

LITERATURE REVIEW: IMPLEMENTATION OF BUSINESS PROCESS MANAGEMENT IN BUSINESS MODEL MANAGEMENT TO IMPROVE THE QUALITY AND EFFICIENCY OF HEALTH SERVICES

Meitria Syahadatina Noor¹ Jeni Susyanti² Syahril Shaddiq³
 Universitas Lambung Mangkurat² Universitas Islam Malang²
 Universitas Lambung Mangkurat³
drmeitria@ulm.ac.id

ABSTRACT

This literature review analyzes the crucial role of *Business Process Management* (BPM) as a vital instrument in *Business Model Management* (BMM), especially in the context of health care facilities. By synthesizing findings from various scientific studies, this article highlights how BPM facilitates the optimization of clinical and administrative workflows, which in turn improves service quality, operational efficiency, and patient satisfaction. The review identifies trends, challenges, and success factors in integrating BPM into the healthcare business model framework, and underscores the potential of BPM to drive innovation and adaptation of business models amid an ever-evolving healthcare landscape.

Keywords: Business Process Management, Business Model Management, Health Services

INTRODUCTION

The modern healthcare sector faces increasingly complex multidimensional pressures: rising costs, higher quality of service demands, changing patient demographics, and rapid evolution of medical technology (Porter & Teisberg, 2006). In the face of these challenges, healthcare facilities can no longer rely on traditional operating models. A more adaptive and structured strategic approach is needed, one of which is through Business Model Management (BMM). BMM involves designing, implementing, and evolving an organization's business model to create, deliver, and capture value in a sustainable manner (Osterwalder & Pigneur, 2010).

One of the important foundations that allows BMM to run effectively is Business Process Management (BPM). BPM is a discipline that focuses on improving organizational performance through the identification, modeling, analysis, measurement, improvement, and optimization of business processes (Harmon, 2019). In healthcare, BPM is applied to simplify clinical and administrative workflows, reduce variation, and improve coordination. Although the relationship between BMM and BPM has been widely discussed in the context of general business, an in-depth study of the synergy between the two, particularly in improving quality and efficiency in the healthcare sector, is still needed. This literature review aims to synthesize relevant findings to provide a comprehensive overview of the implementation of BPM in BMM in health care facilities.

METHODOLOGY

This literature review is conducted with a systematic approach to identify, evaluate, and synthesize relevant scientific articles. Scientific databases used include PubMed, Scopus, ScienceDirect, and Google Scholar. The search keywords used were a combination of: "Business Process Management," "BPM," "Business Model Management," "Business Model Innovation," "healthcare," "hospital," "patient care," "efficiency," "quality improvement," "process improvement," and "service delivery."

The selection of journals in this literature review was carried out based on inclusion and exclusion criteria. The inclusion criteria of the journals identified for this literature review include; a) Journal articles published in English. b) Focus on the implementation or impact of BPM in health organizations. c) Discuss the relationship between BPM and the business model or organizational strategy. d) Peer-reviewed articles (journals, conferences). Meanwhile, the criteria for exclusion from journals that appear when synthesizing scientific articles include; a) Articles that only discuss BPM theory without case studies or implementation. b) Articles that are not relevant to the health service sector. After an initial screening process based on titles and abstracts, relevant articles are analyzed in depth to identify key themes, key findings, challenges, and success factors.

RESULTS AND DISCUSSION

Based on the synthesis of relevant articles, several main themes emerged regarding the implementation of BPM in BMM in the health service sector.

1. **BPM as a Real Driver of Operational Efficiency.** The majority of studies show that BPM consistently contributes to improving operational efficiency in healthcare facilities. This manifests itself in; a) Reduction of cycle time. Processes such as patient registration, handling of medical records, and patient *discharge* are often sources of *bottlenecks*. The implementation of BPM, often supported by digitization (e.g., *Electronic Health Records* - EHR), significantly reduces the time required to complete this process (Trkman, 2010; Mans et al., 2010). An example of this result is a case study showing a reduction in patient waiting time in the emergency department or polyclinic to a reduction of about 30-50% after the optimization of the cycle time reduction process. c) Optimizing the use of resources. By mapping and streamlining workflows, healthcare facilities can identify redundancies and inefficient resource allocations. These conditions include optimizing the use of space, medical equipment, and medical staff time, which leads to a reduction in operational costs (Harmon, 2019). d) Reduction of Operational Costs. Although not always measured directly, the efficiencies achieved through BPM implicitly correlate with reduced operational costs, such as administrative costs, paper usage, and even delays that lead to financial losses.
2. **Improving Quality and Patient Safety.** In addition to efficiency, the literature strongly supports the role of BPM in improving patient quality and safety. The claim is supported by the following explanation; a) Standardization of Clinical Processes. BPM promotes standardization of best practices, reducing unnecessary variation in care. This is especially important in the clinical context to ensure consistent quality and reduce the risk of medical errors (Reijers et al., 2011). b) Improvement of Data Accuracy and Medical Records. The digitization of processes through EHRs, driven by BPM, minimizes manual data input errors and increases the availability of accurate and *real-time* patient information to medical staff (Van der Aalst, 2011). This is crucial for proper diagnosis and safe treatment decisions. c) Evidence-Based Workflow. BPM facilitates the integration of evidence-based clinical guidance into daily workflows, ensuring that patients receive the best possible care based on the latest research.
3. **BPM's Contribution to Business Model Adaptation and Innovation.** Studies show that BPM not only optimizes existing business models but also supports their evolution, which is

demonstrated by; a) Flexibility and Responsiveness. Healthcare organizations with flexible and automated processes are better able to adapt to regulatory changes, new medical technologies (e.g., the adoption of telemedicine), or new payment models (e.g., *value-based care*) (Osterwalder & Pigneur, 2010). b) Innovation of Value Proposition. With a better understanding of internal processes, healthcare facilities can design more innovative value propositions, such as more personalized services, coordinated care, or better accessibility, which are then realized through efficient processes. b) Risk Management. Well-defined processes and regularly monitored help in identifying and mitigating operational and clinical risks, which are essential for the sustainability of business models.

The results of this literature review clearly show that Business Process Management (BPM) is the core of effective Business Model Management (BMM) in healthcare facilities. Consistent findings regarding improved operational efficiency, quality of care, and adaptability of business models reinforce the argument that BPM is not just an operational initiative, but a transformative strategy. The relationship between BPM and BMM can be understood as follows: BMM provides a strategic framework that defines *what* a healthcare organization should achieve (value proposition, patient segment, revenue stream), while BPM provides a mechanism *for how* those strategic goals are realized through efficient and quality process execution (Harmon, 2019). Without optimized processes, even the most brilliant business models will struggle to execute. For example, hospitals that want to adopt a "*value-based care*" model – where payments are tied to a patient's health outcomes, not just the volume of services – must have highly efficient processes for managing care pathways, collecting outcome data, and coordinating across disciplines. This is where BPM becomes vital.

While the benefits are obvious, the challenges identified, such as resistance to change and complexity of clinical processes, cannot be ignored. It emphasizes that the implementation of BPM in the health sector must be accompanied by strong change management and comprehensive *stakeholder* engagement (de Bruin & Rosemann, 2007). Active involvement of doctors, nurses, and administrative staff in the mapping and redesign of the process is key to ensuring that the solutions implemented are relevant, accepted, and sustainable.

The integration of information technology, especially *Hospital Information Systems* (SIRS) and *Electronic Health Records* (EHR), has emerged as a major enabler factor in the implementation of BPM. This technology not only automates manual tasks but also provides real-time data for monitoring process performance, which is essential for continuous improvement cycles (Van der Aalst, 2011). Therefore, investing in the right IT infrastructure should be an integral part of a healthcare facility's BPM and BMM strategy. Overall, this literature review highlights a paradigm shift where the focus is not only on "what we do" (business model) but also "how we do it better" (process management). In an era that prioritizes value and efficiency in health services, BPM is no longer an option, but a strategic imperative.

CONCLUSION

This literature review shows that the implementation of Business Process Management (BPM) is a fundamental prerequisite for the success of Business Model Management (BMM) in healthcare facilities. Through restructuring, digitizing, and standardizing service processes,

healthcare organizations can systematically analyze, optimize, and automate core processes, which directly contributes to improving service quality, operational efficiency, and patient satisfaction. The synergy between BPM and BMM allows healthcare facilities to be more resilient, adaptive, and innovative in facing changing market dynamics.

BIBLIOGRAPHY

- de Bruin, T., & Rosemann, M. (2007). The Business Process Management Maturity Model: A Critical Review. *Lecture Notes in Computer Science*, 4714, 15-28.
- Harmon, P. (2019). *Business Process Change: A Business Process Management Guide for Managers and Process Professionals* (4th ed.). Morgan Kaufmann.
- Herzlinger, R. E. (2006). *Fixing Health Care: A Better Way to Get Everybody What They Need*. Harvard Business School Press.
- Mans, R. S., van der Aalst, W. M. P., & Vanwersch, R. J. B. (2010). Process Mining in Healthcare: Bridging the Gap between Care Pathways and Healthcare Processes. In *Proceedings of the 2nd International Workshop on Process-Oriented Systems in Healthcare (ProSH)*, 3-10.
- Osterwalder, A., & Pigneur, Y. (2010). *Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers*. John Wiley & Sons.
- Porter, M. E., & Teisberg, E. O. (2006). *Redefining Health Care: Creating Value-Based Competition On Results*. Harvard Business School Press.
- Reijers, H. A., Limam, S., & van der Aalst, W. M. P. (2011). Business Process Management in Healthcare: A Taxonomy of Current Challenges. *International Journal of Process Management and Benchmarking*, 1(1), 1-17.
- Trkman, P. (2010). The Critical Success Factors of Business Process Management. *International Journal of Production Economics*, 128(1), 32-42.
- Van der Aalst, W. M. P. (2011). *Process Mining: Discovery, Conformance and Enhancement of Business Processes*. Springer.