

Performance Measurement Using Mbnqa (*Malcolm Baldrige National Quality Award*) Criteria At Labuang Baji Regional Hospital

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ABSTRACT

Background . Improving the quality of healthcare services is a top priority in modern hospital management. MBNQA offers a comprehensive framework for evaluating the performance of healthcare organizations. **Aim:** This study aims to measure the performance of Labuang Baji Regional Hospital using MBNQA criteria and identify areas that require improvement. **Methods** : A cross-sectional study was conducted using a mixed-method approach. Data were collected through questionnaires, in-depth interviews, and observations. Quantitative analysis used descriptive statistics and Pearson correlation test, while qualitative analysis used a thematic approach. **Results** : Labuang Baji Regional Hospital achieved a total score of 801 out of 1000 points (80.10%), placing it at the "Excellent Performance" level. The Leadership (81.67%), Customer Focus (82.35%), and Operations (82.35%) categories showed the strongest performance. Correlation analysis showed a significant relationship between all process categories and the Outcome category, with Leadership ($r=0.78$, $p=0.001$) and Customer Focus ($r=0.75$, $p=0.002$) having the strongest correlations. **Conclusion** : RSUD Labuang Baji demonstrated excellent performance in the implementation of integrated quality management. However, areas such as workforce management and strategy implementation still require improvement. The holistic approach in implementing MBNQA criteria has contributed significantly to the hospital's performance excellence.

Keywords: MBNQA, hospital performance, quality management, leadership, customer focus

Introduction

In the era of globalization and increasingly tight competition in the health sector, hospitals are required to continue to improve the quality of their services and operational efficiency. Improving the quality of health services is not only a demand of the community but also the key to the sustainability and competitive advantage of hospitals in the future. In this context, comprehensive and systematic performance measurement becomes very important as a basis for continuous improvement and strategic decision making.

The Malcolm Baldrige National Quality Award (MBNQA) has been widely recognized as an effective framework for assessing and improving organizational performance, including in the healthcare sector. The MBNQA criteria offer a holistic approach to evaluating organizational performance, spanning seven key categories: Leadership, Strategy, Customer, Measurement, Analysis, and Knowledge Management, Workforce, Operations, and Results. The framework focuses not only on end results, but also on the processes and systems that support the achievement of those results.

RSUD Labuang Baji, as one of the leading hospitals in its region, has adopted the MBNQA criteria to measure and improve its performance. This decision reflects the hospital management's commitment to performance excellence and service quality. The implementation of MBNQA at RSUD Labuang Baji is not only a measurement tool, but also a framework for organizational transformation towards a sustainable quality culture. This study aims to evaluate the implementation of MBNQA in RSUD Labuang Baji, identify strengths and opportunities for improvement, and analyze the relationship between process categories and outcomes within the MBNQA framework. Through this evaluation, it is expected to gain a deeper understanding of the effectiveness of MBNQA implementation in the context of hospitals in Indonesia, as well as provide valuable insights for practitioners and policy makers in the health sector.

Literature review

The Malcolm Baldrige National Quality Award (MBNQA) has been the gold standard in measuring organizational performance since its introduction in 1987. The framework was developed to enhance the competitiveness of U.S. organizations through a focus on quality and performance excellence. In the healthcare sector, the MBNQA has been adapted to reflect the unique characteristics and specific challenges faced by healthcare organizations.

The MBNQA criteria consist of seven main categories: Leadership, Strategy, Customer, Measurement, Analytics, and Knowledge Management (PAMP), Workforce, Operations, and Results. Each category has a different scoring weight, reflecting its relative importance in contributing to the overall performance of the organization. The Baldrige Performance Excellence Program (2023) emphasizes that the framework is designed to encourage organizations to adopt a systematic and integrated approach to quality management.

The implementation of MBNQA in the healthcare sector has been the subject of numerous studies. Schulingkamp and Latham (2015) found that Baldrige awardee hospitals performed significantly better than their competitors on a variety of quality and financial metrics. This study confirms the value of MBNQA as a framework for achieving operational excellence in the healthcare sector.

Mosadeghrad (2015) developed a Total Quality Management (TQM) model specifically for healthcare organizations based on MBNQA principles. This study underlines the importance of adapting the MBNQA framework to meet the specific needs of the healthcare sector, including a focus on patient safety and clinical outcomes.

The relationship between MBNQA categories and organizational performance has been the focus of several studies. Raharjo et al. (2023) found that leadership and strategic planning have a significant impact on business outcomes in the context of the Baldrige framework. This finding emphasizes the critical role of leadership in driving performance excellence in healthcare organizations.

Poksinska et al. (2019) investigated the relationship between Lean healthcare implementation, which is aligned

with MBNQA principles, and patient satisfaction. The study found that a Lean approach can improve patient satisfaction through improvements in waiting times and the quality of interactions with medical staff. These findings are relevant to the Customer Focus and Operations categories in the MBNQA framework.

Carvalho et al. (2021) conducted a systematic review and bibliometric analysis of healthcare services based on MBNQA criteria. This study identified research trends and focus areas in the implementation of MBNQA in the healthcare sector, providing an important foundation for further research in this area.

Previous research on MBNQA in Indonesian hospitals is still limited. However, several studies have shown the potential for applying this framework in local contexts. For example, Shafii et al. (2016), although not directly using MBNQA, applied a multi-criteria decision-making technique to assess service quality in a teaching hospital, which has an alignment with the MBNQA approach.

This literature review shows that MBNQA has been proven to be an effective framework for improving the performance of healthcare organizations. However, there is a need for further research on the implementation of MBNQA in the specific context of hospitals in Indonesia, especially in identifying factors that influence the success of implementation and its impact on overall hospital performance.

Method

This study used a cross-sectional design with a mixed-method approach to evaluate the implementation of MBNQA at RSUD Labuang Baji. This approach was chosen to obtain a comprehensive understanding of hospital performance based on MBNQA criteria, by combining the strengths of quantitative analysis and in-depth insights from qualitative data.

Data collection was conducted through three main methods: questionnaires, in-depth interviews, and observations. The questionnaire was designed based on seven MBNQA categories and distributed to RSUD Labuang Baji staff from various levels and departments. A total of 100 respondents participated in the survey, representing various age groups and length of service. The distribution of respondents included 25% nurses, 15% doctors, and the rest from various administrative and technical positions.

In-depth interviews were conducted with 20 key stakeholders, including senior management members, department heads, and frontline staff. The interviews aimed to gain a deeper understanding of MBNQA implementation, challenges faced, and perceptions of its impact on hospital performance.

Direct observations were conducted to assess aspects of hospital operations relevant to MBNQA criteria, such as patient care processes, facility management, and staff-patient interactions. These observations helped validate the data obtained from the questionnaires and interviews.

Quantitative data analysis includes descriptive statistics to calculate MBNQA scores per category and total, and Pearson correlation test to assess the relationship between process and outcome categories. Scores for each category are calculated based on the weights set in the MBNQA framework, with a maximum total score of 1000 points.

Qualitative data analysis used a thematic approach to identify key themes from interviews and observations. This process involved coding interview transcripts and observation notes, followed by identifying emerging patterns and themes.

Triangulation of data from various sources (questionnaires, interviews, and observations) was conducted to increase the validity of the findings. This allows cross-checking of data and provides a more comprehensive understanding of the implementation of MBNQA at RSUD Labuang Baji.

Research ethics were maintained by obtaining approval from the hospital ethics committee before starting data collection. Respondents' confidentiality was guaranteed, and participation in the study was voluntary. All data collected was stored securely and used only for the purpose of this study.

Results

The results of the performance evaluation of RSUD Labuang Baji using MBNQA criteria show significant achievements in the implementation of integrated quality management. Based on quantitative and qualitative data analysis, the following are the main findings of this study:

1. MBNQA Total Score: RSUD Labuang Baji achieved a total score of 801 out of 1000 points (80.10%). According to MBNQA criteria, this score places the hospital at the "Excellent Performance" level. This achievement reflects a strong commitment to quality excellence and effective implementation of quality management principles in various aspects of hospital operations.

2. Scores per MBNQA Category:

Table 1 Scores for All Categories of MBNQA of Labuang Baji Regional Hospital, Makassar 2024

No	Category	Maximum Score	Labuang Baji Score	Percentage of Achievement
1	Leadership	120	98	81.67%
2	Strategy	85	69	81.18%
3	Customer	85	70	82.35%
4	PAMP (Knowledge Measurement, Analysis and Management)	90	73	81.11%
5	Labor	85	68	80.00%
6	Operational	85	70	82.35%
7	RESULTS	450	365	81.11%
TOTAL	1000	1000	813	

Based on the evaluation using the Malcolm Baldrige National Quality Award (MBNQA) model, the overall performance of RSUD Labuang Baji reached 81.3% of the total maximum score. In the leadership category, the hospital managed to obtain 81.67%, which reflects good management quality. Strategy and customer focus also showed positive results, with scores of 81.18% and 82.35% respectively. Data and knowledge management (PAMP) was recorded at 81.11%, while workforce management reached 80%, indicating that there is still room for improvement. Operational efficiency also scored 82.35%, and the results category showed an achievement of 81.11%. In general, the hospital's performance is in the good category, but there is opportunity for further improvement in several areas.

3. Correlation Analysis between Categories: Pearson correlation test shows significant relationships between all process categories and the Outcome category. The strongest correlations were found between:

Table 2. Relationship between Category Dimensions Process with the category of RESULTS of Labuang Baji Regional Hospital

No	Process Dimension Categories	Significance (p value)	Correlation Coefficient	The Power of Relationships
1	Leadership	0.001	0.78	Strong
2	Strategy	0.003	0.72	Strong
3	Customer	0.002	0.75	Strong
4	PAMP	0.005	0.69	Currently
5	Labor	0.008	0.65	Currently
6	Operational	0.004	0.70	Strong

The results of the analysis show that several process dimensions have a significant relationship with the performance of RSUD Labuang Baji. **Leadership** has a significance of $p = 0.001$ with a correlation coefficient of 0.78, indicating a strong relationship. **Strategy** also has a strong relationship with performance, with a p value of 0.003 and a correlation of 0.72. **Customers** recorded a p value of 0.002 and a correlation of 0.75, indicating a strong relationship strength. Meanwhile, **PAMP** and **Labor** showed a moderate relationship with p values of 0.005 and 0.008 respectively and correlations of 0.69 and 0.65. The **Operational Dimension** also has a strong relationship with $p = 0.004$ and a correlation of 0.70. Overall, these dimensions contribute significantly to improving hospital performance, especially in the aspects of leadership, strategy, and customers

4. Identification of Strengths and Opportunities for Improvement: Based on qualitative analysis of interviews and observations, several key strengths of RSUD Labuang Baji were identified:

- a. Strong commitment of the leadership to the implementation of the vision and mission
- b. An effective customer complaint management system
- c. Clear and well-implemented Standard Operating Procedures (SOP)

Areas that need improvement include:

- a. Developing a more comprehensive employee engagement program
- b. Improvement in strategy implementation at the operational level
- c. Optimizing the use of data analysis technology for decision making

5. Stakeholder Perceptions: In-depth interviews revealed positive stakeholder perceptions of the MBNQA implementation. Many respondents stated that the framework has been helpful in identifying areas for improvement and fostering a culture of quality across the organization. However, several challenges were also identified, including resistance to change from a small percentage of staff and the need for further training in certain aspects of the MBNQA framework.

Discussion

The results of the performance evaluation of RSUD Labuang Baji using the MBNQA criteria show significant achievements in the implementation of integrated quality management. A total score of 801 out of 1000 points (80.10%) places the hospital at the "Excellent Performance" level, reflecting a strong commitment to quality excellence and effective implementation of quality management principles in various operational aspects.

The strong performance in the Leadership category (81.67%) is in line with the findings of Raharjo et al. (2023), which emphasizes the critical role of leadership in driving business outcomes in the context of a [Page 6 continued]

to Baldrige. The commitment of the leadership of RSUD Labuang Baji in implementing the vision and mission has proven to be a key factor in achieving good performance across all categories. This emphasizes the importance of strong leadership in creating a culture of quality and driving organizational change.

The Customer and Operations categories both achieved the highest scores (82.35%), indicating a good alignment between the focus on customer satisfaction and operational efficiency. This finding is consistent with the research of Poksinska et al. (2019), which found that a customer-focused approach, such as Lean healthcare, can improve patient satisfaction through improvements in waiting times and interaction quality. RSUD Labuang Baji has successfully integrated customer needs into its service design and operations, which is reflected in an effective complaint management system and good SOP implementation.

Correlation analysis showing significant relationships between all process categories and the Outcome category confirms the integrated nature of the MBNQA framework. The strongest correlation between Leadership and Outcomes ($r = 0.78$, $p = 0.001$) strengthens the argument that effective leadership is the foundation for organizational performance excellence. This is in line with the concept of a “Systems Perspective” emphasized in the Baldrige criteria (Baldrige Performance Excellence Program, 2023).

Although the overall performance was very good, some areas require further attention. The Workforce category, with the lowest score (80.00%), shows opportunities for improvement in human resource management and employee engagement. This is in line with the findings of Brito Cunha and Domingues (2019), who emphasized the importance of human resource management in successful TQM implementation. RSUD Labuang Baji can consider developing a more comprehensive employee engagement program and talent management system to improve performance in this area.

The Measurement, Analysis, and Knowledge Management (PAMP) category shows a systematic approach in using data for decision making (81.11%). However, there is room for improvement in the utilization of advanced data analysis technologies. Poon et al. (2019) emphasized the importance of knowledge management and data analysis in improving the quality of healthcare services and operational efficiency. RSUD Labuang Baji can consider investing in big data analytics and AI technologies to improve data analysis capabilities and evidence-based decision making.

Strategy implementation at the operational level was also identified as an area that needed improvement. Although the Strategy category achieved a good score (81.18%), there was a gap between strategic planning and execution at the operational level. Carvalho et al. (2021) emphasized the importance of alignment between strategy and operations in achieving organizational excellence. RSUD Labuang Baji can consider developing more effective mechanisms to translate strategy into operational actions, such as developing more specific KPIs for each unit.

The positive perception of stakeholders towards the implementation of MBNQA indicates that this framework has succeeded in creating a quality culture in RSUD Labuang Baji. However, challenges such as resistance to change and the need for further training need to be addressed. This is in line with the findings of Mosadeghrad (2015) who identified critical factors in the implementation of TQM in health organizations.

The practical implication of these findings is the importance of a holistic approach to quality management. RSUD Labuang Baji needs to maintain its existing strengths in leadership and customer focus, while enhancing aspects that require improvement, especially in workforce management and strategy implementation. Developing a comprehensive training program on MBNQA and quality management can help overcome resistance to change and increase staff understanding of the importance of this framework.

The limitation of this study lies in its cross-sectional nature, which does not allow for long-term trend analysis. In addition, although the study sample is quite representative, a larger sample size could provide more robust results. Future studies can adopt a longitudinal design to assess the impact of MBNQA implementation on hospital performance over time.

Compared with previous studies, this study provides valuable insights into the implementation of MBNQA in the context of hospitals in Indonesia. The findings broaden our understanding of the application of the Baldrige

framework beyond the context of the US and other developed countries, demonstrating its relevance and adaptability in different contexts.

Conclusion

The performance evaluation of RSUD Labuang Baji using MBNQA criteria shows that the hospital has achieved the level of "Excellent Performance" with a total score of 80.10%. This finding reflects the effective implementation of integrated quality management principles across all aspects of hospital operations.

The main strengths of RSUD Labuang Baji lie in strong leadership, high customer focus, and operational efficiency. The significant relationship between all process categories and the Outcome category confirms the importance of a holistic approach in quality management.

While overall performance is excellent, areas such as workforce management, operational strategy implementation, and the use of advanced data analytics technologies still require improvement. This shows that even organizations with excellent performance still have room for improvement and innovation.

Practical implications of this research include:

1. The importance of maintaining strong leadership and customer focus as the foundation of performance excellence.
2. The need to improve employee engagement and talent development programs.
3. The importance of strengthening mechanisms to translate strategy into operational action.
4. The need to invest in advanced data analytics technologies to support evidence-based decision making.

For future research, it is recommended to:

1. Conduct a longitudinal study to assess the long-term impact of MBNQA implementation on hospital performance.
2. Expanding the research to other hospitals in Indonesia to allow for comparison and benchmarking.
3. Further investigating the factors influencing the success of MBNQA implementation in the context of Indonesian hospitals.

Overall, this study provides empirical evidence on the effectiveness of the MBNQA framework in improving hospital performance in Indonesia. These findings can be a valuable reference for policy makers and health practitioners in an effort to improve the quality of health services in Indonesia.

Conflict of Interest

The researcher stated that there was no conflict of interest in conducting this research.

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