A Study on Inpatient Complaints Using Root Cause Analysis for Quality Improvement

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Abstract – This study aims to improve the quality of inpatient services through analyzing the inpatient feedback form to identify the gap in services. It helps to identify the real-time problem for the patients during their stay in the hospital. The study was conducted in a 200- bedded multispecialty hospital for 3 months with retrospective data of 350 inpatient feedback forms. The study was a descriptive & analytical study with 12 departments in the hospital. Using analytical tools like the Ishikawa (fishbone) diagram and Pareto chart indicates the majority of complaints are caused by 50% of the departments, like Canteen Services (23%), Billing (13%), and the Housekeeping Department (12%). The departments with low satisfaction levels have a connection with increased waiting time in departments like lab, radiology, and billing services. The primary cause for the low satisfaction level is supportive services. This study suggests that improving the quality of supportive services increases the overall satisfaction level of inpatients.

Key Words: Inpatients, pareto chart, fishbone diagram and patient satisfaction

1. INTRODUCTION

1.1 Definition

2. **RCA:** Root Cause Analysis is a quality tool that helps to find out the real source of the problem. Instead of focusing on superficial causes, RCA helps to solve the real problem in hospital services.

3. **Inpatient complaints:** Inpatient complaints are sourced from a feedback form. Feedback forms were collected for every patient who was admitted to the hospital.

1.2 Causes of patient dissatisfaction—Quality of services is an important factor that affects patient satisfaction.

1.3 Objectives

- To analyze the nature of complaints raised by inpatients.

- To identify the real problem that affects the inpatient satisfaction using root cause analysis.

- To suggest measures to reduce inpatient complaints and improve quality of care.

2. LITERATURE REVIEW

- According to Budhi Setianto, Yauwan Tobing Lukiyono, and Edza Ariya Wikurendra (2023), it is important that hospitals analyze and intervene in the patients' complaints they receive. Because they can reduce the patients' quality of life; even death can occur. Generally the complaints occur because patients are dissatisfied with their standards. If it continues, there is no good handling of complaints, and it makes a negative impact on the organization.

- According to Sebrina Maj Hansen, Mette Kring Clausen, Nana Roust Hansen, and Mette Brandt Eriksen (2026), patients' complaint material should be used to improve the quality initiatives. Complaints material increase the interest to highlight the area that needs a quality improvement. QI initiatives primarily focus on the patient care areas. It shows the patient satisfaction difference between before the quality initiative and after the quality initiative.

3. METHODOLOGY

This is a descriptive and analytical study that helps to reduce the inpatients' complaints through root cause analysis. The simple random technique is used to select the sample size from 2800 inpatients for 3 months. The study was conducted with retrospective data from 350 inpatient feedback forms. The feedback form is a structured questionnaire; it includes the 12 departments' ratings and the waiting time for 5 departments. The ranking method, Pareto chart, correlation, and Ishikawa diagram were used to analyze the data.

4. ANALYSIS

4.1 The chart shows the ranking of each department based on their highest dissatisfaction rates
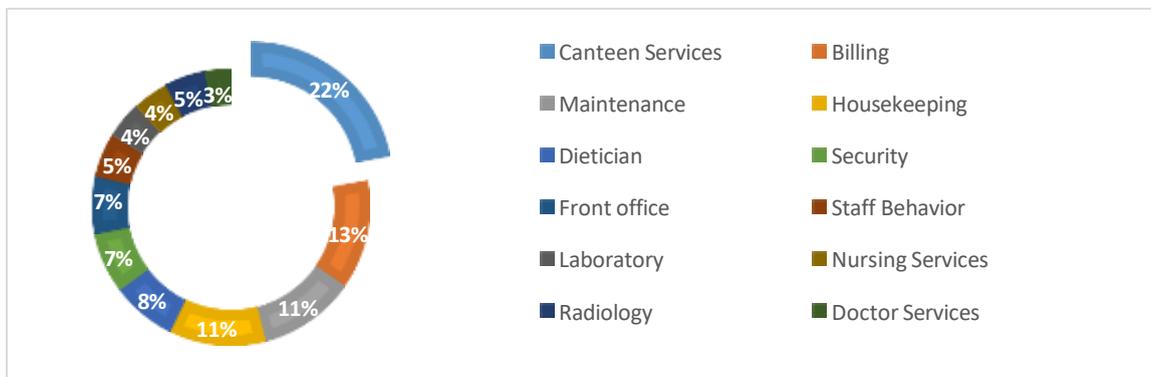
The above chart shows that canteen services get the most dissatisfaction score across 12 departments. Billing, maintenance, and housekeeping get average dissatisfaction scores. The chart clearly shows doctors' and nursing services are good.

4.2 The chart shows Pareto chart
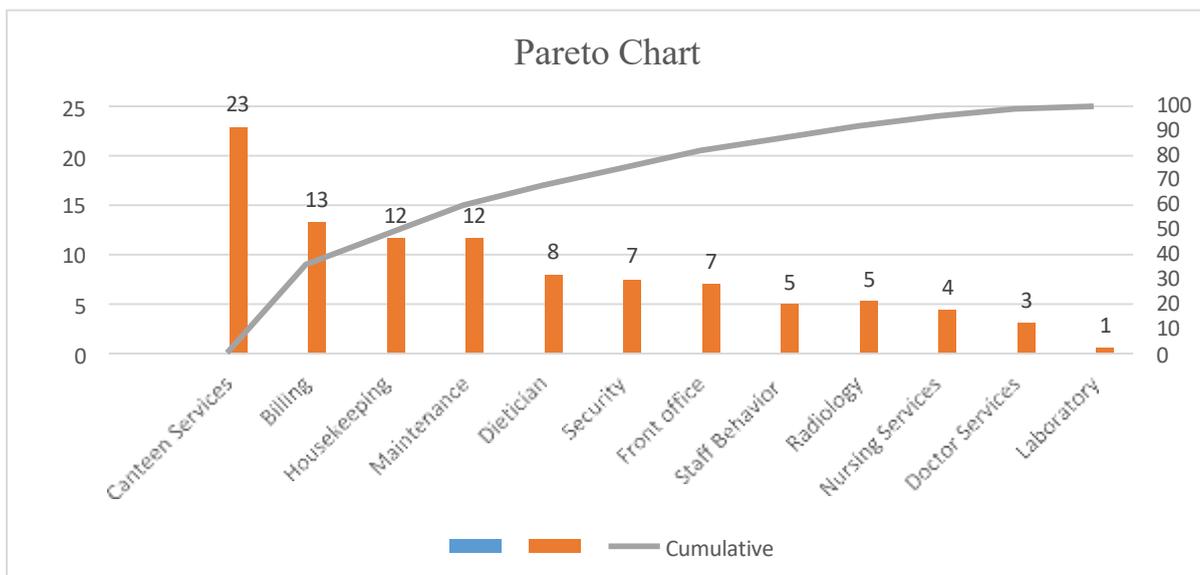
The above charts show that 80% of problems are caused by 7 departments, which leads to patient dissatisfaction. According to the Pareto principle, 80% of problems are created by 20% of causes. So increasing the quality of care in

7 departments will reduce the inpatient complaints.

4.3   The table shows the correlation between variables

| Correlations		Billing waiting time	Billing satisfaction
Billing waiting time	Pearson Correlation	1	-.184**
	Sig. (2-tailed)		.001
	N	350	318
Billing satisfaction	Pearson Correlation	-.184**	1
	Sig. (2-tailed)	.001	
	N	350	350
**. Correlation is significant at the 0.01 level (2-tailed).			

In the following interpretation, H denotes Hypothesis,

1)   Null Hypothesis H0: There is no relationship between billing waiting time and billing satisfaction.

2)   Alternative Hypothesis H1: There is a relationship between billing waiting time and billing satisfaction.

The table shows the correlation between waiting time and patient satisfaction. The significant value is less than 0.05, so the alternative hypothesis is accepted. There is negative correlation between waiting time and satisfaction, which means if the waiting time increases, the satisfaction will decrease.

4.4   The diagram shows the Root Cause Analysis for canteen services
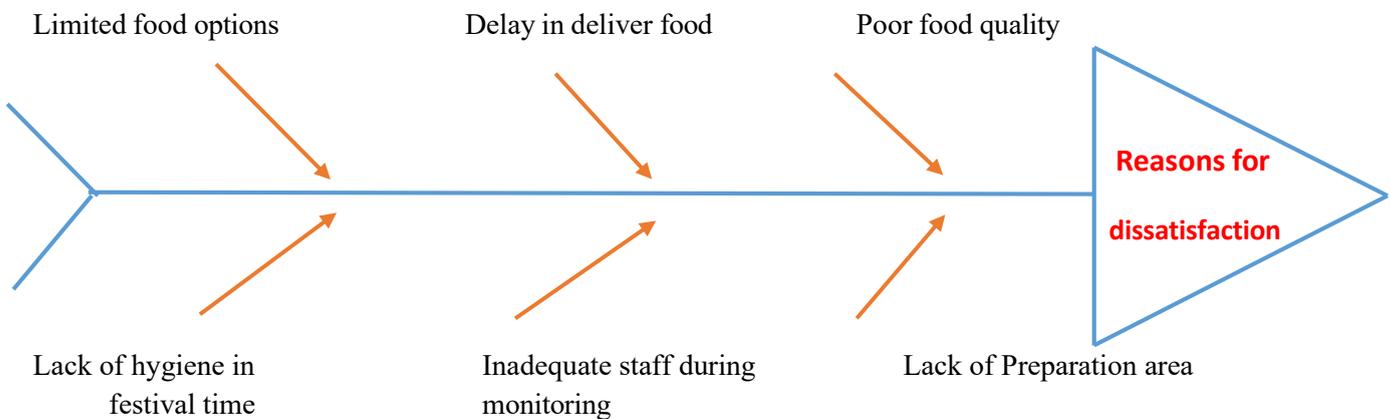
The Ishikawa, or fishbone, diagram is used to categorize factors that lead to patient

dissatisfaction. Important causes like the quality of food directly affect the patients' health. Proper monitoring and improving quality are required to improve the patient's quality of life.

5.   MAJOR FINDINGS

- Canteen services (22%) have higher dissatisfaction rates between 12 departments. Most patients are complaining about the quality and taste of the food.
- Billing (13%), maintenance (11%), and housekeeping (11%) are the second major departments having high dissatisfaction rates.
- Pareto analysis shows maximum complaints caused by 50% of the departments.

- Patient waiting time has a relationship with dissatisfaction level.

6. SUGGESTION

- Conduct a random quality audit in the kitchen and review the patients' feedback forms to improve quality.

- Change a meal plan every week with dietician approval to increase the food satisfaction.

- Wearing PPEs in the kitchen improves the quality of food.

- Develop strong SOPs for supportive services to reduce the errors. Monitoring and evaluation are also very important to improve the quality.

- Make a contingency manpower plan to ensure proper delivery of food during festival time.

- Create a scheduling method in diagnostics, like a test that will be taken between 10 AM and 11 AM.

- The billing department should update the bill amount from time to time to prevent miscommunication.

7. CONCLUSION

This study was conducted to analyze the inpatients' feedback form. The report shows that supportive services are the main cause of inpatient dissatisfaction. Root cause analysis helps to identify the key areas to improve. Improving the quality of services helps to increase patient satisfaction and reduce the complaints.

8. REFERANCE

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