcomes on financial counselling in aspect of improved skills in prioritising debt, the patients can plan their budget in advance..(Brackertz N, 2013)

2. A study done by frances explains the importance of several scales like financial behaviours towards the estimated cost, financial management behaviour of patients can also play a role in the conversion to inpatient admission. Low-income patients are under the financial issues so risk taking behaviour are also involved in the conversion rate of the patient. (Frances C. Lawrence 2015)

3. Financial counsellors play an important service in people who are suffering from financial stress from low incomes and difficulty coping with their situation..(Brackertz N, 2013)

4. Estimation cost of the surgery in financial counselling makes the patient to decide which hospital is affordable to get admitted. (Joseph P Newhouse 2021)

5. In the time of financial counselling the exclusion of estimated cost should be briefed to the patient by explaining the registration charge, more than the estimated hours in ICU and OT, special lab investigations after the surgery or before the surgery are excluded, in the pandemic protective gear are also excluded from the estimated cost. (Joseph P Newhouse 2021)

RESEARCH QUESTION AND OBJECTIVE

Question:

1. What is the conversion rate of financial counselling from outpatient to inpatient admission services?

2. What is the variance between estimated bill and final bill of self-pay in coronary angiogram/angioplasty?

Objective:

1.To understand the process flow of financial counselling to the patient from the hospital.

2.To analyse the reasons for less conversion rates to inpatient admissions using six sigma tools like process mapping, cause and effect analysis.

3. To calculate the variance of estimated bill and final bill of coronary angiogram/angioplasty

4. To identify the variance of the bill and suggest solutions using process mapping, gap analysis and fish bone diagram.

RESEARCH METHODOLOGY

Study location: Study was conducted in Aster Medcity, Kochi

Study duration: A period of two months (May 10th – July 2nd 2021)

Sampling method: Convenience sampling

Sample size: 4449 in Self-pay patients and 3813 in Insurance patients (Nov 2020 – April 2021), 183 patients admitted for coronary angiogram/angioplasty (Nov 2020 – April 2021).

Inclusion criteria: 1. All departments for whom doctors advised for surgery or medical management with admission treatment plan form for estimation cost. **2.** Patients who are advised to undergo coronary angiogram/angioplasty and financial counselling for estimation cost in self-pay.

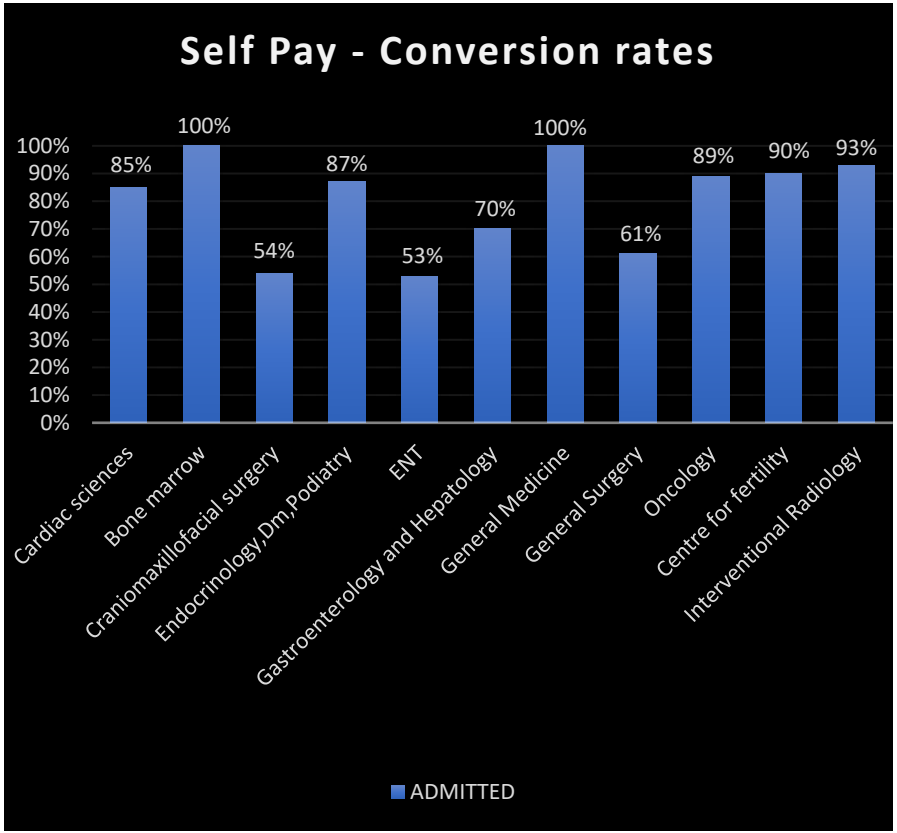
Exclusion criteria: 1. Duplicate entries are excluded from the project, error in documentation, incomplete data. **2.**As this study is only for self-pay patients, insurance patients are not included, other than coronary angiogram/angioplasty are not included in the project, duplicate entries, error in documentation, incomplete data.

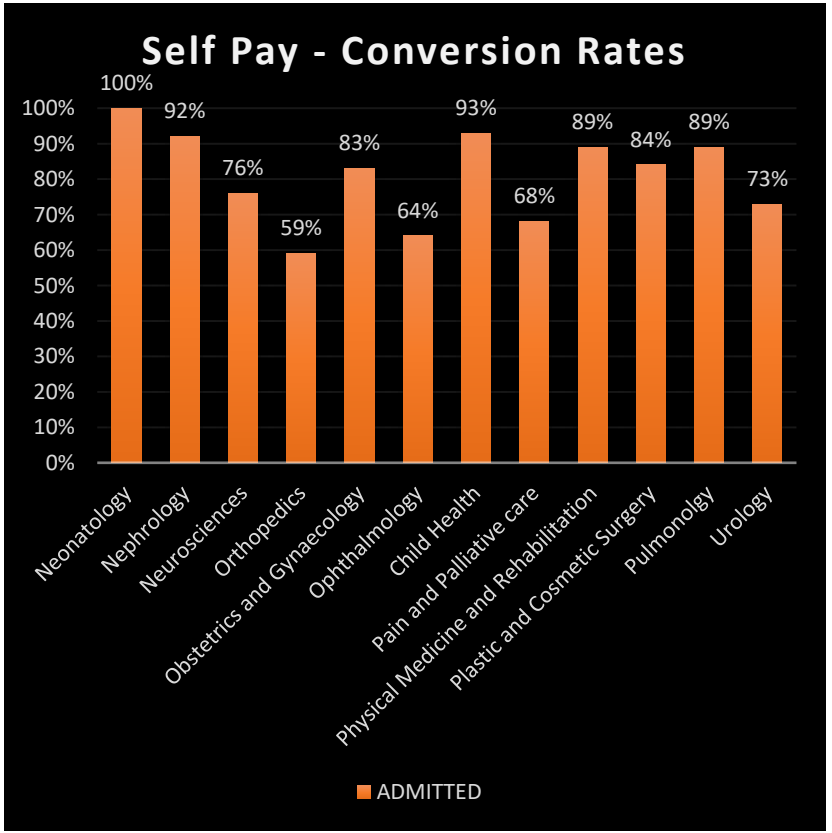
Data analysis tool: Process mapping, Gap analysis, cause and effect analysis

Data collection method: Secondary data was collected from financial counselling desk and billing counter

ANALYSIS RESULTS

SELF-PAY


Self Pay - Conversion rates
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
85%
100%
54%
87%
53%
70%
100%
61%
89%
90%
93%
Cardiac sciences
Bone marrow
Craniomaxillofacial surgery
Endocrinology,Dm,Podiatry
ENT
Gastroenterology and Hepatology
General Medicine
General Surgery
Oncology
Centre for fertility
Interventional Radiology
ADMITTED


Self Pay - Conversion Rates
100%
90%
80%
70%
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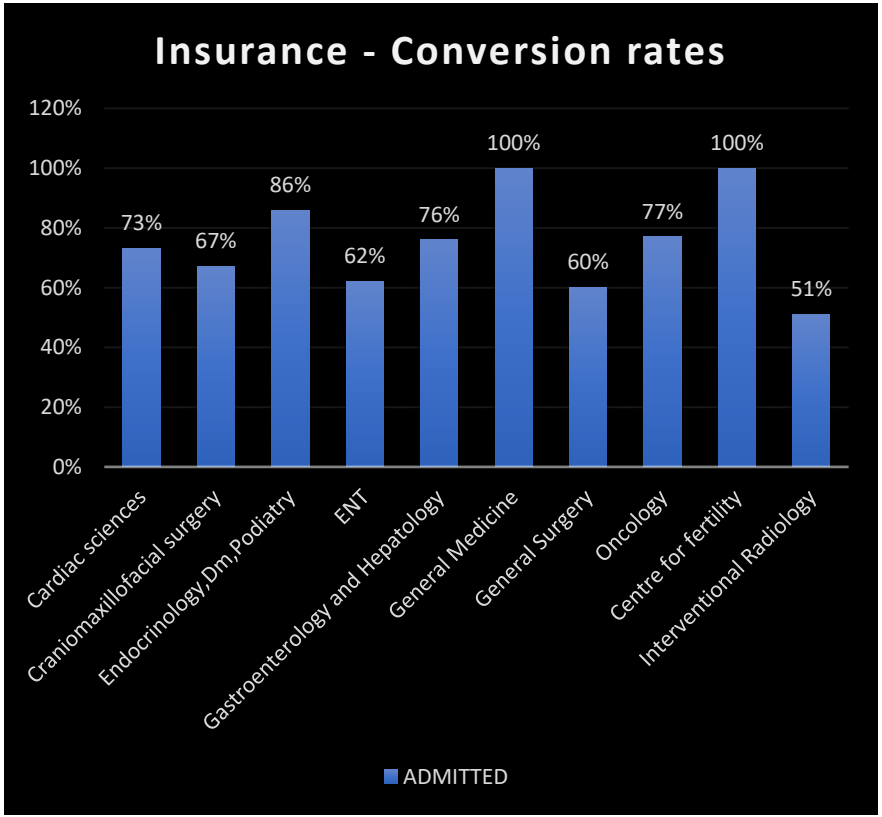
76%
59%
83%
64%
93%
68%
89%
84%
89%
73%
Neonatology
Nephrology
Neurosciences
Orthopedics
Obstetrics and Gynaecology
Ophthalmology
Child Health
Pain and Palliative care
Physical Medicine and Rehabilitation
Plastic and Cosmetic Surgery
Pulmonology
Urology
ADMITTED

INSURANCE


Insurance - Conversion rates
120%
100%
80%
60%
40%
20%
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73%
67%
86%
62%
76%
100%
60%
77%
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51%
Cardiac sciences
Craniomaxillofacial surgery
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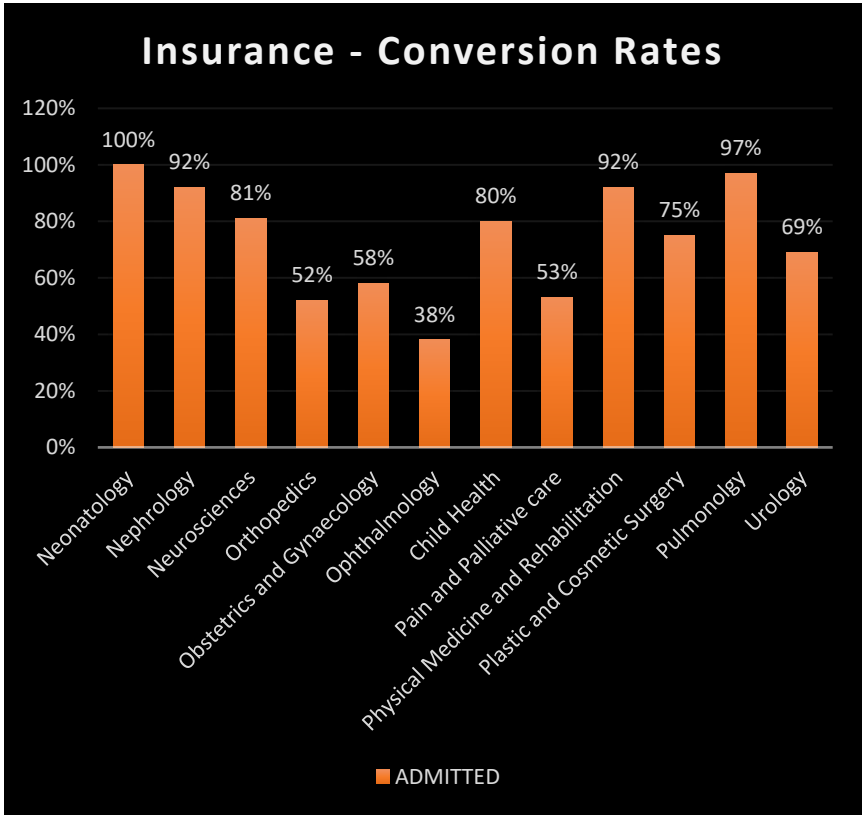
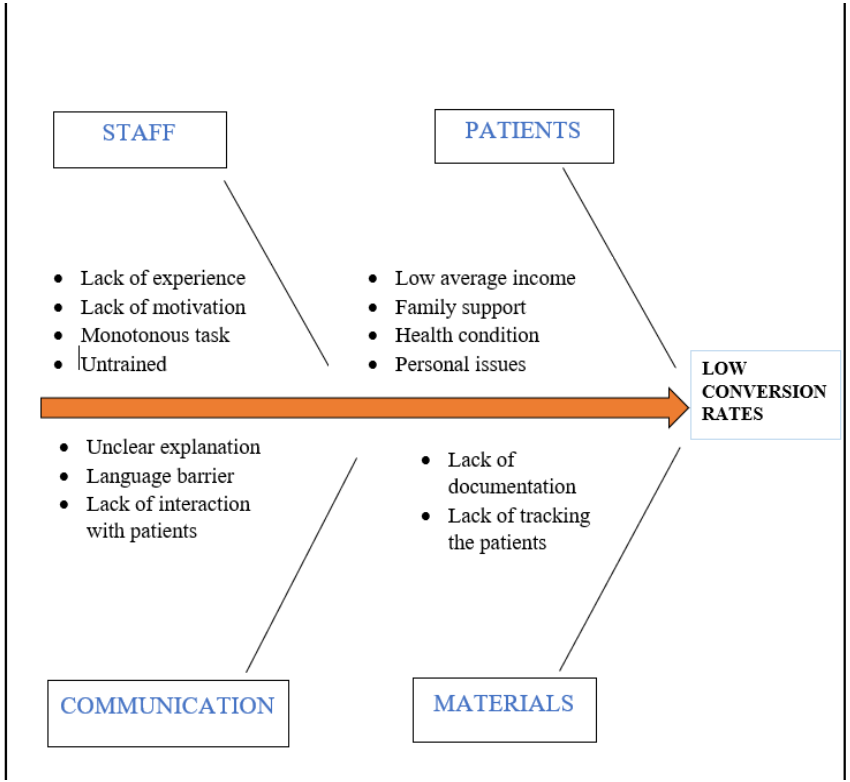
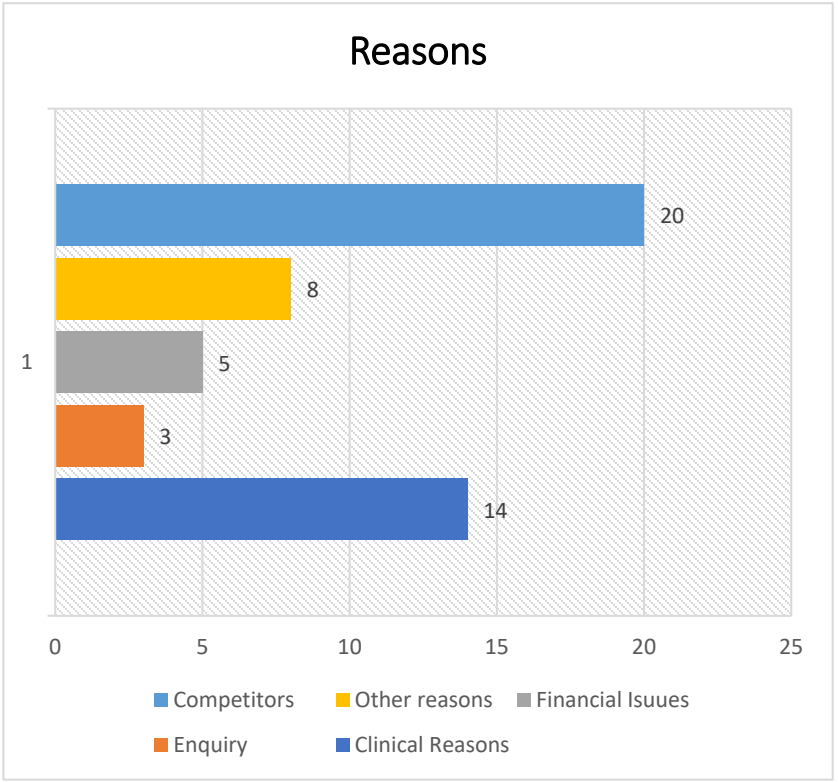

Insurance - Conversion Rates
120%
100%
80%
60%
40%
20%
0%
100%
92%
81%
52%
58%
38%
80%
53%
92%
75%
97%
69%
Neonatology
Nephrology
Neurosciences
Orthopedics
Obstetrics and Gynaecology
Ophthalmology
Child Health
Pain and Palliative care
Physical Medicine and Rehabilitation
Plastic and Cosmetic Surgery
Pulmonolgy
Urology
ADMITTED

ANALYSIS

CAUSE AND EFFECT ANALYSIS





RESULTS AND SUGGESTIONS

RESULT:

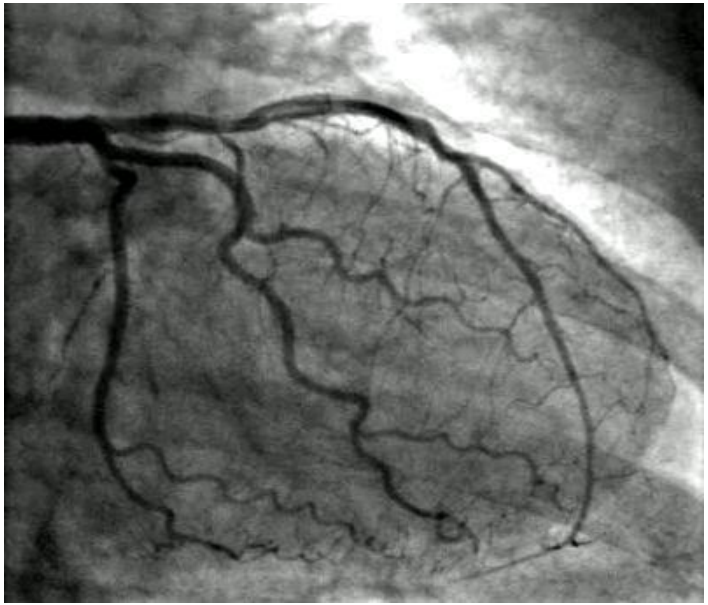
After analysing the data of conversion rates, self – pay NET FIC are higher than the insurance patients by 4449 in self-pay and insurance 3813. Conversion rates varies in all the departments. 100% conversion rates departments in self- pay are General medicine, Neonatology, Bone Marrow.
In insurance General Medicine, Centre of fertility, neonatology.

SUGGESTIONS:

- Images of different types of rooms can be shown to the patients for better clarity of the room rent. It can be done through digital platform or flyers.
- Financial counsellors can track the patient via phone and counselling in phone to get admission in the hospital.
- Manpower can be increased in insurance financial counselling desk as there is delaying process in providing the estimation cost.
- Requesting management to provide packages for most common procedures.
- By encouraging patient feedback and working on patient complaints can also increase the conversion rates, it brings a strong relationship with the patients.
- Providing discounts to the patients who all are under financial constraints.
- Management should encourage consultants to ask their patients to get their procedures done.

CATH LAB

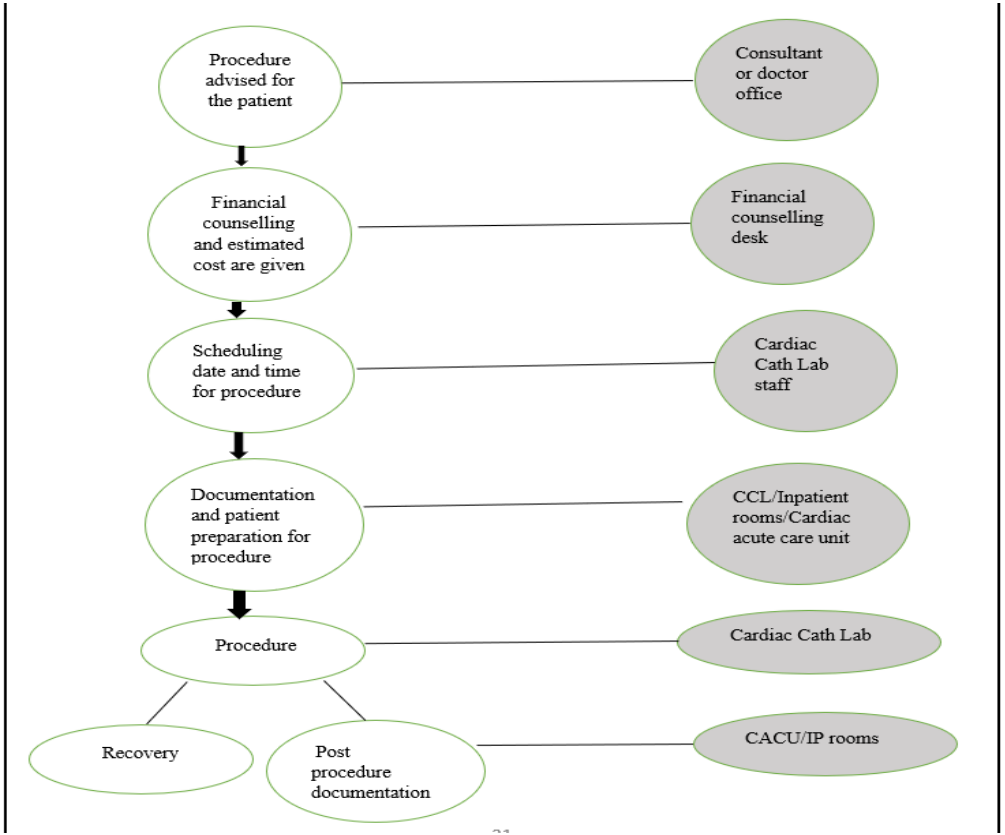
VARIANCE BETWEEN ESTIMATED BILL AND FINAL BILL OF CORONARY ANGIOGRAM/ANGIOPLASTY IN SELF-PAY

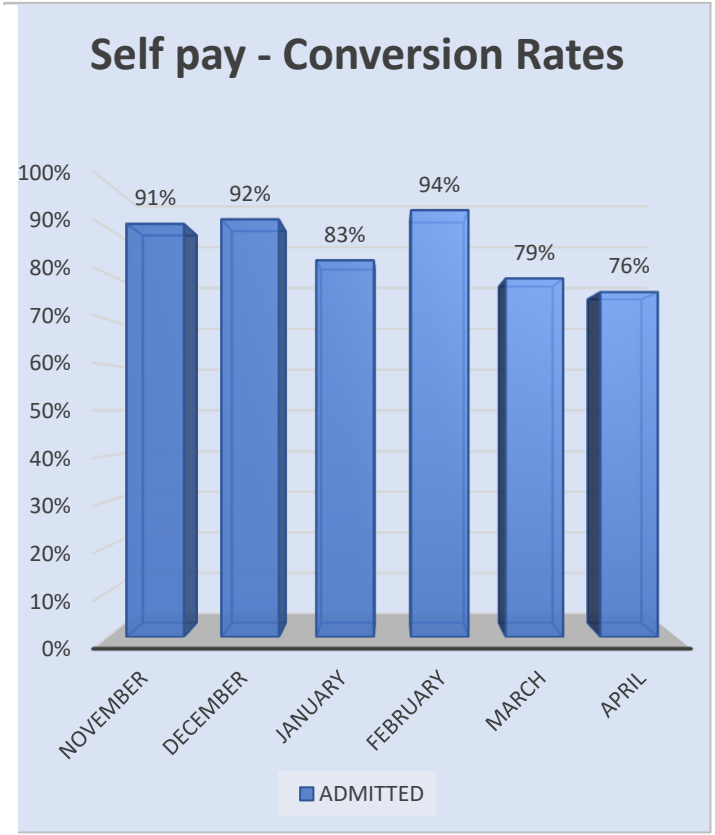


- As per the secondary data in financial counselling, the top procedure in the hospital is coronary angiogram/angioplasty.
- The combination of positive care in Cath lab and cost control results in lasting impact in financial performance.
- Financial counselling plays a high-ranking role in conversion of patient from outpatient to inpatient, so the estimated bill should be calculated with the less variance compared to the final bill.
- Patient's satisfaction does not end in the IP admissions itself it ends at the time of billing final bill and at discharge of the patient.

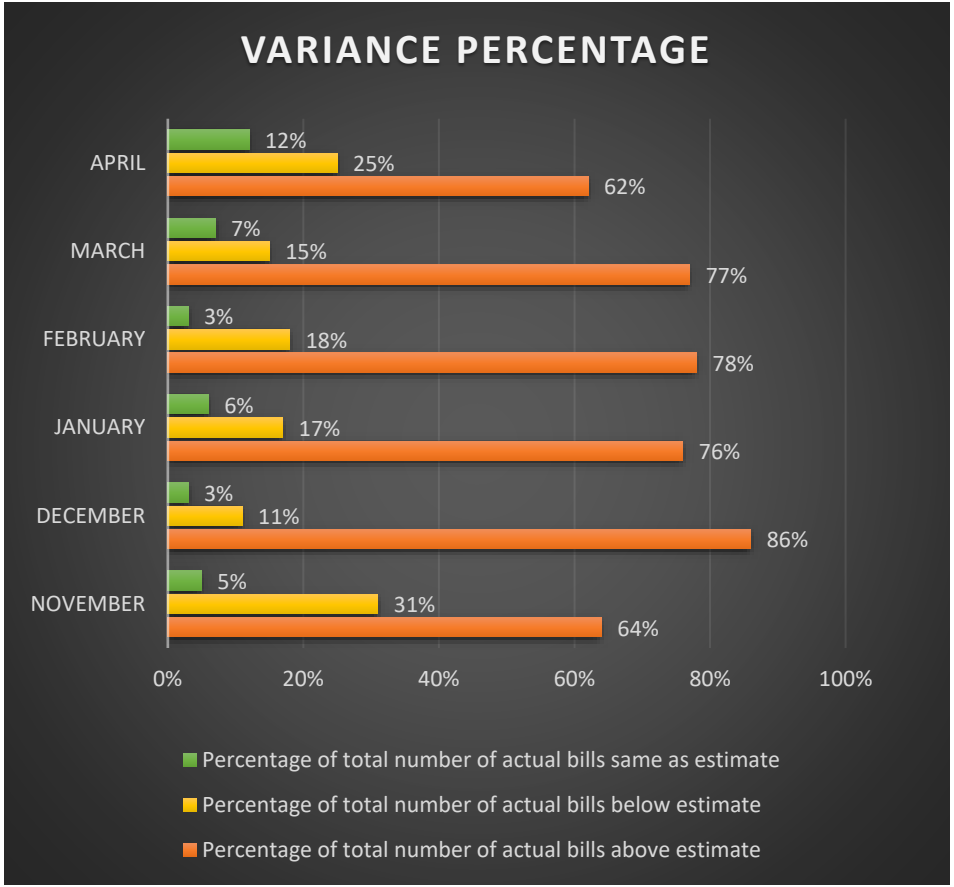
PROCESS MAPPING AND FIC

Process mapping of financial counselling and cardiac cath lab

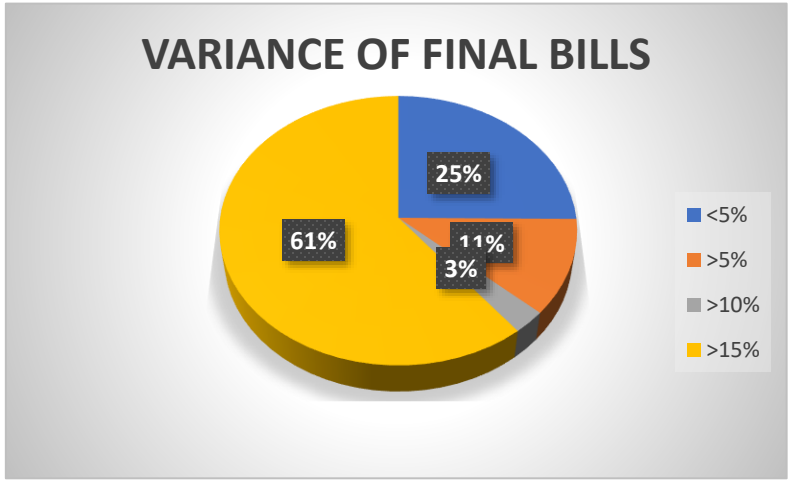




VARIANCE



VARIANCE	NUMBER OF FINAL BILLS
<5%	46
>5%	21
>10%	5
>15%	111



GAP ANALYSIS

SR.NO	ERROR	JUSTIFICATION
1.	Number of stents used	Number of stents used is variable according to the condition of the patient. The types of stents are also according to the blockage in each patient.
2.	Average length of stay	Following standard operating procedures and it can be controlled by providing quality care to the patient.
3.	Incorrect procedure	Diagnostic procedures should be followed properly and second opinion for procedure can be taken for better clarity.
4.	Pre-existing conditions	Cost may vary for each patient according to their pre-existing conditions and medical history of each patient
5.	Repeat of procedures	Use of skilled labour and trainings can be given to upgrade their knowledge. It can be controlled by following the standard operating procedure.
6.	Consumables	Consumables usage depends on each patient's case and due to this pandemic protective gear have been added in the list.
7.	Human errors	This error is by entering wrong estimated cost information and it can be clarified by double checking the estimation cost before giving to the patient.
8.	Surgeon's charges	It can be controlled by standardizing the charges
9.	Lack of training and skill	Trainings should be given to financial counsellors and estimation cost should be calculated properly to avoid more variance in the bill
10.	Room charges	According to patient's choice types of rooms can be allotted like single room, twin sharing, deluxe room, etc.
11.	Hospital acquired infections	This can be controlled by following the quality control department of the hospital or following NABH/JCI measures to reduce the hospital acquired infections.

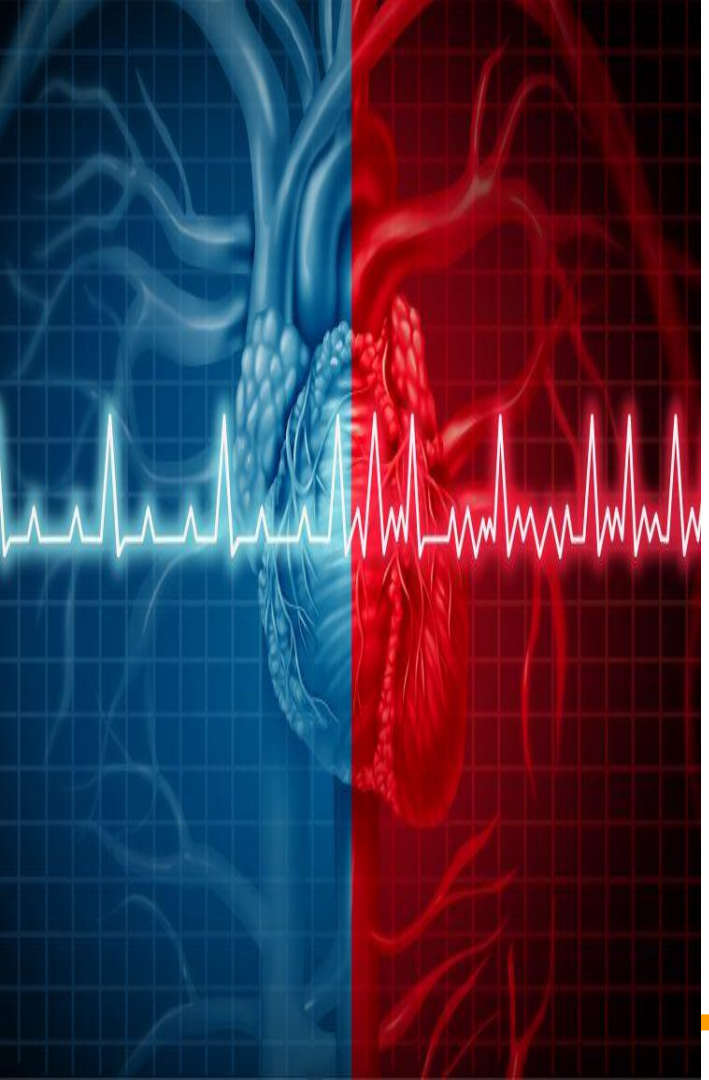
RESULTS AND SUGGESTIONS

RESULT:

After analysing the data out of 183 self-pay patients of procedure coronary angiogram/angioplasty, 36 patients final bill was below the estimated bill, 10 patients final bill was same as the estimated bill, 137 patients final bill was above the estimated bill. In other note of variance <5% are 46 final bills of patient, >5% of variance are 21 final bills of the patient, >10% of variance are 5 final bills of the patient, >15% of variance are 111 final bills of the patient. As there is a high amount of variance in estimated bill and the final bill following measures can be adopted to reduce the variance in final bill.

SUGGESTIONS:

- A proper medical management of patient should be done with proper diagnostic procedures that ensure the length of stay is maintained to the standard average.
- Financial counselling should be done by experienced staff for the less variance between the estimated cost and the final cost.
- Trainings should be given to all the staff for appropriate skilled force to avoid repeated procedures and incorrect procedures.
- Quality department in the hospital should conduct regular intervals of trainings to reduce the hospital acquired infections, it can be controlled by adopting measure by quality department.
- Consumables should be used in appropriate number and extra usage of consumables can be reduced.



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Thank
You