



KEY PERFORMANCE INDICATOR IN OUT-PATIENT SERVICES AT A MULTI-SPECIALITY HOSPITAL

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ABSTRACT

Key Performance Indicators (KPIs) are a mean, not an end. A core measure that gauges the organization's past or current performance in particular areas, KPIs reflect how closely the organization's underlying processes are aligned with best practices. The KPI perspective can be clinical, financial, or patient-focused. KPIs may also be quantitative and qualitative or a hybrid of the two and expressed as a fixed value, percentage, ratio, average, or rate, depending on the measure. One of the challenges of defining indicators at the department level and then propagating them through the healthcare organization is the potential lack of congruence. The area of research chosen is the outpatient service department at the hospital. The study done is a descriptive study. The source of data is Primary data which is collected by a structured questionnaire and also a checklist for Turn Around time (TAT). The sampling technique used is stratified random sampling. The statistical tool used is Percentage analysis and Weighted average, Chi-Square and Standard Deviation. The Research Study attempts to find out the waiting time and level of patient satisfaction among outpatients at the hospital. It is suggested to provide adequate manpower, inter-departmental coordination and communication and to provide a regular training session for nurses. These concerns could be rectified by the

management by providing adequate manpower, Inter-departmental coordination and communication, and providing training to the staff, thereby, improving the quality of care and efficiency of the Outpatient department.

Keywords - Outpatient department, Multispeciality hospital, Healthcare organisation.

DOI: 10.48047/ecb/2023.12.si12.070

INTRODUCTION

In a Multi-speciality hospital, the CFO is responsible for the delivery of P&L. Hence, every CFO has to understand the various on which profitable of the hospital depends. They are often known as the key performance indicators. These indicators not only help in driving profitability but also provide early warning whenever something is not going in the appropriate direction. Therefore, it is mandatory for a CFO not only to understand the KPIs but also to maintain a systemic discipline to calculate the same initially daily to tap the financial pulse and intervene as soon as inappropriateness is noticed. KPIs are used to measure and track the performance of a business or organization. Key performance indicators (KPIs) are widely used in healthcare to measure the efficiency and effectiveness of services provided. KPIs provide a focus for strategic and operational improvement, create an analytical basis for decision making and help focus attention on what matters most. Managing with KPIs often means working to improve leading indicators that will later drive lagging benefits. Leading indicators are precursors of future success; lagging indicators show how successful the organization was at achieving a result in the past. **The need** for KPIs in outpatient services arises from the increasing demand for quality healthcare services and the need to manage costs effectively. Measuring KPIs can help healthcare organizations identify areas for improvement and optimize resource allocation. **The importance** of KPIs in outpatient services is further highlighted by the growing trend towards value-based healthcare. Value-based healthcare emphasizes the need to improve patient outcomes while reducing costs.

REVIEW OF LITERATURE

Reviewing the previous literature brought out a message that To increase the efficiency of the decision-making process, a hierarchy of KPIs is recommended in terms of their impact on the performance of medical staff. The practical importance of our research consists in ranking KPIs on four clusters that support managers to focus on both the

human factor (clinical errors, infection rate, and medication errors) and the technical elements of maximum importance (laboratory test time, location of the facility, and sufficient air) Study by Adriana Burlea – Schiopoiu, Koudoua Ferhati (2020), says that The Managerial Implications of the Key Performance Indicators in the Healthcare Sector: A Cluster Analysis. Following, Quality Initiatives: Key performance indicators for Measuring and Improving the radiology department performance., by Hani H Abujudeh, Rathachal Kaewlai, Benjamin A Asfaw, James h Thrall (2010), says that Keyperformance indicators may be used to measure and improve radiology performance, monitor the health of a radiology organization, and track its progress in fulfilling its vision and achieving its long-term goals, In the future, radiology-specific KPIs such as those in use at the authors' institution may help provide a framework for measuring performance in radiology practice.

Jerome Ng, and Jeff Harrison (2010) had done research on, Key performance indicators for clinical pharmacy services in New Zealand public hospitals, and explained about the response rate was 43%. The top two ranked KPIs were concerning chart review and medication reconciliation. Only three of 52 KPIs were rated 'easily' measurable. No statistically significant differences were seen between professional groups or hospital sizes. The top-ranked KPIs reflected the pharmacist's central role in improving the individual patient's medicines use. Measurability appeared to be a major issue due to resource constraints. This study has provided the platform for future nationwide hospital clinical pharmacy KPIs. The following study Developing key performance indicators for a tertiary children's hospital network by Christopher Elliot, and Cheryl McCullagh (2018) says that. A structured approach to performance measurement and improvement is needed to ensure a balanced suite of KPIs that can be expected to drive an organisation to improve child health outcomes. Future directions for SCHN include a systematic approach to implementation beyond the mandated KPIs, including KPIs that reflect equity and improved outcomes for priority populations, development of meaningful measures for the aspirational KPIs, adding structure KPIs and measurement of changes in child health outcomes related to the development of this KPI process. Badria Al Rashid and Ahmed H. Al Wahaibi (2020) say that Performance across the KPIs exhibited a considerable variation between facilities, with workload and outcome performing lower than other components. The findings of this study offered a measure of internal strength that need to be sustained, challenges that require quality improvement initiatives, and

external factors such as social determinants that impact overall performance PHC. M.Ishaq Bhatti, Hassan Awan, and Z.Razaq (2014) a study says the overall performance of the manufacturing organizations was evaluated. The results show that manufacturing organizations put more focus on customer satisfaction and Delivery reliability in terms of performance measurement, And measuring the performance in terms of cost, finances, quality, time, flexibility, delivery reliability, safety, customer satisfaction, employees satisfaction and social performance indicators has a positive significant impact on the overall organization's performance. this study will serve as a valuable guideline for several manufacturing organizations operating in other developing countries of the world

OBJECTIVES

This study aims to understand the existing key performance indicators in OPD in multispecialty hospitals which help the hospital to gain more patient satisfaction. It also aids in To Identify the factors influencing KPI in Out-Patient Service. and if 'yes', then take appropriate measures to correct it.

RESEARCH METHODOLOGY

The research study is based on a quantitative approach in which the primary data has been collected through a structured questionnaire and also a standard checklist to assess the turnaround time in the outpatient department. The Standard questionnaire helped to general questions regarding their socio-demographic characteristics and also help to managerial aspect because of easy to identify the level of patient satisfaction while the checklist aimed to understand the time taken between every out-patient process of a patient. The data has been collected from March 01, 2023, to April 15, 2023, and recorded 90 responses by using a stratified sampling method. A sample choice is meant to be an unbiased representation of the total population. Descriptive analysis (Percentage Analyse, Weighted Average, Standard deviation, Chi-Square has been done for the collected data using SPSS Software to interpret the results.

DATA ANALYSIS AND RESULTS

1. PERCENTAGE ANALYSIS

As mentioned in **Table 1**, the majority of the respondents were Female (N=46) and Male (N=44). The frequency of visit, Follow-ups & Review are higher frequency (N=34), and the lower frequency of visit is more than three times (N=6)

GENDER	No. of Respondents	Percentage (%)
Male	44	48.9
Female	46	51.1
FREQUENCY OF VISIT	FREQUENCY	
Follow-up & Review	34	37.8
More than three times	6	6.7

Table 1- Demographic details and frequency of the visit

2. WEIGHTED AVERAGE

a) KPIs FOR PRE-CONSULTATION IN OPD SERVICE

As mentioned in **Table 2**, indicates that among 90 respondents the highest weighted average of 3.93 for healthcare providers is explaining the reason for medical tests. And the least weighted average is 3.23 for waiting time for a consultation after registration.

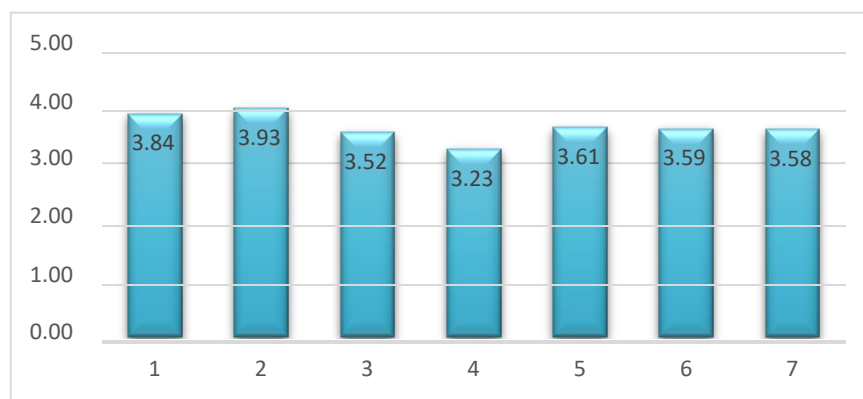


Table 2 – KPIs for Pre-consultation in out-patient services

b) KPIs FOR POST-CONSULTATION IN OPD SERVICE

Table 3, indicates that among 90 respondents the highest weighted average of 3.77 for guidance and information for patients about diagnostic procedures. And the least weighted average is 3.00 for well you are oriented about the medication.

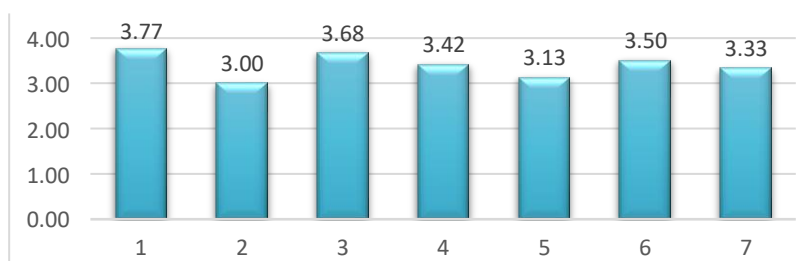


Table 3 - KPIs for Post-consultation in out-patient services³ CHI-SQUARE ANALYSIS

a) ASSOCIATION BETWEEN PERFORMING TASKS GUIDANCE AND INFORMATION FOR PATIENTS ABOUT DIAGNOSTIC PROCEDURES AND WAITING TIME FOR CONSULTANTS AFTER REGISTRATION

		Guidance and information for patient about diagnostic procedure					TOTAL
		Highly Dissatisfied	Dissatisfied	Neutral	Satisfied	Highly Satisfied	
Waiting time for a consultation after registration	Highly Dissatisfied	2	1	1	6	1	11
	Dissatisfied	0	3	7	1	1	12
	Neutral	0	2	8	13	4	27
	Satisfied	0	0	5	14	6	25
	Highly Satisfied	0	0	2	5	8	15
	TOTAL	2	6	23	39	20	90
p-value							.000

TABLE 4 - H1 is accepted. Since the significance value is less than p-value <0.05, there is a highly significant association between guidance and information for patients about diagnostic procedures and waiting time for consultation after registration.

b) ASSOCIATION BETWEEN PERFORMING TASKS GUIDANCE AND INFORMATION FOR PATIENTS ABOUT DIAGNOSTIC PROCEDURES AND WAITING TIME FOR DIAGNOSTIC TEST

		Guidance and information for patient about diagnostic procedure					
Waiting		Highly Dissatisfied	Dissatisfied	Neutral	Satisfied	Highly Satisfied	TOTAL
time for Diagnostic test	Highly Dissatisfied	2	1	1	0	0	4
	Dissatisfied	0	2	6	10	2	20
	Neutral	0	3	11	16	6	36
	Satisfied	0	0	4	11	5	20
	Highly Satisfied	0	0	1	2	7	10
	TOTAL	2	6	23	39	20	90
	p-value						

TABLE 5- H1 is accepted. Since the significance value is less than p-value <0.05 , there is a highly significant association between guidance and information for patients about diagnostic procedures and waiting time for diagnostic tests.

c) ASSOCIATION BETWEEN PERFORMING TASKS IN RESPONSE TO BILLING QUERIES AND TIME TAKEN AT THE BILLING COUNTER

		Response to billing queries					
Time	take	Highly Dissatisfied	Dissatisfied	Neutral	Satisfied	Highly Satisfied	TOTAL
nt Billing Counter	Highly Dissatisfied	3	1	1	0	0	5
	Dissatisfied	1	5	6	3	0	15
	Neutral	0	5	7	15	1	28
	Satisfied	0	0	2	3	8	13
	Highly Satisfied	0	0	2	3	8	13
	TOTAL	4	11	23	40	12	90
	p-value						

TABLE 6 - H1 is accepted. Since the significance value is less than p-value <0.05 , there is a highly significant association between guidance and information for patients about diagnostic procedures and waiting time for diagnostic tests.

4. STANDARD DEVIATION

a) TURN-AROUND TIME (TAT)

	TAT	TAT	Frequency
Average	89.442	0-20	2
Standard Deviation	38.608	20-40	6
Samples Size	90	40-60	13
		60-80	22
		80-100	19
		100-120	7
		120-140	8
		140-160	10
		160-180	2
		180-200	0
		200-220	1

TABLE 7 – Overall TAT

The table shows the overall TAT of the OPD process out of 90 patients, the highest frequency for 22 patients within 60-80mins, the lowest frequency for 1 patient within 200-220 mins

b) TIME BETWEEN VITAL CHECK AND CONSULTANT START TIME

Time interval	Frequency
0-10	35
10-20	25
20-30	10
30-40	5
40-50	2
50-60	3
60-70	2
70-80	0
80-90	6
90-100	1
100-110	1

	Time between vital check and consultant start time
Average	22.844
Standard Deviation	25.315
Samples Size	90

TABLE 8 – Time between vital check and Consultant start time

The above table shows the time between vital check and consultant start time out of 90 patients, highest frequency for 35 patients within 0-10mins, , lowest frequency for 1 patient within 100-110 mins.

DISCUSSION

KPIs are used to measure and track the performance of a business or organization. In the context of outpatient service, some important KPIs to consider include: Patient Satisfaction, Appointment availability, Average waiting time, Staff Utilisation, Patient referral Rate, Average cost per patient, etc, these all the factor will help to increase the efficiency level of operation in healthcare organisations. After this analysis, we understood that the least weighted average is 3.23 for the waiting time for a consultation after registration so that need the waiting time for a consultation after registration shall be reduced by providing an adequate number of consultants in place, responded where the least weighted average is 3.00 due to the concern, should to providing adequate training on medication orientation among the nursing staff and finally significance value is less than p-value <0.05 , and there is a highly significant association between competency in nursing services and waiting time for diagnostic tests, so that shall be improved on inter-departmental coordination and communication to make better outcomes and standard analysis show that of overall TAT of OPD process out of 90 patients, the highest frequency for 22 patients within 60-80mins, and the lowest frequency for 1 patient within 200-220 mins that mean that there is no deviation between the workflow process in the organization.

CONCLUSION:

It is concluded that there is overall operational efficiency in the Outpatient services in this hospital. There are a few concerns to be taken care such as; waiting time for a consultation after registration, diagnostic test and time taken at the billing counters. These concerns could be addressed by the Management by providing adequate manpower, Inter-departmental coordination and communication, and providing training to the employees, thereby, improving the quality of care and efficiency of the Outpatient department shall be improved.

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