Enhancing Financial Administration in Hospital Expense Management Through Digitization: A Case Study of Pisgah Advanced Medical Center and Bechem SDA Hospital

1.0 Background of the Study

Pisgah Advanced Medical Centre, commonly known as SDA Hospital, started as a small clinic serving the Bechem community and nearby regions. Thanks to its high-quality services and commitment to patient care, the facility grew rapidly, ultimately expanding and being officially commissioned as a hospital. Today, Pisgah Hospital provides a diverse range of medical services, including general healthcare, gynecology, ENT (Ear, Nose, and Throat), maternity care, and other essential services, thus offering comprehensive support to the community it serves. Financial Administration in Hospitals refers to the systematic management of a healthcare institution's financial resources to ensure operational efficiency, transparency, and sustainability. It covers a wide range of activities, including:

Budgeting: The preparation and management of financial resources to allocate funds across various departments, ensuring the hospital maintains quality care while fulfilling its operational needs.

Financial Reporting: Creating comprehensive financial documents such as balance sheets, income statements, and cash flow reports, which provide stakeholders with a clear understanding of the hospital's financial health. These reports assist in informed decision-making.

Revenue Cycle Management (RCM): Managing the complete process of patient service revenue, from scheduling and billing to payment collection and claims processing. This ensures the timely receipt of payments and minimizes bad debts.

Adoption of Technology: The increasing use of financial software and electronic systems in hospitals to automate tasks like billing, payroll, and financial reporting. The adoption of technology improves financial accuracy, reduces administrative burdens, and offers real-time financial insights.

Digitization has revolutionized healthcare, improving operational efficiency and transparency, particularly in financial administration. Traditionally, hospitals relied on manual methods to track

expenses, which were prone to human error, inefficiencies, and delays. These issues contributed to mismanagement of resources, rising costs, and compromised patient care (Bodenheimer, 2005). Financial mismanagement in healthcare institutions leads to the wastage of valuable resources, further complicating the provision of timely and effective care. Research has shown that adopting digital systems enhances real-time tracking, monitoring, and reporting of financial activities, which helps minimize errors and increases accountability (McClellan, 2003; AdvaMed, 2004). Several studies have highlighted those digital innovations, such as electronic financial management systems, hold significant potential for controlling costs while maintaining high-quality care (Cutler & McClellan, 2001). However, debates continue about whether these systems' long-term benefits outweigh their costs (Rettig, 1994). Additionally, challenges such as high implementation costs and resistance from hospital staff hinder the widespread adoption of these technologies (Christensen, Bohmer, & Kenagy, 2000).

This study examines these issues within the context of Pisgah Advanced Medical Centre and Bechem SDA Hospital, where traditional financial tracking methods contribute to operational inefficiencies. These hospitals provide an ideal setting to evaluate how digitization can address these challenges, optimize resource management, and improve patient care delivery.

Related Research and Gaps

Research has highlighted both the benefits and challenges associated with innovations in healthcare:

Benefits of Innovation: Technological advancements have been linked to improved life expectancy and reduced mortality rates (Lichtenberg, 2001).

Barriers to Implementation: Despite the promise of technology, barriers such as high costs, limited empirical tools for measuring economic value, and difficulties in adapting existing infrastructures to new technologies remain persistent (Rettig, 1994). Although these studies highlight the benefits and limitations of healthcare innovation, gaps persist, especially in understanding the long-term value of digitization in financial management systems. Further research is needed to address the barriers to effective implementation and to develop robust tools for assessing the economic impact of these systems.

Additionally, research has identified key gaps in digital healthcare systems, such as the lack of comprehensive e-health platforms tailored to specific medical fields (Alhassan, 2018) and

insufficient funding for healthcare infrastructure (Leväsluoto et al., 2021). There is also a need for better methodological support to monitor the effectiveness of healthcare financing reforms in the digital age (Popelo et al., 2022). Finally, the lack of research on the stages of digital transformation in healthcare organizations (Bosch et al., 2021) has made it difficult to understand how to implement these systems effectively.

1.1 Problem Statement

The manual financial administration systems employed at Pisgah Advanced Medical Center and Bechem SDA Hospital, specifically within their accounting departments, have resulted in significant inefficiencies. These inefficiencies include delayed reporting, difficulty in tracking expenses, and suboptimal decision-making (Bodenheimer, 2005; McClellan, 2003). The reliance on traditional methods makes it challenging to effectively monitor and control financial activities, often leading to errors in expense tracking, misallocation of resources, and delayed financial decision-making, all of which impede the optimal delivery of patient care (AdvaMed, 2004). This issue highlights the urgent need for a digitized solution to streamline financial processes, enhance transparency, and improve accountability within hospital management (Rettig, 1994). By incorporating digital tools, these hospitals could benefit from real-time financial reporting, reduced errors, and more informed decision-making, ultimately improving the efficiency of financial management and the quality of patient care. The absence of a robust, automated system in these institutions represents a clear gap that this study aims to address.

1.2 Objectives of the Study

1.2.0 General Objective:

The project aims to:

To enhance financial administration in hospital expense management through digitization in the accounting department.

1.2.1 Specific Objectives:

To design and develop a mobile application for hospital expense management that enables real-time tracking, reporting, and management of financial activities.

To assess the impact of the mobile application on hospital financial decision-making and resource optimization.

1.3 Significance of the study

This study is of great significance, particularly in the context of enhancing financial management in healthcare institutions, with a focus on Pisgah Advanced Medical Center and Bechem SDA Hospital. The findings of this research will offer valuable insights into the adoption and integration of digital solutions for improving financial administration processes in hospitals.

Improved Efficiency in Financial Management: One of the major contributions of this study is to demonstrate how digitizing financial processes can lead to greater efficiency. Research indicates that manual financial systems often result in delays, errors, and inefficiencies (McClellan, 2003). By automating these systems, hospitals can streamline expense tracking, reduce human error, and improve reporting accuracy, leading to better decision-making (AdvaMed, 2004).

Enhanced Transparency and Accountability: Digital systems in financial administration enhance transparency and accountability (Rettig, 1994). This is crucial in hospitals, where proper allocation of resources directly impacts patient care. Digitization allows for real-time tracking of financial activities, which can provide hospital administrators and stakeholders with immediate insights into financial health (Bodenheimer, 2005). This helps to prevent financial mismanagement, which is a common issue in many healthcare facilities.

Resource Optimization: The study will also contribute to understanding how digital tools can optimize resource allocation in hospitals. Financial mismanagement in hospitals often leads to the wastage of critical resources, which, in turn, affects the quality of care provided (Cutler & McClellan, 2001). By introducing a digital solution, hospitals can better allocate funds and reduce

unnecessary expenses, ensuring that more resources are directed towards patient care (McClellan, 2003).

Contribution to Knowledge: This research also fills a gap in the current literature by focusing on the specific challenges faced by hospitals in Ghana, particularly in terms of financial mismanagement and the slow adoption of digital solutions. While there has been significant research on the benefits of digital financial management systems globally (Lichtenberg, 2001), more context-specific studies are needed to understand how these innovations can be applied effectively in resource-constrained settings like Ghana (Leväsluoto et al., 2021).

1.4 Scope of Study

This study focuses on the implementation of a digital solution for enhancing financial administration in hospitals, specifically in the context of Pisgah Advanced Medical Center and Bechem SDA Hospital. The research will primarily center on developing a mobile application to address the challenges associated with manual financial systems in these hospitals, such as delayed reporting, poor expense tracking, and misallocation of resources. The scope of this study includes the following:

Implementation Using Mobile Apps: The core solution will involve the development and deployment of a mobile application that will digitize key aspects of the financial administration process. The mobile app will allow hospital staff to input, track, and monitor financial data in real time, providing accurate reports and enabling informed decision-making. Mobile apps are increasingly being adopted in healthcare management due to their convenience, accessibility, and ability to integrate with existing hospital systems (Lichtenberg, 2001).

Target Hospitals: The study will focus on Pisgah Advanced Medical Center and Bechem SDA Hospital, two healthcare institutions in Ghana. The research will analyze the current challenges faced by these hospitals due to the lack of an automated financial system and assess how a mobile application can solve these issues. These hospitals are ideal case studies due to their growth, service diversity, and the need for improved financial management practices.

1.5 Organization of Work

The project is organized into five chapters: introduction, literature review, methodology, discussion, and conclusion with suggestions.

Chapter One (Introduction): This chapter discusses the study's history, problem statement, research aims, importance, and project scope.
Chapter Two (Literature Review): This chapter identifies related ideas and examines subtopics relevant to the study issue. It also provides a critical review of the available literature and associated research.

The third chapter (Methodology) discusses in depth the research methodology, protocols, data gathering tools, and analytic approaches. It also contains the system design, architecture, and hardware and software specs.

Chapter Four (Results and Discussions): This chapter summarizes and analyzes the study's findings and considers their consequences. The data gathered during the study is examined and interpreted, and the findings are presented in an understandable and orderly format. Depending on the study design, the analysis might include statistical approaches, qualitative analysis, or a combination of the two. The chapter should also answer any research questions or hypotheses, compare the findings to previous studies, and explain any unexpected outcomes.

Chapter Five (Conclusion and Recommendations): This chapter summarizes the project's primary findings and conclusions, and it makes recommendations for further study and improvements based on the findings.

Reference:

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