LUX MENSANA

Volume 3, Issue 2, 2024
Page. 317-326

Original Research Article

PERFORMANCE MEASUREMENT USING THE BALANCED SCORECARD PERSPECTIVE OF CUSTOMER SERVICE AND INTERNAL BUSINESS PROCESSES ON THE PHARMACEUTICAL INSTALLATION PERFORMANCE OF KENDAL ISLAMIC HOSPITAL

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ABSTRACT

Introduction. Ensuring the quality of hospital services, quality control is carried out including monitoring and evaluation. One of the indicators is customer satisfaction and business processes aimed at measuring performance for the progress of the hospital. **Method.** This research used prospective observational research. **Result & Analysis.** Performance measurement of the Kendal Islamic Hospital Pharmacy Installation using the Balanced Scorecard method in terms of customer perspective with indicators of customer satisfaction and internal business process perspective with indicators of waiting time for concocted and non-concocted outpatient prescriptions, conformity of outpatient prescriptions with formularies, drug availability, and percentage of expired date and death stock drugs. **Discussion.** The results of the Balanced Score card approach in the Kendal Hospital Pharmacy Installation are "Fair" with an average score of 0.14. The customer perspective shows that patients are satisfied with the patient satisfaction index of 79.5%. Measurements from the perspective of internal business processes are quite good, the suitability of prescriptions with the formulary is 94.99%, the availability of drugs is 99.44% and death stock drugs are 1.08%, the waiting time for concocted drugs is 85.28% and non concocted 77.5%, expired drugs are 0.42%.

Keywords: Balanced Scorecard, Customer Satisfaction, Internal Business Processes

INTRODUCTION

Hospitals are the places that provide health services to the public. Because it requires a lot of funds, advanced technology, and manpower, it cannot only function as a social institution. Hospitals should also be managed like businesses that concern with social responsibility and management principles. Therefore, it is important for the organization to be thoroughly accountable for its performance, both in services and processes, while ensuring good standards of work and continuous quality improvement (Sulistyaningrum *et al.*,

2016). Efforts are needed to improve the quality and performance of hospitals in order to provide good services to the community. Balanced scorecard is a structured and comprehensive method as a management evaluation tool because it can measure from four aspects, which are finance, customers, service processes, and learning growth (Aprilliani, Kartinah and Hardiati, 2015).

Performance measurement is defined as assessment of various activities in the organizational value system that needs to adjust planning and control (Sarjono, Suprapto and Megasari, 2017). Top management wants to improve company performance, so attention should be focused on motivating employees to improve performance in non-financial or operational terms, because that is actually the long-term financial performance (Kaplan and Norton, 2004).

The balanced scorecard is very relevant in measuring the current performance of the pharmacy installation. This concept allows the pharmacy installation to analyze and identify management problems occurring, and understand its position compared to its competitors. In addition, the balanced scorecard can also be used to assess the success of the hospital (Fuada, 2020).

Research by Menna and Temesvari (2022) found that the main indicator used for customer perspective is customer satisfaction. From an internal business perspective, the main indicators are operations and innovation processes. While from the perspective of growth and learning, the main indicators are performance and productivity. The measurement method in the balanced scorecard is to assess each perspective in a balanced manner using their respective benchmarks. According to Sujatmiko (2013), the balance criteria are used to measure its strategic objectives are balanced across all perspectives. The scores in the balance criteria table are standardized scores that indicate "good" performance in all aspects of the company. Scores are given in the rating scale presented in Table 1.

Table 1. Rating Scale

Rating	Score
-1	Less
0	Fair
1	Good

Source: Mulyadi (2001)

The balanced scorecard method is very effective in measuring the performance of the current pharmaceutical installation. This measurement can provide an illustration of the performance of the pharmacy installation in Kendal Regency Islamic Hospital. Therefore, we can determine the performance achievements that have been achieved and use this information as a basis for improving performance in the future, so that the quality of service can be improved.

LITERATURE REVIEW

Public health development according to Health Law No. 17/2023 requires efforts to improve public health with principles such as welfare, equity, non-discrimination, participation, and sustainability. It aims to create quality human resources, reduce disparities, strengthen good health services, improve health resilience, ensure a healthy life, and improve the welfare and competitiveness of the nation to achieve national development goals (Indonesia, 2023).

Hospitals are places that provide complete healthcare to people. They provide inpatient, outpatient, and emergency services as regulated by the regulation of Health Minister No. 3/2020. Hospitals may care for patients for short or long periods of time depending on their medical needs. The main focus of hospitals is to provide effective diagnosis and treatment for patients with various medical conditions (Anandyta, 2020).

According to the regulation of the Indonesian Health Minister No. 72/2016 on pharmaceutical service standards in hospitals, hospital pharmacy installations are led by a pharmacist with the assistance of pharmaceutical staff who comply with legal requirements and have professional competence. They are responsible for all pharmaceutical work and services required by the hospital (Indonesia, 2016).

Performance is the result of implementing programs, activities, or policies to achieve the organization's goals, objectives, mission, and vision. This is referred to in the organization's strategic planning. According to some experts, performance also includes organizational achievements, both profit-making and nonprofit, within a certain time span (Moeheriono, 2009; Fahmi, 2017).

The definition of performance measurement based on Mahsun (2009) is the process of evaluating the progress of work against pre-determined goals. This includes evaluating the efficiency of using resources to produce goods and services, the quality of goods and services (how goods and services are delivered to customers and customer satisfaction), the achievement of activity results compared to the desired goals, and the effectiveness of actions in achieving these goals.

The balanced scorecard is a way of measuring the success of an organization by combining several performance measurement techniques. It involves four main perspectives which are financial, customer, internal business processes, and learning and growth (Nawawi, 2006). According to Luis and Bromo (2010), the balanced scorecard is a management tool that maintains a balance between financial and non-financial indicators, past, present, and future performance, and both internal and external indicators. This tool distinguishes indicators that are the causes (leading) and results (lagging) of organizational performance. The balanced scorecard also represents a clear cause-and-effect relationship. There are four perspectives in the balanced scorecard, which are financial, customer, internal business, and learning and growth. The measurement method in the balanced scorecard is to be balanced between these perspectives (Fuada, 2020).

METHOD AND ANALYSIS

This research is a non-experimental study and uses an observational descriptive approach. Quantitative data is presented in percentage form. Performance from the customer's perspective is measured through customer satisfaction, while from an internal business perspective it is measured by considering waiting time, drug availability, formulation compliance, percentage of dead stock, and expired drugs. The population in this research consisted of respondents, prescription sheets, and the number of drugs in the pharmacy installation of Kendal Islamic Hospital.

The population of respondents (patients or families of outpatients) to

measure patient satisfaction is 22,500 respondents within three months, based on an average of 300 patients per day for 25 days a month. The population of outpatient prescription sheets to see the internal business perspective was also 22,500 prescription sheets in three months, with an average of 300 prescriptions per day. While the population of the number of drugs measured to assess availability, formulation compliance, percentage of dead stock, and percentage of expired drugs at the Kendal Regency Islamic Hospital Pharmacy Installation includes 710 drug items.

RESULT

Performance measurement from the customer's perspective is conducted by assessing the satisfaction of patients who receive services at the Outpatient Pharmacy Installation. In order to evaluate patient satisfaction, a SERVPERF questionnaire consisting of 19 positive and negative statements from 5 quality aspects, which are reliability, responsibility, assurance, empathy, and physical reasonableness was used. Before the questionnaire was distributed to all samples, the questionnaire was tested for validity and reliability involving 30 patients. The reliability of the questionnaire was also tested on 30 outpatients. The reliability test results showed a Cronbach's Alpha value > 0.7, which was 0.910, indicating that the questionnaire was reliable for use.

The Results of Performance Measurement

Measuring the pharmacy installation performance of Kendal Islamic Hospital using balanced scorecard from two perspectives. First, from the customer's perspective by measuring customer satisfaction. Second, from the internal business process perspective by measuring the time spent waiting for outpatient prescriptions, whether compounded or not, compliance of outpatient prescriptions with the formulary, drug availability, and the percentage of expired drugs and in-stock.

Performance Measurement from Customer Perspective

Performance measurement from the customer's perspective is conducted by measuring outpatient satisfaction with services at the Outpatient Pharmacy Installation. Assessment of patient satisfaction using the SERVPERF questionnaire consisting of 19 positive and negative statements from 5 dimensions of quality, which are reliability, responsibility, assurance, empathy, and physical appearance, which have been tested for validity and reliability. Before being distributed to all samples, the questionnaire was tested for validity and reliability on 30 patients. The Patient Satisfaction Index is the result of a questionnaire distributed to 120 outpatients at the Kendal Islamic Hospital Pharmacy Installation. The highest score (Y) and the lowest score (X) of the assessment items are required to interpret the results with the following formula:

Y = Highest Score x Number of respondents

= 5 x 120 = 600

X = Lowest Score x Number of Respondents

= 1 x 120 = 120

Patient satisfaction index = Average Score / Y x 100

= 477/600 x 100 % = 79,5 %

After the calculation results with the index formula are obtained, the questionnaire satisfaction category is described in the Table 2 below:

Table 2. Customer Satisfaction Index Criteria

No	Index Value (100%)	Category
1	80%<satisfaction index≤100%	Very Satisfied
2	60%%<satisfaction index≤80%	Satisfied
3	40%%<satisfaction index≤60%	Quite Satisfied
4	20%%<satisfaction index≤40%	Less Satisfied
5	0%%<satisfaction index≤20%	Dissatisfied

Source: PT Sucofindo Consumer Survey Guide in Kartikawati (2008)

The patient satisfaction index value is 79.5%, which indicates that outpatients are satisfied with the services at the Pharmacy Installation. Based on the questionnaire, it was found that the lowest scores were in the aspects of physical evidence (uncomfortable waiting room) and reliability (long waiting time for medicine). Meanwhile, the highest score is in the aspect of assurance, which means that the knowledge, ability, and courtesy of pharmacy officers are good.

Performance Measurement from the Internal Business Process Perspective

The performance of the pharmacy installation is measured from the perspective of internal business processes using 5 indicators that include the percentage of waiting time for outpatient prescriptions for compounded and noncompounded drugs; the conformity of outpatient prescriptions with the approved drug list (formulary); the percentage of drug availability; and the percentage of expired drugs and dead stock.

1. The percentage of waiting time for outpatient prescriptions for compounded and noncompounded drugs

One of the indicators from the internal business process perspective is the waiting time for outpatient prescription services. Waiting time for drug services is divided into two categories, which are noncompounded drugs (non-recombinant) and compounded drugs (such as puffers, capsules, ointments). The results of the research on the waiting time for outpatient prescription services for compounded and noncompounded drugs during January - March 2022 are presented in Table 3 below.

Table 3. The Percentage of Waiting Time for Compounded and Noncompounded

No	Evaluation Item	Result (minutes) Average
1	Waiting Time for Prescription Medicine	**85,28**
2	Waiting Time for Non-compounded Medicine	**77,50**

Source: Primary Data Processed by Researchers

The results showed that the waiting time for compounded drugs for outpatients was 85.28% and the waiting time for non-compounded drugs was 77.5%. Both are still under the target set by the Kendal Islamic Hospital Pharmacy Installation, which is ≥ 90%. It means that the waiting time for compounded and noncompounded drugs has not reached a good standard. Similar to previous research, these results do not meet the minimum hospital standards (Hidayah, Amal and Hana Herdiani, 2021).

2. The conformity of outpatient prescriptions with the approved drug list (formulary) at Kendal Islamic Hospital

The next assessment indicator from the internal business process perspective is whether the outpatient prescription is in accordance with the hospital formulary. The results can be found in Table 4 and it indicates that the suitability is less compared to previous research (Nursanti and Heryani, 2021).

Table 4. Percentage of Prescription Conformity with Hospital Formulary

Evaluation Item	Result (%) Average
Conformity of Prescription with Hospital Formulary	**94,99**

Source: Primary Data Processed by Researchers

The result showed that the average percentage of conformity of outpatient prescriptions with the Kendal Islamic Hospital formulary during January to March 2022 was 94.99% and exceeded the target of the Kendal Islamic Hospital Pharmacy Installation indicator of ≥80%. It shows that doctors have complied with the SOP to write prescriptions in accordance with the hospital formulary.

3. The percentage of drug availability

The results of data processing on the percentage of drug availability at the Kendal Islamic Hospital Pharmacy Installation during January-March 2022 can be o in Table 5.

Table 5. Percentage of Drug Availability

Evaluation Item	Result (%) Average
Percentage of Medicine Availability	**99,44**

Source: Primary Data Processed by Researchers

From the results of data processing, the average percentage of drug availability from January to March 2022 at the Islamic Hospital Kendal Pharmacy Installation is 99.44%. This shows that the availability of drugs at the Kendal Islamic Hospital Pharmacy Installation is very good; the drug planning process in the procurement department is already good so there is only a small amount of empty drugs.

4. The percentage of expired drugs and dead stock

The percentage of expired drugs and drugs categorized as death stock at the Islamic Hospital Kendal Pharmacy Installation during January-March 2022 can be seen in Table 6.

Table 6. Percentage of Expired Medicines and Death Stock

No	Evaluation Item	Result Percent Average
1	Percentage of expired drugs	**0,42**
2	Percentage of Death Stock drugs	**1,08**

Source: Primary Data Processed by Researchers

From the following table it can be seen that the average percentage of expired drugs per month is 0.42%, which means that it exceeds the target set by the Islamic Hospital Kendal Pharmacy Installation

which is 0%. For drugs that are death stock, namely drugs that have not been dispensed for 6 consecutive months, the average percentage is 1.08%, which means that drugs that are not included in the death stock category are 98.92% and have exceeded the set target of ≥ 90%.

Performance Measurement with Balanced Scorecard

After the data on the results of measuring performance from a customer perspective and an internal business process perspective with their respective indicators are obtained, the next step is to assess whether the performance of the Kendal Islamic Hospital Pharmacy Installation is good or not. The assessment is carried out using interval size weights. Interval measures are used to rank objects based on certain attributes. The same interval or distance on the interval scale is considered to represent the same interval or distance on the object being measured. The number of items measured is 7, so the total score for "poor" performance is -7, the total score for "fair" performance is 0, and the total score for "good" performance is 7.

Table 7. Balanced Scorecard Assessment Score

	Score	Total Scor	Definition
Less	-1	-7	Achievement level below standard/target
Enough	0	0	Achievement level in line with standard/target
Good	1	7	Achievement level above the target standard

Source: Primary Data Processed by Researchers

The results of the performance assessment below are the result of analysis of the data presented. The assessment results on the customer perspective with the customer satisfaction indicator are a customer satisfaction index of 79.5% and are in the "satisfied" category and are given a score of 1 or “good.” In the Internal Business Process perspective with 6 indicators, the waiting time for compounded drugs is still below standard and is given a score of -1 or "less", as well as for the waiting time for non-prescribed drugs is still below standard and is given a score of -1 or less.” The indicator of the suitability of outpatient prescriptions with the hospital formulary has exceeded the standard and is given a score of 1 or "good", for drug availability has also exceeded the standard and is given a score of 1 or "good". Furthermore, the percentage of drugs that include dead stock has exceeded the standard and is given a score of 1 or "good". Then, the percentage of expired drugs is still below standard because there are still drugs that expire within 3 months of the study time and are given a score of -1 or "less". The performance measurement assessment score at the Islamic Hospital Kendal Pharmacy Installation can be seen in Table 8.

Table 8. Performance Assessment Score with Balanced Scorecard

No	Perspective	Criteria	Score
1	Customer Customer Satisfacti	Good	1
2	Internal Business Processes	Less	-1
	a. Waiting time for compounded medicine	Less Good	-1 1
	b. Non-prescription medicine lead	Good Good	1 1

	time	Less	-1
c.	Conformity of outpatient prescription with hospital formulary		
d.	Drug availability		
e.	Percentage of death stock drugs		
f.	Percentage of expired date drug		
Score			1

Source: Primary Data Processed by Researchers

The total weighted score of the Kendal Islamic Hospital Pharmacy Installation is 1 of the total standard weight, so the average score is 1/7 = 0.14. The next step is to create a scale to assess the total score so that the company's performance can be said to be "less", "sufficient" and "good". Then determine the boundaries of the "less", "enough" and "good" areas. A "less" score is less than 50% (score 0) and performance is said to be "good" if it is more than 80% and is assumed to be equal to 0.6. The rest is a sufficient area, which is between 0-0.6. The following is an image of the performance curve of the Kendal Islamic Hospital Pharmacy Installation (Figure 1).

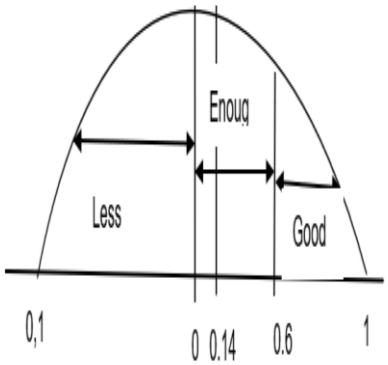

Figure 1. Kendal Islamic Hospital Pharmacy Installation Performance Curve
Source: Processed Data by Researchers

According to Figure 1, the Kendal Islamic Hospital Pharmacy Installation is rated "Adequate" because its average score (0.14) is in the range of 0-0.6.

CONCLUSION

Based on the results of research on measuring the performance of The Islamic Hospital Kendal Pharmacy Installation with the Balanced Scorecard method in terms of customer perspectives and internal business processes, it can be concluded that the results of measuring the performance of the Islamic Hospital Kendal Pharmacy Installation with the Balanced Scorecard method in terms of customer perspectives and internal business process perspectives are in the "Fair" category with an average score of 0.14. For the results of the performance of the Islamic Hospital Kendal Pharmacy Installation when viewed from a Customer Perspective, namely judging from customer satisfaction is good because the customer satisfaction index is 79.5%, which means that the patient is satisfied. While the results from the Internal Business Process perspective, namely for the percentage of waiting time for non-recombinant drugs are 77.5% and concoctions are 85.28% (still below the target ≥90%), the suitability of prescription writing for the hospital formulary 94.99% has exceeded the target (≥ 80%), the percentage of drug availability 99.44% and the percentage of expired drugs 0.42% which is less than the target (0%) and the number of drugs that are not categorized as death stock is 98.92% which has exceeded the target (≥90%).

ADVANCED RESEARCH

Research for Performance Effectiveness Using Balanced Scorecard on Pharmacy Installation at Kendal Islamic Hospital by Completing The Complete Perspectives, Namely Financial, Customer Perspective, Consumer Perspective, Internal Business Perspective, Learning and Growth Perspective.

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