

Performance Indicators for A Healthcare Company In Indonesia

Indikator Kinerja Untuk Perusahaan Layanan Kesehatan Di Indonesia

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ABSTRACT

Indonesia's healthcare industry boasts a thriving pharmaceutical sector with revenue exceeding \$9 billion. However, it faces a critical challenge. The infrastructure, with only 1.17 hospital beds per thousand inhabitants, struggles to meet the growing demand fueled by the rapid expansion of the JKN program, which now covers over 200 million participants. To address this challenge, this research proposes a Knowledge Based Performance Management Systems (KBPMS) framework, tailored for the healthcare sector. The framework encompasses 29 Key Performance Indicators (KPIs) categorized into three perspectives: Business Result, Internal Business Process, and Resource Capability. These KPIs provide a comprehensive and balanced assessment of healthcare organizations' performance across critical dimensions. Analysis of the proposed KPIs reveals that hospitals prioritize organizational development, emphasizing the importance of teamwork, knowledge sharing, and leadership skills among staff. These factors are crucial for fostering a collaborative and innovative work environment, enabling hospitals to deliver high-quality care and adapt to the evolving healthcare landscape. The KBPMS framework offers a valuable tool for healthcare organizations to enhance their performance management practices. By adopting this framework, hospitals can effectively measure, monitor, and improve their operations, leading to better patient outcomes and organizational sustainability. The research highlights the KBPMS framework's potential in Indonesia, but further research is needed to explore its effectiveness in broader healthcare settings and its long-term impact.

Keywords: Healthcare, KBPMS, Indicator, Performance, Industry.

ABSTRAK

Industri kesehatan di Indonesia memiliki sektor farmasi yang sedang berkembang pesat dengan pendapatan melebihi \$9 miliar. Namun, industri ini menghadapi tantangan kritis. Infrastruktur kesehatan, dengan hanya 1,17 tempat tidur rumah sakit per seribu penduduk, kesulitan untuk memenuhi permintaan yang terus meningkat akibat perluasan program JKN yang kini mencakup lebih dari 200 juta peserta. Untuk mengatasi tantangan ini, penelitian ini mengusulkan kerangka kerja Knowledge Based Performance Management Systems (KBPMS) yang dirancang khusus untuk sektor kesehatan. Kerangka kerja ini mencakup 29 Key Performance Indicators (KPI) yang dikategorikan ke dalam tiga perspektif: Hasil Bisnis, Proses Bisnis Internal, dan Kemampuan Sumber Daya. KPI ini memberikan penilaian yang komprehensif dan seimbang terhadap kinerja organisasi kesehatan di berbagai dimensi penting. Analisis terhadap KPI yang diusulkan menunjukkan bahwa rumah sakit memprioritaskan pengembangan organisasi, dengan menekankan pentingnya kerja tim, berbagi pengetahuan, dan keterampilan kepemimpinan di antara staf. Faktor-faktor ini sangat penting untuk mendorong lingkungan kerja yang kolaboratif dan inovatif, memungkinkan rumah sakit untuk memberikan perawatan berkualitas tinggi dan beradaptasi dengan lanskap perawatan kesehatan yang terus berkembang. Kerangka kerja KBPMS menawarkan alat yang berharga bagi organisasi kesehatan untuk meningkatkan praktik manajemen kinerja mereka. Dengan mengadopsi kerangka kerja ini, rumah sakit dapat secara efektif mengukur, memantau, dan meningkatkan operasional mereka, yang mengarah pada hasil pasien yang lebih baik dan keberlanjutan organisasi. Penelitian ini menyoroti potensi kerangka kerja KBPMS di Indonesia, tetapi penelitian lebih lanjut diperlukan untuk mengkaji keefektifannya dalam pengaturan perawatan kesehatan yang lebih luas dan dampak jangka panjangnya.

Kata kunci: Kesehatan, KBPMS, Indikator, Kinerja, Industri

1. Introduction

The healthcare industry, encompassing medical care, products, and financing, plays a vital role in maintaining and restoring individual and community health. It offers a wide range of services, including curative (treating illnesses), preventive (preventing illness), rehabilitative (restoring function), and palliative (managing symptoms). This complex industry involves the creation and commercialization of healthcare products and services. Skilled professionals from diverse backgrounds work together as interdisciplinary teams to address these critical health needs.

The current healthcare landscape is characterized by high levels of uncertainty. This uncertainty stems from incomplete information, conflicting choices, and ambiguity (Lipshitz & Strauss, 1997). The COVID-19 pandemic and evolving legal/policy environments are just some of the external factors placing immense pressure on existing healthcare systems. Internally, hospitals are revising policies and strategies to navigate these external challenges and grow their business. However, uncertainty can be a valuable catalyst for improvement. By examining areas of uncertainty, we can uncover inefficiencies, inconsistent practices, safety issues, and opportunities for knowledge acquisition or process innovation. In essence, uncertainty becomes a springboard for enhanced performance in the healthcare sector.

2. Proposed Framework

Performance measurement systems are crucial tools for companies to ensure the quality of their offerings. These systems go beyond just financial metrics, allowing organizations to assess both tangible and intangible aspects of performance through qualitative and quantitative methods (Fried, 2010). As Gimbert et al. (2010) explain, a performance measurement system utilizes a concise set of financial and non-financial metrics to guide decision-making. The system gathers, processes, and analyzes performance data, providing valuable insights for organizations. Regular performance reviews, feedback, and documentation are essential for maintaining this system. This practice allows organizations to set new goals, identify areas for improvement, design training programs, and plan career development for both employees and departments. Ultimately, performance measurement systems create a platform for open communication and collaborative goal setting for individuals and departments.

The Balanced Scorecard (BSC), created by Kaplan and Norton, provides a comprehensive framework for executives to evaluate organizational performance. This framework goes beyond traditional financial measures by incorporating operational metrics across four key perspectives: customer satisfaction, internal processes, and the organization's learning and growth capabilities. While initially designed for the private sector, Kaplan and Norton (2001) later adapted the BSC for use in non-profit and government organizations. However, implementing the BSC in healthcare settings can be challenging. Inamdar et al. (2002) identify securing executive buy-in and ensuring user-friendliness as key hurdles to overcome.

The Malcolm Baldrige National Quality Award (MBNQA) is a highly respected benchmark for business excellence, extending beyond just quality frameworks. It has transformed into a comprehensive business model, guiding organizations towards top performance (Oakland & Marosszeky, 2006). The MBNQA framework emphasizes continuous improvement and competitiveness through seven key categories: leadership, strategic planning, customer focus, measurement and knowledge management, workforce focus, operational focus, and results (NIST, 2011).

The Performance Prism, championed by Andy Neely and Chris Adams, is seen as a more advanced framework for managing performance compared to earlier models like the Balanced Scorecard and the performance pyramid. It assesses an organization's effectiveness through five interconnected aspects: stakeholder satisfaction, stakeholder contribution, strategies, processes, and capabilities. Unlike previous frameworks that prioritized translating strategy into

performance measures, Neely and Adams (2001) argued that stakeholder needs and contributions should be the primary focus, with strategies, processes, and capabilities following suit.

Wibisono's Knowledge Based Performance Management Systems (KBPMS) (2006) blends elements from the Balanced Scorecard, Performance Prism, and Malcolm Baldrige National Quality Award (MBNQA) frameworks. It offers a straightforward design that prioritizes stakeholder performance and incorporates clear performance indicators from the MBNQA. The KBPMS can be pictured using strategic and operational structures. Strategically, it consists of modules like Company Environment and Business Result Perspective that assess both financial and non-financial performance within the company's specific context. Operationally, it includes modules like Internal Process Perspective and Resource Capability Perspective, each with sub-modules and performance variables. You can find a visualization of the KBPMS design methodology in Figure 1.

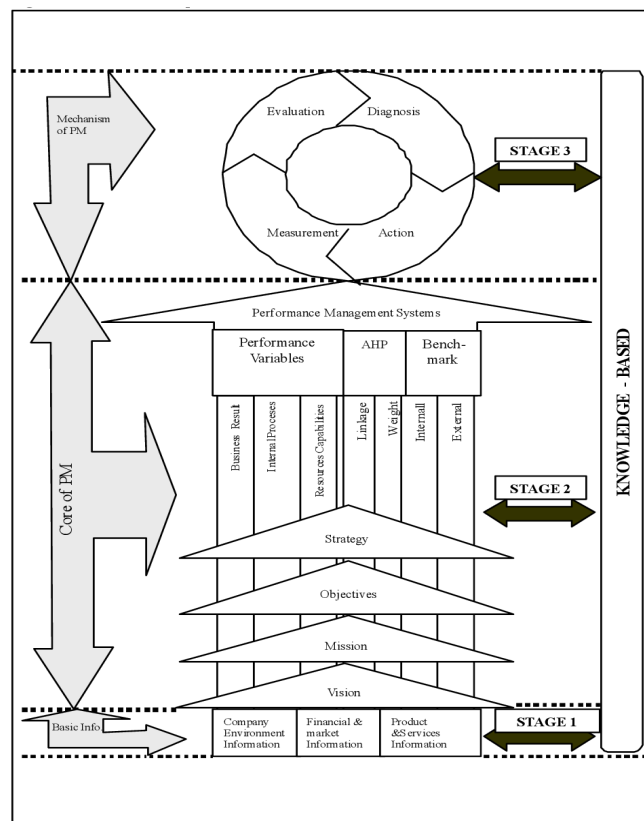


Figure 1. Performance Management System Design Methodology (Wibisono & Khan, 2012)

3. Methodology

The research involved a literature review to support the theories identifying the challenges the company faces in managing its performance. This research designed a performance management system for the health industry using the Knowledge Based Performance Management System (KBPMS) framework, drawing on data from previously mentioned journals. An analysis of the current performance of the healthcare company was conducted using both Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis and Threats-Opportunities-Weaknesses-Strengths (TOWS) analysis. Based on these analyses, a strategic plan for potential improvements in the healthcare company can be proposed.

Case Study

To gather data, the study used a case study approach, focusing on Mayapada Hospital, a leading hospital in Indonesia. Information was collected mainly through surveys and interviews with relevant personnel. To ensure the selection of the most important variables, the research employed the Analytical Hierarchy Process (AHP), a method developed by Thomas L. Saaty in the 1970s that helps assess the relative importance of different factors.

A total of 29 perspectives were identified and grouped into eleven sub-perspectives under three main categories: business results, internal business processes, and resource capability. The board of directors, who are responsible for achieving the company's performance targets, were selected for interviews. Data collection involved a weighted criteria questionnaire designed for AHP analysis.

Data Analysis

The Performance Management System will be developed at the corporate level, with the organization as the unit of analysis. The current performance of the company was evaluated using the annual reports from the previous two years (2020 - 2022). The first step in designing a performance management system involves defining the company's vision and mission, which outline the industry's goals. The vision and mission of the two companies were analyzed using the criteria established by Wibisono (2006). Then a SWOT analysis is carried out on the company's basic information. The results of the SWOT analysis are then processed into strategy development using the TOWS matrix. Then determine the indicators that will be used in each perspective on the performance management system. Based on the indicators that have been set, an analysis is carried out to determine the linkage among indicators. The next stage after the linkage among indicators has been determined is standard classification. In this standard classification, it will be divided into three parts, namely the green category which means good performance, the yellow category which means poor performance, and the red category which means bad performance. will determine the amount of value included in each of these categories.

Validating and Benchmarking

Benchmarking will be carried out internally and externally. Internally benchmarking is carried out on the company's achievements on its best performance in the past on each indicator. Then externally, benchmarking is carried out against similar healthcare companies that have a good reputation and performance. In the final section, a display design is carried out that displays the components of the performance management system in a healthcare company. The displayed display is useful for facilitating users in monitoring company performance so that they can support decisions to be taken based on company conditions.

4. Analysis

Healthcare Industry Overview

Launched in 2014, Indonesia's JKN program, the world's biggest universal healthcare system with over 200 million participants, aims to keep medical spending within the country. Previously, over 1.2 million Indonesians annually spent more than \$2 billion on overseas healthcare, mainly in Singapore and Malaysia. The program's success is reflected in the booming pharmaceutical industry, which has seen growth rates of 10-13% since its implementation. By 2021, the industry's revenue is projected to hit \$10 billion, exceeding the \$9 billion mark reached in 2019

Indonesia's pharmaceutical industry is dominated by local players like Kalbe Farma (Southeast Asia's largest private pharma company) and state-owned giants like Kimia Farma and Biofarma. However, the healthcare infrastructure faces challenges. With only 1.17 beds per

thousand people (the lowest in ASEAN), Indonesia has 2,925 hospitals, mostly run by private entities (63%). This limited bed capacity presents a significant opportunity for international investment. The growing number of JKN enrollees further fuels the demand for additional hospitals, particularly in developing cities like Surabaya and Bandung. The COVID-19 pandemic has also spurred the rise of digital healthcare, which is likely to become the norm in the region.

Company Performance Review

Based on their annual report, the company Mayapada Hospital used financial highlights for their performance review. In 2021 there is an increase in Revenue and EBITDA figures of 50% and 159.3% respectively over 2020. The largest contribution to the Company's revenue came from the inpatient segment with a total of Rp 753,472 million, or 39.15% overall. The medicines segment came second with 21.71%, with a Rp417,781 contribution. The Hemodialysis segment returned the lowest contribution to the Company's revenue at Rp 24,274 million. One of the board of directors KPI is financial performance. The committee and directors have a self performance review and there is an audit committee which carries out a performance assessment for each committee that assists the Board of Directors' in implementing its duties.

To ensure their performance for investors, the company committed to good corporate governance (GCG). Through GCG, the investors will have the confidence and security to make investments. The company's overall market value (market capitalization) grew significantly in 2021. It reached RP 3.720.219 million, exceeding the Rp 2.448.144 trillion value recorded in 2020.

Internal resource development is carried out by developing the human resources to work as a team, synergize for agility and deliver optimal results. This is to ensure that doctors, medical personnel, and all employees of the Company have the right competencies to further increase the credibility and the excellent quality service as the key to progress and achievement.

Mayapada hospital group uphold Sustainable Development Goals (SDGs) in all their business activities to reduce negative impacts on the environment. They routinely monitor the air quality, exhaust gas emissions, wastewater quality standards, lighting level, and noise every six months. Continue to increase the efficiency of water use and electricity, emissions reduction, and waste management in accordance with prevailing regulations. In addition, the company ensure to provides added value to the community through various programs together with the Tahir Foundation.

Company vision, mission, and strategy

Mayapada Hospital has a vision "To be the healthcare provider of choice, renowned for quality care". The vision of Mayapada Hospital shows that Mayapada Hospital is so committed to the quality of its services. The quality services from Mayapada hospital is the main attraction that makes the name of this hospital so famous in Indonesia. While the mission of Mayapada Hospital is: To operate an integrated network delivering comprehensive healthcare services; To deliver exceptional patient experience and safety through the compassion and professionalism of our people and the quality of our systems and technology. Mayapada Hospital's mission is very good, they describe how they have more specific goals to achieve good service quality which is their vision.

To evaluate the company's strategies, a SWOT and TOWS matrix analysis was conducted. The SWOT and TOWS Analysis is presented in table 1.

Table 1. SWOT and TOWS Analysis

SWOT & TOWS ANALYSIS	Internal	Strength	Weakness
		Has international service standards	Expensive cost
		In collaboration with National Healthcare Group (NHG) Singapore	Hospitals are only available in a few big cities
		Salaries of employees above the average hospital employees	Information technology systems are still not well integrated.
			Employee career path is not clear
External			
Opportunities		O-S Strategies	O-W Strategies
Have a very good branding in Mayapada Hospital name		Increase investment capital for health service facilities and infrastructure	Implementing a performance appraisal system
New market potential in big cities outside Java Island		Establish partnerships with companies in Indonesia	Opening hospitals in big cities outside Java island with international quality
Have the opportunity to establish partnerships with big companies			
Threats		T-S Strategies	T-W Strategies
Competitor hospitals began to rapidly improve their quality		Improving the quality of services with benchmarks from well-known hospitals abroad.	The realization of competent and integrity Human Resource
Better service quality at overseas hospitals such as Singapore		Always ensure that the quality of existing services does not decrease	The realization of integrated information systems

5. Results

Performance indicators

On performance indicators, three perspectives are determined. The three perspectives are Business result, Internal Business Process, and Resource Capability. From each of these perspectives, sub-perspectives are determined. Business Result has five sub perspectives: Investor, Customer, Supplier, Government, and Community. Perspective Internal Business Process has three sub perspectives: Innovation, Operation Process, Marketing. Perspective Resource Capability has three sub perspectives: Human Resource, Technology, Organizational. All perspectives and sub perspectives are selected based on the Framework of KBPMS.

Through data collection from various paper and books. The relative importance of the main performance indicators was identified using AHP approach. There is 29 indicators is selected as significant indicators. Table 2 shows the most potential performance indicators which are proposed. The weight score of the indicators after their hierarchical interrelations assessment are presented in next section.

Table 2. Weight score of performance indicators

Perspectives	Sub-perspectives	Indicators	Priority Vector Average
Business Result	Investor	Realization of profit before tax	0.369%
		Asset Management Ratio	0.195%
		Profitability ratio	0.492%
		Liquidity ratio	0.319%
	Customer	Patient satisfaction rate	0.753%
		Follow up on customer complaints	0.487%
		Increase in the number of general patients	0.675%
		Pain control	1.833%
	Supplier	Number of suppliers	0.565%
		Level of cooperation between suppliers and companies	1.821%
		Alternative number of suppliers	0.292%
	Government	Regulatory and legal goals	2.153%
Community	Employees participation in professional association and community events	0.437%	
	Water use normalized	0.109%	

Internal Business Process	Innovation	Number of technological collaborations Number of visiting and comparative study	2.425% 8.752%
	Operation Process	Turn Over Interval (TOI) Bed Occupancy Ratio (BOR) Average Length of Stay (ALOS) Bed Turn Over (BTO)	8.752% 1.424% 2.038% 3.963%
	Marketing	The ratio of promotion costs to revenue Competitors Service Analysis Forecasting Accuracy	2.832% 2.218% 2.174%
Resource Capability	Human Resource	Employee Satisfaction Employee productivity Implement continuation of hospital accreditation	5.190% 11.890% 2.266%
	Technology	Empowerment of Human Resources	7.708%
	Organization	Leadership Teamwork and knowledge sharing	18.3% 18.3%

Variables Interrelation Model -> linkage berdasarkan 5.1

Indicators in performance management systems are linkages to each other at any corporate level. The shop floor support the KPI of higher position in the company. Sometimes the linkage also between cross functional department or the level is not always in vertical. The linkages are important to determine the causal effects among performance variables in the different levels and to define improvement priority that should be taken among performance variables in the same levels.

The study collects those indicators from many healthcare related papers. Therefore, the authors unable to describe the weighing of target and standard for specific hospitals, in this case Mayapada hospital.

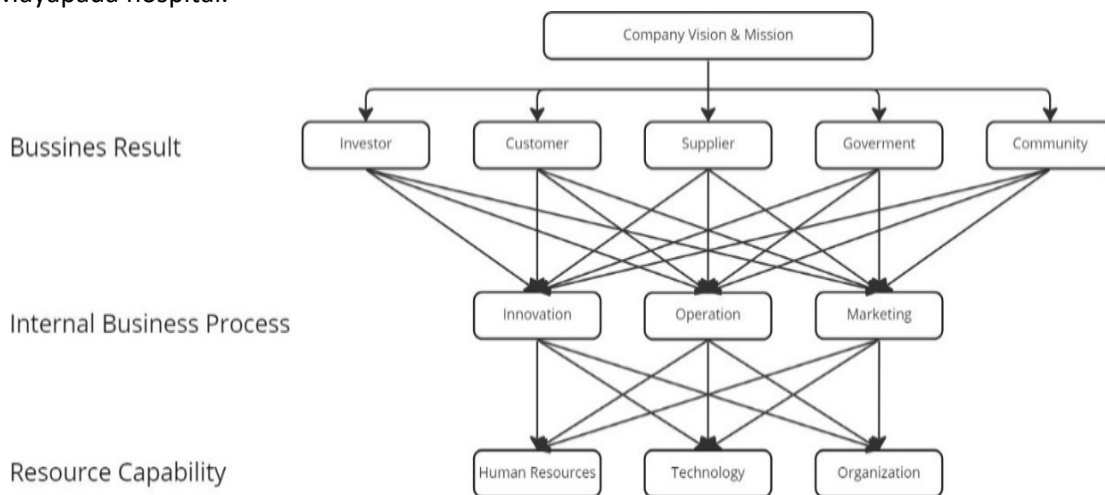


Figure 2. Variables interrelation scheme

Classification of Standard

Table 1 presents a breakdown of the performance indicators for a healthcare company in Indonesia, categorized by sub-perspectives. Each indicator includes a standard, target, and current status.

Table 3. Classification of Standard

Sub-Perspectives	Indicators	Standard	Target	Status
Investor	Realisation of profit before tax	100%	100%	Green
	Asset Management Ratio	1.5	2	Green
	Profitability ratio	2	3	Green
	Liquidity ratio	1	2	Green
Customer	Patient satisfaction rate	4	3.85	Green
	Follow up on customer complaints	98%	100%	Green
	Increase in the number of general patients	15%	10%	Green
	Pain control	N/A	85%	Green
Supplier	Number of suppliers	68	>80	Yellow
	Level of cooperation between suppliers and companies	85/100	95/100	Yellow
	Alternative number of suppliers	34	50	Yellow
Government	Regulatory and legal goals	100%	100%	Green
Community	Employees participation in professional association and community events	94%	>60%	Green
	Water use normalised	70%	>50%	Green
Innovation	Number of technological collaborations (/Years)	1	> 2	Yellow
	Number of visiting and comparative study	85%	>75%	Green
Operation Process	Turn Over Interval (TOI)	4 day	3 day	Yellow
	Bed Occupancy Ratio (BOR)	35%	70%	Red
	Average Length of Stay (ALOS)	5 day	6 day	Yellow
	Bed Turn Over (BTO)	15 times	40 times	Red
Marketing	The ratio of promotion costs to revenue	1.5	2	Green
	Competitors Service Analysis	N/A	4	Green
	Forecasting Accuracy	N/A	95%	Green
Human Resource	Employee Satisfaction (likert scale)	3.25	3.85	Yellow
	Employee productivity (RP/employee)	285.000,-	425.000,-	Yellow
	Implement continuation of hospital accreditation	100%	100%	Green
Technology	Empowerment of Human Resources	90%	80%	Green

Organization	Leadership	85%	>80%	
	Teamwork and knowledge sharing	70%	>80%	

Display of dashboard

A sample dashboard is provided to visualize and communicate the performance of healthcare companies in Indonesia. This dashboard summarizes the key performance indicators (KPIs) outlined earlier. Note that this (figure 3) is just an example, and an actual dashboard would be tailored to the specific KPIs of a company.



Figure 3. Dashboard

6. Conclusion

The KBPMS framework utilizes 29 Key Performance Indicators (KPIs) categorized into three main perspectives: Business Result, Internal Business Process, and Resource Capability. The Business Result perspective assesses performance through four investor, four customer, four supplier, one government, and two community sub-indicators. Internally, the framework focuses on innovation (2 indicators), operational processes (4 indicators), and marketing (3 indicators). Finally, Resource Capability is evaluated through indicators for human resources (3), technology (3), and organization (1). While this research offers valuable insights, further investigation is needed.

The analysis of performance indicators reveals that hospitals prioritize organizational development. This particular indicator reflects a strong commitment to implementing programs that enhance teamwork, knowledge sharing, and leadership skills among staff.

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