OPTIMIZING DISCHARGE PROCESS EFFICIENCY FOR CASH AND INSURANCE PATIENTS IN A TERTIARY HOSPITAL: A STUDY ON DELAYS AND IMPLEMENTATION IMPACT ON TAT

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Aim & Objectives

AIM:

The aim of this study is to compare the outcomes of discharge TAT for cash and insurance patients in a tertiary hospital, before and after implementing corrective strategies.

OBJECTIVES:

1. To ensure that cash and insurance patients are billed correctly and in a timely manner.

2. To assess the factors causing delays/bottlenecks in the discharge process and interventional measures to mitigate them until bill preparation in the discharge process.

3. To analyze the data before and after an intervention aimed at improving the billing time in the discharge process.

Methodology

Discharge process has been observed from 15th March 2023 to 10th May 2023 i.e., from 9:30 AM to 5 PM on the working days in a tertiary hospital at Hyderabad

Sample size: 1169 discharges for LAN bill preparation and 452 for Insurance bill conversion

Study design: Descriptive Observational study

Data collection tools: HIMS, EHR, Remedinet

Sampling technique: Convenient sampling

Methodology

Analytical tools:	Microsoft Excel
Study Criteria:	**Inclusion Criteria:**
	Cash and Insurance patients who have been admitted to the hospital whose medical conditions have stabilized and are ready for discharge during the study period.
	Discharges that took place between 9:30 AM to 5 PM are considered.
	Exclusion Criteria:
	Corporate patients who have been admitted during the study period.
	Discharges that took place after 5:00 PM are not considered.
Study Procedure:	A comparison is done before and after the implementation changes for both the TATs which include:
	TAT 1 - The time taken for the preparation of the LAN bill from discharge initiation
	TAT 2 - The time taken by the insurance biller to convert the LAN bill to the Insurance bill and submit the final bill to the external TPA through Remedinet

Process flow on floor

Consultant - Advises discharge

Nurse - Initiates discharge process

IP, OT and Cath Lab Clearance

Nurse - Sends case sheet to the billing department

Floor biller - Receives case sheet and prepares the bill

Floor biller - Does service call off

Floor biller - Clicks on sent the case sheet to audit

Audit executive - Goes on floor near Floor Biller to audit

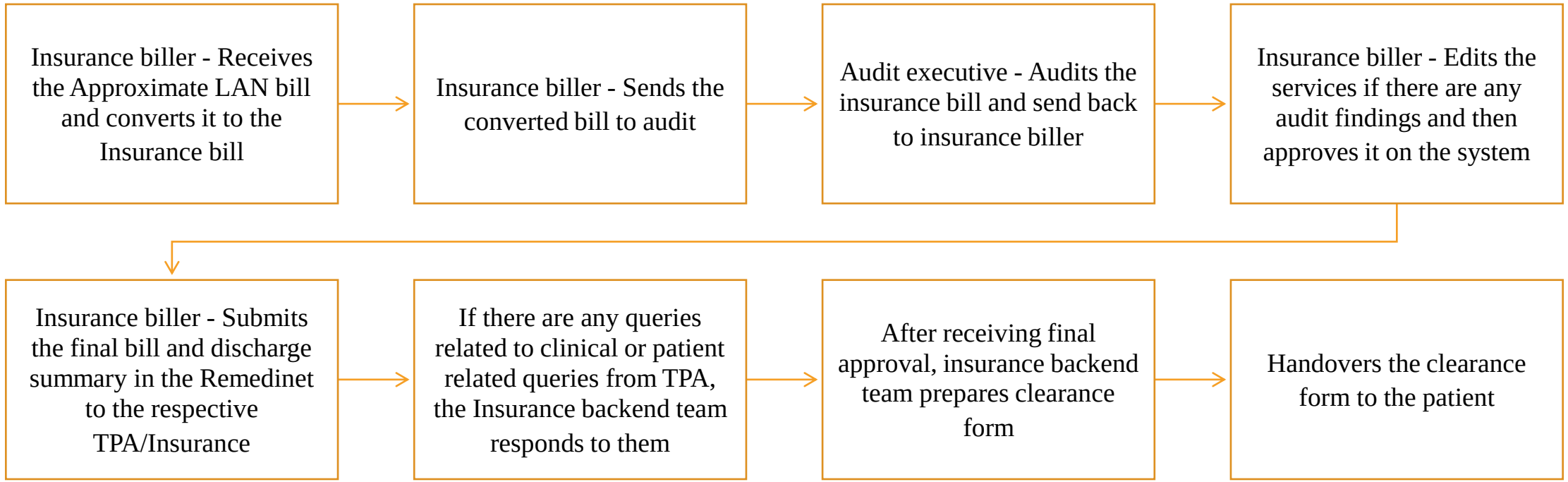
Audit executive - Receives the case sheet and audit

Audit executive - Revokes the service call off if there are any audit findings and clicks on sent to the billing

Floor biller - Receives the case sheet after audit and edit services if there are any findings and click it as Bill Prepared

For Cash patients - Final bill is handed over to the patient & For Insurance patients - Biller clicks on sent to TPA billing

Process flow in Insurance backend



Observations in LAN bill Preparation

Package conversion delays	Audit delays
Doctor fee confirmation delays	Improper updation of bills by billers
Reinforcement training is required for billers	Billers waited for the nurse to give the case sheet
Ins / Corp package delays	Other department staff taking case sheets in between
Late escalations to the HOD / concerned departments	HIMS and IT issues

Observations

Implementation of changes

- ✓ Training sessions on package conversions
- ✓ Provided laptops to Audit executives & frequent reviewing
- ✓ Doctor fee delays - Billing HOD tried sorting this by talking to doctors
- ✓ Checking on regular updation of bills
- ✓ Training on certain challenges faced by billers
- ✓ Billers to proactively request and take the case sheet if not received by nurses
- ✓ Ins / Corp staff to be responded fast
- ✓ Billers shouldn’t give case sheets to any department staff after receiving it
- ✓ Immediate escalations to be done if any issues arise
- ✓ Daily reviews of the biller’s performance

Observations in Post Auth Submission

- Waited for the aid to bring the case sheet to start bill conversion
- Doctor fee confirmation delays
- Patient flow in department for queries, admissions & document submission
- One biller for bill conversion & submission. Shift starts at 11:30
- Billers waited for aid to send the case sheet to audit and bring it again
- No dedicated aid in the department
- Revising surgeon fee after bill conversion
- Pending Discharge Summaries
- Attendants coming to see the bill
- Printer issue & double entries - HIMS
- HIMS, Remedinet & IT issues

Observations

Implementation of changes

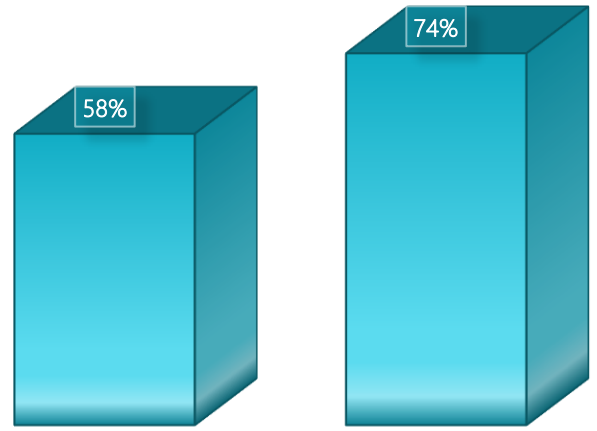
- ✓ Stopped moving the case sheets & started relying on EHR & WhatsApp notification
- ✓ Asked the billers to stop confirming the doctor fee as floor billers already confirm
- ✓ Locking door & repositioning billers & providing contact number for any queries & informed FC to counsel thoroughly
- ✓ Two billers for conversion & submission. Shift timings – one at 10, another at 11:30
- ✓ A dedicated Audit Executive in the department itself
- ✓ A dedicated Aid in the department
- ✓ Manager escalated the discharge summaries delay to the Medical Admin
- ✓ Replaced printer & sorted double entries
- ✓ Daily reviewing of Manager & billers

Project Analysis for LAN Bill Preparation

Row Labels	< 1 hr	> 1 hr	Grand Total
Mar	**213**	**134**	**347**
15-Mar	12	10	22
16-Mar	15	7	22
17-Mar	13	8	21
18-Mar	16	10	26
20-Mar	20	8	28
21-Mar	21	9	30
23-Mar	15	10	25
24-Mar	15	4	19
25-Mar	20	6	26
27-Mar	16	7	23
28-Mar	11	9	20
29-Mar	10	18	28
30-Mar	14	15	29
31-Mar	15	13	28
Apr	**125**	**104**	**229**
01-Apr	18	5	23
03-Apr	16	8	24
04-Apr	24	7	31
05-Apr	17	17	34
06-Apr	12	19	31
07-Apr	10	13	23
08-Apr	15	26	41
10-Apr	13	9	22
Grand Total	**338**	**238**	**576**

Row Labels	< 1 hr	> 1 hr	Grand Total
Apr	**309**	**127**	**436**
11-Apr	5	12	17
12-Apr	14	7	21
13-Apr	20	10	30
14-Apr	13	13	26
15-Apr	4	18	22
17-Apr	13	14	27
18-Apr	14	9	23
19-Apr	24	4	28
20-Apr	26	3	29
21-Apr	20	4	24
22-Apr	24	3	27
24-Apr	10	6	16
25-Apr	26	3	29
26-Apr	22	5	27
27-Apr	26	7	33
28-Apr	18	2	20
29-Apr	30	7	37
May	**131**	**26**	**157**
02-May	11	3	14
03-May	14	1	15
04-May	14	6	20
05-May	20	5	25
06-May	20	4	24
08-May	14	1	15
09-May	16	3	19
10-May	22	3	25
Grand Total	**440**	**153**	**593**

LAN BILL PREPARATION TAT (BEFORE & AFTER IMPLEMENTATION)



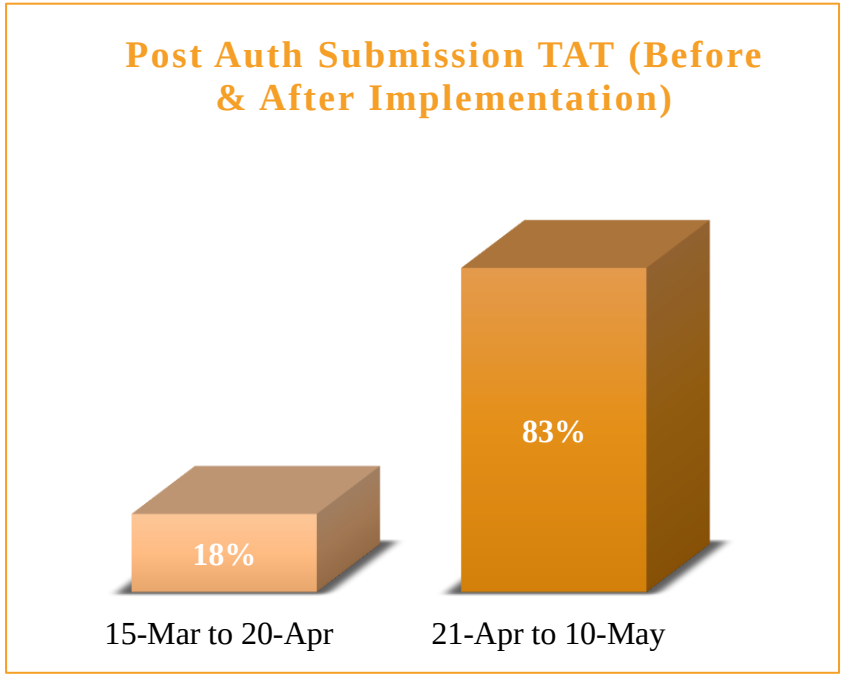
15-Mar to 10-Apr

11-Apr to 10-May

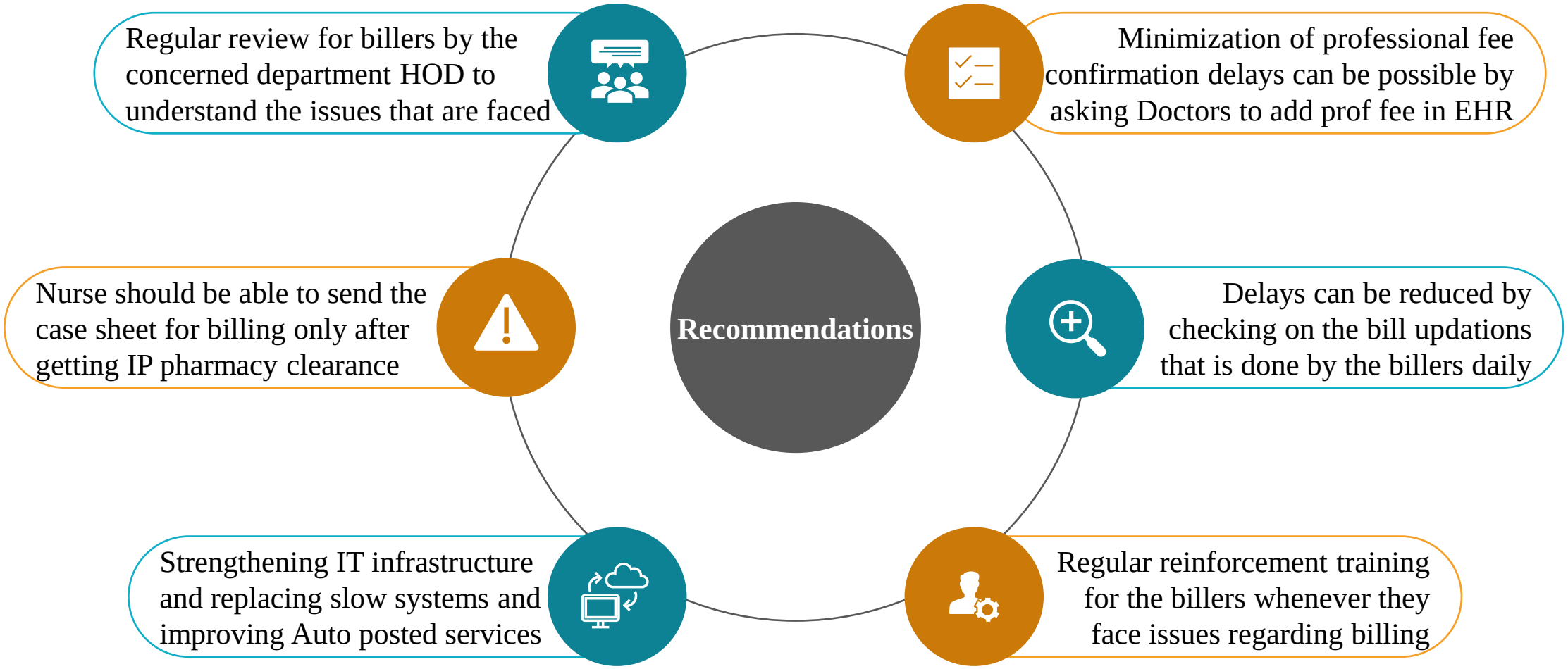
Project Analysis for Post Auth Submission

Row Label	< 45 min	> 45 min	Grand Tot
Mar	**9**	**157**	**166**
15-Mar		12	12
16-Mar		13	13
17-Mar	3	3	6
18-Mar	1	6	7
20-Mar	1	11	12
21-Mar		17	17
23-Mar	2	6	7
24-Mar		12	12
25-Mar		18	18
27-Mar		11	11
28-Mar	1	8	9
29-Mar	1	9	10
30-Mar		16	16
31-Mar		15	15
Apr	**9**	**88**	**97**
01-Apr		11	11
03-Apr	1	10	11
04-Apr	3	13	16
05-Apr	1	14	15
06-Apr	1	15	16
07-Apr	2	7	9
08-Apr	1	18	19
Grand Tot	**18**	**245**	**263**

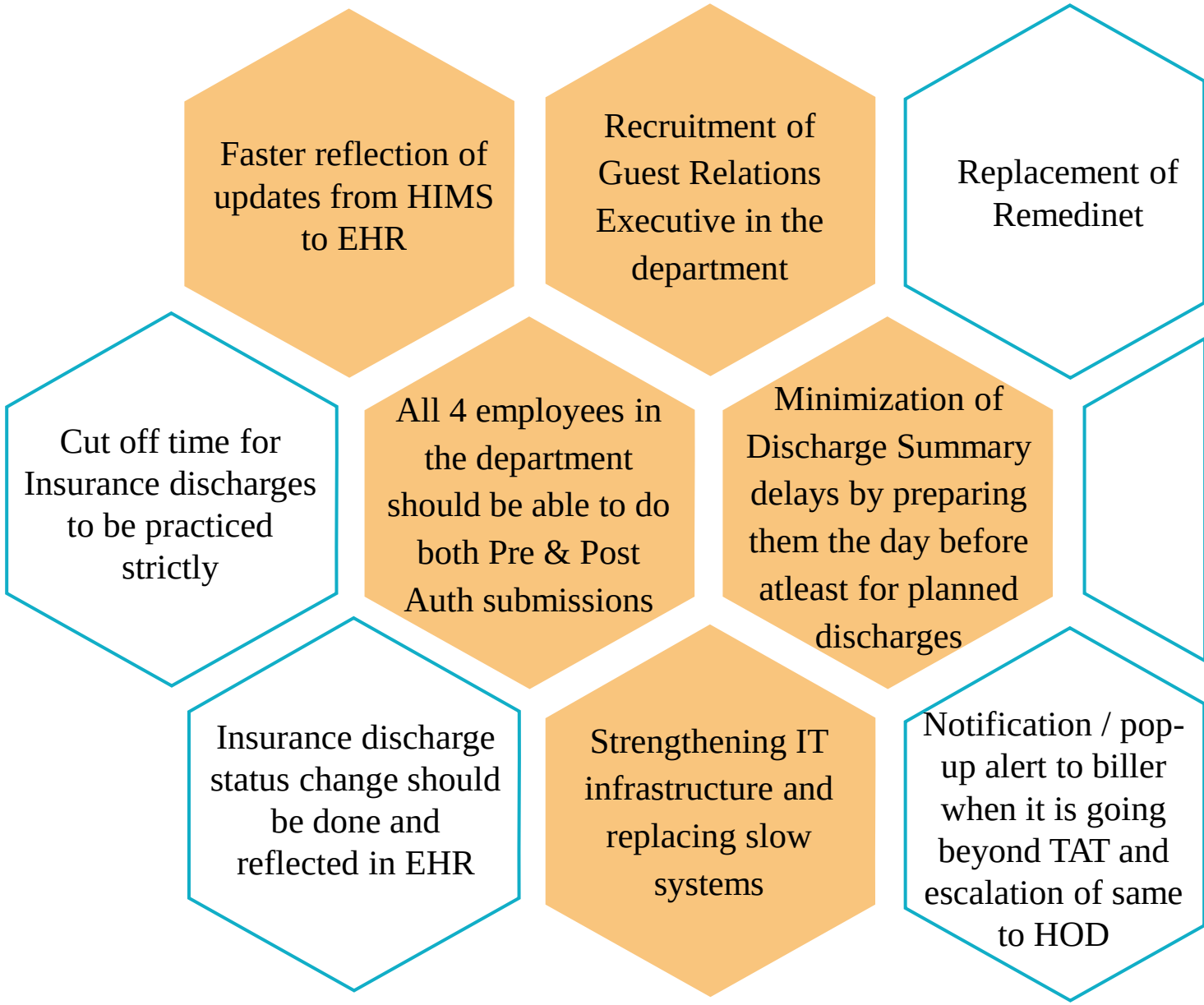
Row Labels	< 45 min	> 45 min	Grand Total
Apr	**63**	**48**	**111**
21-Apr	4	5	9
22-Apr	7	7	14
24-Apr	7	2	9
25-Apr	8	11	19
26-Apr	9	3	12
27-Apr	12	9	21
28-Apr	9	4	13
29-Apr	7	7	14
May	**64**	**14**	**78**
02-May	6	2	8
03-May	7	1	8
04-May	8	1	9
05-May	12	3	15
06-May	10	1	11
08-May	4	2	6
09-May	8	2	10
10-May	9	2	11
Grand Total	**127**	**62**	**189**



Recommendations for LAN Bill Preparation



Recommendations for Post Auth Submission



Conclusion

- The findings support that the implemented changes significantly improved the LAN bill preparation process, insurance bill submission, and TAT metrics.
- These improvements not only enhanced operational efficiency but also contributed to a smoother patient experience by minimizing delays, optimizing coordination, and streamlining the billing process.
- Moreover, the prompt escalation of issues to the appropriate authorities and daily performance reviews fostered a proactive approach to addressing challenges and ensuring continuous improvement in the discharge process.
- By implementing these interventions, the hospital can effectively address process bottlenecks, reduce TAT, and improve overall operational efficiency.
- This study depicts the importance of continuous improvement efforts in enhancing the discharge process and ultimately improving the overall patient experience.

Thank You