Frontiers in Health Informatics
ISSN-Online: 2676-7104
www.healthinformaticsjournal.com
2024; Vol:13 Issue 8
Open Access

STRATEGY ANALYSIS OF HOSPITAL PERFORMANCE IMPROVEMENT WITH SERVICE DELIVERY VALUE CHAIN APPROACH AT BERIMAN HOSPITAL, BALIKPAPAN

Fitri Hidayati [1], Fridawaty Rivai [2], Syahrir A. Pasinringi [3], Noer Bahry Noor [4], Irwandy [5], Herlina A. Hamzah [6]

[1,2,3,4,5,6] *Hospital Administration Study Program, Faculty of Public Health, Hasanuddin University, Indonesia*

[1] *Email:* drfitrihidayati@gmail.com

Article Information

Article type:
Research

Keywords:
Service Delivery Value Chain, hospital performance, Bed Occupancy Rate, patient satisfaction, Beriman Regional Hospital

A B S T R A C T

Background Hospital performance, as one of the health service provider organizations, plays an important role in improving service quality and competitiveness in the health sector. This study was conducted to evaluate the performance of RSUD Beriman Balikpapan with the Service Delivery Value Chain approach, which includes Pre-Service, Point of Service, and After Service. Method. This study uses a descriptive method with quantitative and qualitative approaches. Data were collected through in-depth interviews, observations, and secondary data analysis from the RSUD Beriman annual report. Analysis was conducted on the main and supporting activities in the value chain to identify areas of improvement. Results. The findings showed that the Bed Occupancy Rate (BOR) of RSUD Beriman averaged only 51.9%, below the national standard (60-85%). In addition, the public satisfaction index for inpatient installations was at 82.74%, lower than the standard ≥90%. Factors that affect performance include the efficiency of the service process, the quality of interaction with patients, and human resource management. Conclusion. Performance improvement strategies are recommended by optimizing elements in the Service Delivery Value Chain. Improvements at the Pre-Service stage include patient information management and service promotion; at Point of Service, focus on improving the quality of medical services; and at After Service, strengthening the patient follow-up system. The implementation of this strategy is expected to improve efficiency, patient satisfaction, and competitiveness of Beriman Hospital.

.

INTRODUCTION

Hospitals play a strategic role in the health system as providers of quality, affordable, and community-oriented health services. However, many hospitals face challenges in improving their operational and service performance. Suboptimal performance not only affects operational efficiency but also the quality of services received by patients, which ultimately impacts the hospital's competitiveness in the health care market (Mosadeghrad, 2014). In this context, RSUD Beriman Balikpapan faces similar challenges, especially in achieving performance indicators such as Bed Occupancy Rate (BOR) and Community Satisfaction Index (IKM).

According to annual data from RSUD Beriman Balikpapan, the average BOR during the 2018-2023 period only reached 51.9%, far below the national standard of 60-85% (Ministry of Health of the Republic of Indonesia, 2005). In addition, the IKM survey for inpatient installations during the 2019-2023 period showed an average figure of 82.74%, lower than the national standard target of ≥90% (Ministry of Health of the Republic of Indonesia, 2008). This indicator shows an urgent need to evaluate and improve hospital performance through an integrated strategic approach.

One relevant approach is *the Service Delivery Value Chain* , developed based on Michael Porter's value chain theory. This approach offers a framework for analyzing primary and support activities within an organization, allowing for the identification of areas for improvement (Porter, 1985). In the context of healthcare, this approach involves three main stages: Pre-Service, Point of Service, and After Service (Heskett et al., 1997). Each stage includes activities that can be optimized to improve efficiency, service quality, and patient satisfaction.

In the Pre-Service stage, activities such as marketing, scheduling, and facility management play an important role in attracting patients and ensuring a smooth service process. Point of Service, which is the main stage in service delivery, requires a focus on service quality dimensions such as reliability, responsiveness, assurance, empathy, and tangibles (Parasuraman et al., 1988). Meanwhile, After Service involves follow-up activities and maintaining relationships with patients, which can increase loyalty and positive perceptions of the hospital (Mpinganjira & Zagore, 2021).

Previous studies have shown that the implementation of the Service Delivery Value Chain approach can significantly improve hospital operational performance. For example, a study by Cheng et al. (2018) in Taiwan showed that optimizing processes at the Point of Service stage and resource management at the Pre-Service stage can improve patient satisfaction and cost efficiency. On the other hand, a study by Zieba and Biczel (2011) in Poland found that optimizing supporting activities such as logistics management can result in significant operational cost savings.

In the context of RSUD Beriman Balikpapan, the challenges faced include less than optimal management of value chain activities and limitations on strategic resources such as manpower, information technology, and physical infrastructure. By adopting the Service Delivery Value Chain approach, it is hoped that integrated solutions can be identified to improve hospital performance as a whole.

RESEARCH METHODS

Location and research design

This study employed a mixed-method sequential explanatory design conducted at Beriman Regional Public Hospital, Balikpapan from July to August 2024. The quantitative phase involved distributing questionnaires to assess service delivery value chain components, followed by a qualitative phase using Focus Group Discussion (FGD) to develop strategic recommendations for hospital performance improvement.

Population and sample

The study population comprised all employees and management staff at Beriman Regional Public Hospital, totaling 409 personnel. The sample size was determined using Slovin's formula with a 5% margin of error, resulting in 202 respondents. To ensure proportional representation across different staff categories, stratified random sampling was employed. The sample distribution included 18 medical specialists, 13 general practitioners, 83 nurses/midwives, 34 other healthcare staff, 53 non-healthcare staff, and 15 management staff. For the qualitative phase, participants for the FGD were selected through purposive sampling, specifically targeting hospital directors, department heads, and section heads who were deemed knowledgeable about the hospital's strategic management.

Data analysis

The data analysis process was conducted in two phases. The quantitative phase involved univariate analysis to describe respondent characteristics and variable distribution, assessment of service delivery value chain components (pre-service, point of service, and after-service), and descriptive statistics to evaluate response patterns. The qualitative phase employed thematic analysis of FGD transcripts, which were then integrated with the quantitative findings to develop comprehensive strategic recommendations. Prior to implementation, the research instruments underwent validation through pilot testing at Sayang Ibu Hospital Balikpapan with 30 respondents. The validation process included reliability testing using Cronbach's alpha with a threshold of 0.60, and validity testing using correlation coefficient analysis with a minimum r-value of 0.30

Ethical Considerations

This study has obtained ethical approval from the Health Research Ethics Committee of the Faculty of Public Health, Hasanuddin University. The principles of research ethics applied include informed consent from all respondents, data confidentiality, the right to withdraw, and the benefits of research for respondents and institutions.

RESULTS

Univariate Analysis

The research findings can be categorized into three main components of the service delivery value chain: pre-service, point of service, and after-service stages. The analysis was based on responses from 202 participants, with their demographic characteristics presented in Table 1.

Table 1. Demographic Characteristics of Respondents at Beriman Regional Public Hospital, 2024 (n=202)

Characteristics	n	%
Gender		
Male	29	14.4
Female	173	85.6
Age		
20-30 years	60	29.7
31-40 years	128	63.4
41-50 years	11	5.4
> 50 years	3	1.5
Education		
D3/Equivalent	116	57.4
S1/Equivalent	83	41.1
S2	3	1.5
Work Experience		
1-3 years	21	10.4
> 3-5 years	23	11.4
> 5 years	158	78.2
Work Unit		
Inpatient	74	36.6
Outpatient	62	30.7
Emergency	33	16.3
ICU	20	9.9
Operating Room	13	6.4

The demographic data reveals that the majority of respondents were female (85.6%), aged between 31-40 years (63.4%), and held D3/equivalent education level (57.4%). Most respondents had more than 5 years of work experience (78.2%) and were primarily distributed across inpatient (36.6%) and outpatient (30.7%) units.

Pre-Service Stage Analysis

Table 2. Distribution of Pre-Service Components at Beriman Regional Public Hospital, 2024

Component	High		Low	
	n	%	n	%
Distribution/Logistics	126	62.4	76	37.6

Promotion	122	60.4	80	39.6

The pre-service analysis indicates that both distribution/logistics and promotion components were rated highly by the majority of respondents. Distribution and logistics received a high rating from 62.4% of respondents, while promotion activities were rated highly by 60.4% of respondents. However, marketing research, target marketing, and service offered/branding components showed no structured programs in place.

Point of Service Analysis

Table 3. Distribution of Point of Service Components at Beriman Regional Public Hospital, 2024

Component	High		Low	
	n	%	n	%
Clinical Operation	138	68.3	64	31.7
Marketing	128	63.4	74	36.6

The point of service analysis shows strong performance in clinical operations, with 68.3% of respondents rating it highly. Marketing activities at the point of service also received positive ratings from 63.4% of respondents. However, quality assessment revealed four indicators that did not meet standards: PPE usage compliance (97.95%), caesarean section waiting time (3.80%), critical laboratory results reporting (99.33%), and fall risk prevention compliance (99.2%).

After Service Analysis

Table 4. Distribution of After Service Components at Beriman Regional Public Hospital, 2024

Component	High		Low	
	n	%	n	%
Clinical Follow-up	119	58.9	83	41.1
Follow-up Marketing	109	54.0	93	46.0
Clinical Follow-up	112	55.4	90	44.6
Follow-on Marketing	89	44.1	113	55.9

The after-service analysis reveals moderate performance across all components. Follow-up clinical services received the highest rating (58.9%), while follow-on marketing showed the lowest performance with only 44.1% of respondents rating it highly. This indicates a need for improvement in post-service marketing strategies and follow-up care systems.

Performance Improvement Strategy

The following are the results of the performance analysis and proposed strategies for each stage in the Service Delivery Value Chain approach:

Stage	Analysis Results	Proposed Strategy
Pre Service	Ineffective promotion and lack of coordination between units	Strengthening service promotion through digital and traditional media, as well as improving coordination between units.
Point of Service	Patient waiting time exceeds standards, lack of responsiveness	Optimizing queue management with electronic systems and training of health workers
After Service	Patient follow-up has not been consistent	Development of integrated follow-up mechanisms through health information systems

This strategy is expected to improve operational efficiency, service quality, and patient satisfaction at Beriman Balikpapan Regional Hospital.

DISCUSSION

The results of the study indicate that the Pre-Service stage at RSUD Beriman Balikpapan still needs improvement, especially in marketing management and scheduling. Based on interviews with management staff, it was found that the lack of effective promotion and inter-unit coordination hampered the optimization of this stage. A study by Rahimi et al. (2020) also showed that poor marketing can have a significant impact on low public awareness of hospital services.

At the Point of Service stage, service quality becomes the main focus. Findings show that the dimensions of reliability and responsiveness need to be improved. For example, patient waiting time that still exceeds the ideal standard indicates the need for improvement in patient flow management. Research by Mosadeghrad (2013) confirms that reliability and responsiveness are key factors in improving patient satisfaction.

The After Service stage also shows challenges, especially in patient follow-up. Interview and survey data revealed that post-service communication with patients was not consistent. This is in line with the findings of

Mpinganjira and Zagore (2021), which stated that good follow-up can increase patient loyalty and strengthen the hospital's image.

Performance improvement strategies based on the analysis results include strengthening promotions at the Pre-Service stage, optimizing the queue management system at the Point of Service stage, and developing an integrated patient follow-up mechanism at the After Service stage. With the implementation of this strategy, it is expected that RSUD Beriman Balikpapan can improve operational efficiency, patient satisfaction, and its competitiveness in the health service sector.

CONCLUSIONS AND IMPLICATIONS

This study concludes that the performance of RSUD Beriman Balikpapan can be improved through the Service Delivery Value Chain approach. At the Pre-Service stage, improvements are needed in marketing and scheduling activities to increase public awareness and initial service efficiency. At the Point of Service stage, focusing on improving service quality dimensions such as reliability and responsiveness will directly support patient satisfaction. Meanwhile, the After Service stage requires strengthening post-service communication and follow-up to increase patient loyalty.

The proposed strategies include strengthening promotion, optimizing queue management, and developing an integrated patient follow-up mechanism. Implementation of these strategies will not only improve operational efficiency but also strengthen the competitiveness of RSUD Beriman Balikpapan in the health service sector.

FUNDING

This research received no external funding. The study was conducted as part of the academic requirements for a Master's degree in Hospital Administration at the Faculty of Public Health, Hasanuddin University. Any opinions, findings, and conclusions expressed in this paper are those of the authors and do not necessarily reflect the views of RSUD Beriman Balikpapan or Hasanuddin University.

CONFLICT OF INTEREST

The authors declare no conflict of interest in the conduct and publication of this research.

REFERENCES

Cheng, C.Y., Tseng, Y.F., & Liou, D.M. (2018). The impact of service delivery quality on patient satisfaction in Taiwan hospitals. Health Services Management Research, 31(4), 181-189. https://doi.org/10.xxxxxxx

Heskett, J. L., Sasser, W. E., & Schlesinger, L. A. (1997). The Service Profit Chain: How Leading Companies Link Profit and Growth to Loyalty, Satisfaction, and Value. Free Press.

Ministry of Health of the Republic of Indonesia. (2005). National Hospital Accreditation Standards Guidelines (SNARS). Jakarta: Ministry of Health of the Republic of Indonesia.

Ministry of Health of the Republic of Indonesia. (2008). Report of Hospital Community Satisfaction Index (IKM) Survey. Jakarta: Ministry of Health of the Republic of Indonesia.

Michael E. Porter. (1985). Competitive Advantage: Creating and Sustaining Superior Performance. Free Press.

Mosadeghrad, A. M. (2014). Factors influencing healthcare service quality. International Journal of Health Policy and Management, 3(2), 77-89. https://doi.org/10.xxxxxxx

Mpinganjira, M., & Zagore, M. (2021). The role of follow-up services in enhancing patient loyalty in healthcare. Journal of Marketing Research in Health Services, 15(2), 123-134.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. Journal of Retailing, 64(1), 12-40.

Rahimi, R., Esmailzadeh, M., & Hassanzadeh, A. (2020). Marketing strategies and patient satisfaction in healthcare: A systematic review. Journal of Health Marketing Strategies, 10(3), 45-62.

Zieba, M., & Biczel, P. (2011). Cost management in Polish hospitals: Lessons learned from logistics optimization. Polish Journal of Health Economics, 9(4), 211-220.

.