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A Framework for Improving Quality Management in Healthcare Project Management in Cameroon: Case Study of the COVID-19 Project at Presbyterian Health Hospital, Bepanda–Douala

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Authorship and Institutional Context

This article is an original scholarly work authored by **Dorothée Mamba** and developed within the institutional contexts of Presbyterian Health Hospital (PHH) Bepanda, Douala, Cameroon, and Rome Business School, Italy. The study reflects independent academic analysis and does not represent the official position of the affiliated institutions.

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Abstract

Introduction: The COVID-19 pandemic exposed significant weaknesses in health project management systems, particularly in low- and middle-income countries such as Cameroon. Effective quality management in health projects is essential to ensure timely service delivery, patient safety, efficient resource utilization, and stakeholder satisfaction during public health emergencies. This study aims to develop a contextualized framework to strengthen quality management in health project implementation in Cameroon, using the COVID-19 response project at the Presbyterian Health Hospital (PHH) in Bepanda, Douala, as a case study.

Methods: A mixed-methods case study design was employed. Data were collected through document review, key informant interviews, and descriptive analysis of project performance indicators to assess the quality management practices implemented during the project.

Results: The findings identified several critical challenges affecting quality management in health projects. These include inadequate quality planning, weak monitoring and evaluation systems, limited staff training in project quality management, and insufficient coordination among key stakeholders. These gaps may hinder the effectiveness and sustainability of health interventions, particularly in emergency contexts.

Conclusion: Based on these findings and informed by established project management and quality improvement models, a practical framework for strengthening quality management in health projects was developed. The framework places leadership at its core and incorporates key components such as quality planning, capacity building, stakeholder engagement, risk management, and continuous quality improvement. This framework provides practical guidance for health managers and policymakers seeking to enhance quality management practices in future health projects and emergency response initiatives in Cameroon and similar contexts.

Keywords: Health project management, COVID-19 response, Hospital management, Quality management, Cameroon.

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1. INTRODUCTION

The COVID-19 pandemic represented an unprecedented global health crisis, placing a severe strain on health systems and revealing significant gaps in health project management (World Health Organization (WHO, 2020). The rapid implementation of complex projects, under conditions of uncertainty and intense pressure on resources, was necessary to limit the spread of the virus and ensure patient care (Huang et al., 2020). In low- and middle-income countries such as Cameroon, these challenges were particularly pronounced due to often fragile health systems and limited resources (United Nations Office for the Coordination of Humanitarian Affairs [OCHA], 2020).

In Cameroon, hospitals had to deploy COVID-19 response projects covering epidemiological surveillance, case management, infection prevention and control, logistics, and community engagement. The effectiveness of these projects largely depended on the quality of project management practices. However, in many Cameroonian health facilities, project management is still implemented without formalized quality management frameworks, resulting in inefficiencies, delays, suboptimal outcomes, and reduced satisfaction among patients and staff (Bajwa et al., 2021; KPMG, 2020).

The Presbyterian Health Hospital (PHH) of Bepanda, located in Douala, illustrates these challenges. This facility implemented several COVID-19 projects, including isolation units, staff training, and infection prevention and control (IPC) interventions (PHH, 2021). Between October 1 and October 14, 2020, Cameroon recorded 406 new confirmed COVID-19 cases, bringing the total to 21,203 cases, including 423 deaths and 20,117 recoveries (OCHA, 2020). The rapid spread of the virus, characterized by multiple waves and peaks over nearly three years, exerted considerable pressure on the health system and the community, highlighting gaps in planning, monitoring, coordination, and stakeholder engagement in health projects (WHO, 2021).

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In this context, strengthening quality management in health projects emerges as a strategic priority. Quality management is defined as the set of systematic processes aimed at ensuring that projects comply with predefined standards, meet stakeholder requirements, and achieve the expected health outcomes (Kerzner, 2017). Developing frameworks adapted to the Cameroonian context could improve project performance, intervention efficiency, and stakeholder satisfaction (PMI, 2021).

Thus, the main objective of this study is to propose a contextual framework to improve quality management in health projects in Cameroon, using the COVID-19 project at PHH Bepanda as a case study. The research question is as follows: Which quality management practices implemented in the COVID-19 project at PHH Bepanda can be integrated to strengthen the performance of health projects in Cameroon? To address this question, the study formulates the hypothesis that effective leadership and strong stakeholder engagement have a significant positive influence on the quality of outcomes in health project management during health emergencies (Kerzner, 2017; PMI, 2021). This research, therefore, aims to provide practical recommendations to guide health managers and policymakers in strengthening quality management practices, contributing to more effective and sustainable interventions in future health projects in Cameroon.

2. METHODS

This study adopted a case study design using a mixed-methods approach to obtain a comprehensive understanding of quality management practices within a real-life healthcare project context. The case study strategy allowed for an in-depth exploration of processes, challenges, and contextual factors influencing project quality management, while the combination of qualitative and quantitative methods enhanced the robustness and completeness of the findings.

The study was conducted at Presbyterian Health Hospital (PHH) Bepanda, a faith-based health facility located in Douala in the Littoral Region of Cameroon. The hospital implemented several COVID-19 response interventions, making it an appropriate setting for examining quality management practices in healthcare project implementation during a public health emergency.

Data were collected through multiple sources to ensure methodological rigor. First, a comprehensive review of COVID-19 project documents and institutional reports was carried out to assess documented procedures, performance indicators, and quality assurance mechanisms.

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Second, key informant interviews were conducted with hospital administrators, project coordinators, and frontline healthcare workers directly involved in the implementation of the COVID-19 project. These interviews provided in-depth insights into leadership practices, coordination mechanisms, and operational challenges. Third, direct observation of quality-related practices during project implementation was undertaken to capture real-time processes and compliance with established standards.

Qualitative data were analyzed using thematic analysis to identify recurring patterns, themes, and relationships related to quality management practices. Quantitative data derived from project performance indicators were analyzed descriptively to summarize trends and measurable outcomes. The findings from different data sources were triangulated to enhance the validity, credibility, and reliability of the results.

Ethical considerations were strictly observed throughout the research process. Data collection at Presbyterian Health Hospital Bepanda was conducted solely for the purposes of this study. Participants were fully informed about the purpose, potential benefits, risks, and funding context of the research prior to providing their consent. Participation was entirely voluntary, and respondents were free to withdraw from the study at any time without consequence. Formal authorization to conduct the research was obtained from the hospital administration, and the institution's confidentiality policies were strictly respected. The data collected were not shared with any third party, except the research supervisor, in order to ensure confidentiality. Ethical approval was obtained from the relevant institutional authorities, and all research findings were reported transparently to prevent plagiarism or research misconduct.

3. RESULTS

The findings reveal that quality management practices implemented during the COVID-19 project at Presbyterian Health Hospital (PHH) Bepanda were primarily centered on compliance with national infection prevention and control (IPC) protocols, adherence to case management guidelines, and mandatory reporting to health authorities.

Supervisory visits, IPC audits, case reviews, and compliance checks were conducted as part of routine quality assurance and control activities. However, despite these efforts, structured project-

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specific quality planning documents were absent. There were limited clearly defined performance indicators, irregular documentation of quality assurance processes, and no formalized continuous quality improvement mechanisms. Staff capacity-building initiatives were mainly ad hoc, with no structured training programs specifically focused on project quality management.

Several challenges affecting quality management were identified. A major constraint was the limited capacity of staff in project quality management, largely due to insufficient formal training in quality and project management principles. Monitoring and evaluation (M&E) systems were weak, characterized by inadequate data collection tools and limited integration of evidence into decision-making processes. Resource constraints, including funding limitations and supply chain disruptions, further hindered the effective implementation of quality standards. Additionally, stakeholder coordination was suboptimal, with unclear roles and communication gaps contributing to duplication of efforts and operational inefficiencies.

These challenges had tangible implications for project outcomes. They affected the timeliness of project activities, reduced the consistency and standardization of patient care, compromised staff safety in certain instances, and ultimately influenced the overall quality of service delivery during the COVID-19 response. The combined effect of limited planning, weak monitoring systems, and coordination gaps constrained the project's ability to achieve optimal quality outcomes under emergency conditions.

In response to the identified gaps, a contextualized framework for improving quality management in healthcare project management in Cameroon is proposed. The framework integrates established project management principles, healthcare quality improvement models, and the contextual realities of the Cameroonian health system. It is designed to be practical, adaptable to different healthcare settings, and scalable for future health emergencies and routine health projects.

The framework is structured around six interrelated core components. First, leadership and governance emphasize clear role definition, accountability mechanisms, and alignment with institutional and national policies to strengthen oversight and strategic decision-making. Second, quality planning involves defining explicit quality standards, measurable performance indicators, and risk management plans to establish clear benchmarks and objectives.

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Third, capacity building focuses on structured training in quality management and project management to enhance staff competence and ensure consistent implementation of standards. Fourth, stakeholder engagement promotes coordination with institutional partners, government authorities, and the community to foster collaboration, shared ownership, and resource optimization.

Fifth, monitoring, evaluation, and learning (MEL) systems prioritize systematic data collection, analysis, and feedback loops to enable evidence-based decision-making and timely corrective actions. Finally, continuous quality improvement (CQI) mechanisms, including Plan–Do–Study–Act (PDSA) cycles and regular audits, aim to ensure sustained improvements in healthcare project outcomes.

Conceptually, the framework places healthcare project quality outcomes namely patient safety, effectiveness, efficiency, and stakeholder satisfaction at its center. Surrounding this core are the six interconnected components, each reinforcing and influencing the others. External contextual factors, including national health policies, funding mechanisms, and the dynamics of public health emergencies, interact with all components of the framework. Continuous feedback loops across the project lifecycle ensure ongoing learning, adaptation, and responsiveness to emerging challenges.

4. DISCUSSION

The findings of this study are consistent with existing literature emphasizing the central role of leadership, capacity building, and continuous quality improvement in strengthening healthcare quality management systems. The challenges identified at Presbyterian Health Hospital (PHH) Bepanda—particularly the absence of structured quality planning, limited staff training in project quality management, and weak monitoring and evaluation systems—reflect systemic gaps commonly reported in low- and middle-income country health systems during public health emergencies (World Health Organization (WHO, 2021). Effective leadership and governance structures have been widely recognized as critical determinants of project success, particularly in crisis contexts where rapid decision-making, accountability, and coordination are essential (Kerzner, 2017; Project Management Institute (PMI, 2021).

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The limited formalization of quality management processes observed in this study further supports evidence suggesting that healthcare projects often prioritize operational urgency over structured quality planning during emergencies (Bajwa et al., 2021). However, research consistently demonstrates that clearly defined quality standards, performance indicators, and risk management strategies significantly improve project outcomes and organizational performance (PMI, 2021). Similarly, the gaps identified in staff capacity and structured training align with prior studies indicating that sustainable quality improvement depends heavily on continuous professional development and institutional learning mechanisms (WHO, 2020).

The proposed framework responds directly to these contextual challenges by integrating leadership and governance, quality planning, capacity building, stakeholder engagement, monitoring–evaluation–learning systems, and continuous quality improvement into a coherent and adaptable model. By situating healthcare project quality outcomes—such as patient safety, effectiveness, efficiency, and stakeholder satisfaction—at its core, the framework reflects internationally recognized quality dimensions while remaining sensitive to the operational realities of Cameroonian healthcare facilities (WHO, 2020; PMI, 2021).

Furthermore, the emphasis on stakeholder engagement and coordinated action addresses the inefficiencies and duplication of efforts observed during project implementation, reinforcing evidence that collaborative governance and clear communication channels enhance accountability and resource optimization in health interventions (Kerzner, 2017). The incorporation of continuous feedback loops and learning mechanisms also aligns with established quality improvement models, particularly the Plan–Do–Study–Act (PDSA) cycle, which has been widely applied in healthcare settings to promote adaptive management and sustained performance improvement (WHO, 2021).

Overall, this study contributes to the growing body of evidence advocating for context-sensitive and system-oriented approaches to healthcare project quality management. By proposing a practical and scalable framework tailored to the Cameroonian context, it provides actionable guidance for strengthening institutional resilience, improving service delivery, and enhancing preparedness for future public health emergencies.

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5. CONCLUSION

Improving quality management in healthcare project management is essential for ensuring effective and resilient responses to public health emergencies in Cameroon. The findings of this study highlight the critical gaps in structured quality planning, capacity building, monitoring systems, and stakeholder coordination that can undermine project performance during crises such as the COVID-19 pandemic. Addressing these weaknesses requires a systematic and context-sensitive approach.

The proposed framework offers a structured and adaptable model tailored to the realities of the Cameroonian health system. By integrating leadership and governance, quality planning, capacity building, stakeholder engagement, monitoring–evaluation–learning mechanisms, and continuous quality improvement processes, the framework provides a comprehensive pathway for strengthening healthcare project implementation. Its adoption has the potential to enhance project effectiveness and efficiency, improve patient outcomes, increase stakeholder satisfaction, and reinforce overall health system resilience in both emergency and routine contexts.

6. CONTRIBUTION

Based on the study findings, several strategic actions are recommended to strengthen quality management in healthcare project management in Cameroon. First, healthcare institutions should systematically integrate formal quality management frameworks into all health projects to ensure structured planning, clear performance indicators, and accountability mechanisms. Second, targeted and continuous training programs in healthcare project management and quality management should be developed to build institutional capacity and improve staff competence.

Third, monitoring, evaluation, and continuous quality improvement mechanisms should be institutionalized within healthcare facilities to promote evidence-based decision-making, timely corrective actions, and sustained performance enhancement. Finally, stronger policy support at national and institutional levels is necessary to embed quality-focused project management principles into healthcare governance structures, ensuring long-term sustainability and improved preparedness for future public health emergencies.

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8. CONFLICT OF INTEREST

The authors declare that there is no conflict of interest regarding the publication of this paper. The research was conducted independently, and no financial or commercial relationships influenced the study design, data collection, analysis, interpretation of findings, or manuscript preparation.

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