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## The Role of Cost Accounting in the Efficiency of Healthcare Services

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### Abstract

*The efficiency of healthcare services is a major challenge in managing healthcare facilities, particularly due to increasing demands for service quality and limited available resources. Ineffective cost management can reduce the performance of healthcare organizations and disrupt service sustainability; therefore, cost accounting is essential as a management tool to provide accurate cost information, control waste, and improve the efficiency of healthcare services. This study aims to analyze the role of cost accounting in improving the efficiency of healthcare services using a Systematic Literature Review (SLR) approach. The literature review process was conducted using the PICOS framework to ensure alignment with population, intervention, outcomes, and study design. Articles were retrieved from various national and international scientific databases within a publication period of the last five to ten years. Articles that met the inclusion criteria were qualitatively analyzed to identify how cost accounting is implemented and its impact on efficiency and performance of healthcare services. The results show that the application of cost accounting methods such as responsibility accounting, activity-based costing, and the development of technology-based cost accounting systems makes a positive contribution to improving healthcare service efficiency by increasing the accuracy of cost identification, controlling operational expenditures, and maximizing resource utilization. In addition, the use of digital technology in cost accounting systems enhances transparency, accountability, and the quality of financial information that supports managerial decision-making. Based on these findings, it can be concluded that cost accounting plays an important role in supporting healthcare service efficiency, where the application of appropriate methods, supported by managerial capability and information technology, is a key factor in achieving efficient, sustainable, and high-quality healthcare services.*

**Keywords:** *Healthcare Services, Healthcare Service Efficiency, Cost Accounting, Cost Management*

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## INTRODUCTION

Health service efficiency is a big problem in managing hospitals and clinics, especially as the need for healthcare services is growing, but available resources are very limited. High operating costs, like buying medicine and medical equipment, paying doctors and staff, and maintaining facilities, often don't match the income from the services provided. This situation can lower the quality of care, limit people's access to health services, and put health facilities at risk of failing. (Numbung & Prayogi, 2025).

Studies show that one of the main reasons healthcare services are not efficient is because of a weak cost management system. The lack of structure in managing costs stops managers from finding waste and assessing how well services are provided. In such situations, cost accounting serves as a management tool that provides organized information about costs, helping in planning, monitoring, and evaluating healthcare service performance. (Wibowo et al., 2021).

Cost accounting is one of the cost accounting methods commonly used in healthcare service facilities. This system groups costs based on responsibility centers, so each unit has a clear responsibility for using resources. Using cost accounting actually has a positive and real impact on cost efficiency in hospitals and clinics, because it increases transparency, accountability, and control over operational costs. (Djuarni & Indawati, 2024).

In addition, using the Activity-Based Costing (ABC) method also helps improve the efficiency of healthcare services. This method allows for calculating the cost of services based on the actual activities carried out for specific patients or services. With more accurate cost data, management can identify activities that do not provide much value, adjust service prices, and use resources more effectively. (Mubarok et al., 2024).

The development of information technology has made the role of cost accounting more important in improving the efficiency of health services. Combining accounting information systems with the digital management of costs makes the process of recording and reporting costs faster, more accurate, and more transparent. Research results show that internal controls and accounting information systems have a significant impact on cost efficiency and the quality of patient care. (Varzaru, 2022).

Even though there have been many studies looking at the role of cost accounting in healthcare services, the results are not all focused and use different methods. Because of this, there is a need for a more complete study using a Systematic Literature Review approach to gather and bring together scientific evidence about how cost accounting can improve healthcare service efficiency, and to find important managerial conclusions that can help in managing healthcare service centers.

## RESEARCH METHODS

This study uses the Systematic Literature Review (SLR) method to find, analyze, and summarize scientific articles that discuss the role of cost accounting in improving healthcare service efficiency. The systematic review approach was chosen because it allows for a structured, clear, and repeatable process in searching for, selecting, and analyzing literature.

The research findings and their presentation follow the PRISMA guidelines to ensure the report is well-structured and improves the quality of the research methods. Additionally, the PICOS framework (Population, Intervention, Comparison, Outcome, Study Design) was used as a basis to determine the research focus and set the boundaries for selecting articles to review.

The article search was conducted in several electronic databases, namely Google Scholar and PubMed, using a combination of relevant keywords related to the topic, which include health services, efficient health services, cost accounting, and cost management. These keywords were combined using the Boolean operators AND and OR. The selected articles are original research published between 2020 and 2025, available in either Indonesian or English, and accessible in full.

The article selection process is done step by step. First, duplicate articles are removed. Then, articles are filtered based on their title and abstract. After that, the full text of each article is analyzed to make sure it meets the set criteria. Articles that pass the selection are systematically reviewed to identify research characteristics, types of cost accounting applications, and results related to healthcare service efficiency. The data is then analyzed using descriptive qualitative methods and is organized in a narrative form to serve as a basis for drawing research conclusions.

## RESULTS AND DISCUSSION

In this literature review, the process of searching for and identifying articles was done using the PICOS framework (Population, Intervention, Comparison, Outcome, Study design). The PICOS framework helps researchers set clear boundaries for their literature search and systematically develop inclusion and exclusion criteria, ensuring that the articles included are relevant to the research purpose..

**Tabel 1. PICOS**

NO	Subject	Criteria
1	P ( <i>Population</i> )	Healthcare facilities (hospitals, clinics, community health centers) or healthcare service units
2	I ( <i>Intervention</i> )	Implementation of healthcare cost accounting (e.g., Activity-Based Costing, traditional costing, cost control systems)
3	C ( <i>Comparison</i> )	Healthcare services without the implementation of systematic cost accounting or those using conventional costing methods
4	O ( <i>Outcome</i> )	Healthcare service efficiency (cost control, tariff accuracy, operational efficiency, managerial decision-making)

5 S (Study Design) Quantitative

Article eligibility criteria were specified using inclusion and exclusion criteria. The inclusion criteria applied included original research articles, study populations conducted in hospitals, clinics, community health centers, and other healthcare service units; articles discussing the implementation of cost accounting, cost calculation methods, cost control systems, or responsibility accounting; healthcare service efficiency and financial performance; articles published in Indonesian or English; articles published within the period from 2020 to 2025; and studies using quantitative methods.

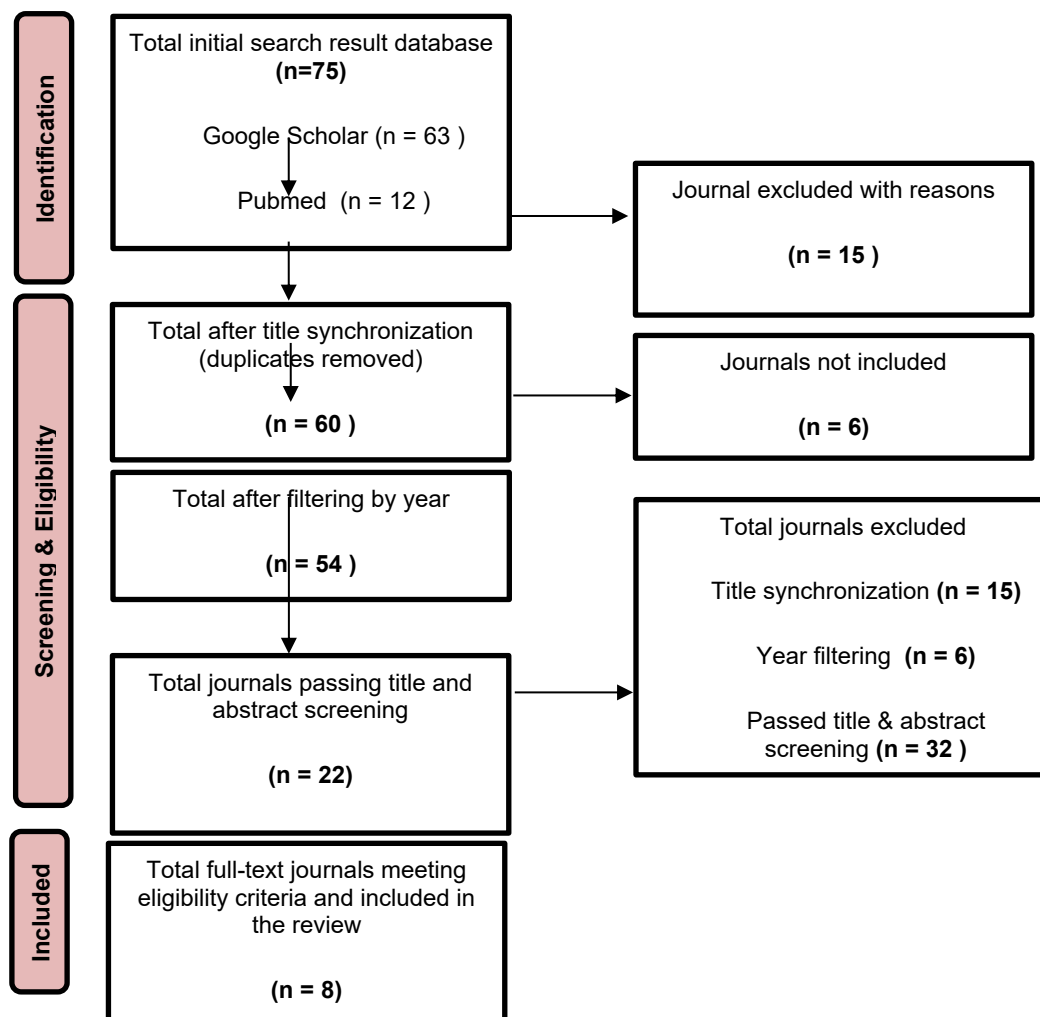
Meanwhile, the exclusion criteria in this study include research conducted in the private sector, articles that do not discuss healthcare service efficiency as an outcome of the research, articles in the form of reviews, editorials, or opinions, and articles whose full text is not accessible..

Articles are searched through several electronic databases, including Google Scholar and PubMed. The literature search strategy uses a combination of relevant keywords related to the research topic, such as terms connected to healthcare workers, incentive and compensation systems, service quality, and the public sector. The keywords used include *Healthcare Services, Efficiency in Healthcare Services, Cost Accounting, and Cost Management*, combined using Boolean operators AND and OR as needed for the search.

During the selection process, the articles obtained from the initial search are carefully filtered step by step. The process starts by removing duplicate articles based on similar titles, which reduces the number of articles to be analyzed. Next, the articles are screened according to the publication year and language criteria, based on the inclusion criteria that have been set.

Articles that passed the initial stage were then reviewed for their title and abstract to check if their topic matched the research purpose. Articles found to be relevant were further analyzed by looking at their full text to make sure they met all the inclusion and exclusion criteria. Based on this selection process, 8 articles out of 75 met all the criteria and were included in the final analysis.

Diagram 1. PRISMA



Data from eight selected articles shows that using cost accounting and financial control systems is very important for improving healthcare service efficiency in different types of facilities. A study by Numbung and Prayogi (2025) in hospitals and health centers found that cost accountability supported by managerial leadership has a positive effect on cost efficiency. The cost accountability system helps increase the accountability of cost centers and control operational expenses. (Numbung & Prayogi, 2025).

Research by Wibowo et al. (2021) in a general hospital shows that internal control and accounting information systems have a big impact on cost efficiency and the quality of patient services. The study highlights that having good control systems and support from accounting information technology can improve financial performance and service quality. (Wibowo et al., 2021). Based on these findings, Djuarni and Indawati found in 2024 that the application of accountability accounting in the clinic is already quite good as a tool for evaluating the performance of cost centers, although it still needs improvement in planning and cost control to achieve maximum efficiency. (Djuarni & Indawati, 2024).

Some studies highlight the importance of using activity-based costing (ABC) to analyze healthcare service costs. Research by Mubarok et al. (2024) shows that applying ABC based on clinical pathways provides more accurate unit cost calculations compared to hospital tariffs and INA-CBGs, helping to assess pricing and treatment efficiency for patients. (Mubarok et al., 2024). Similar results were also found by Ramadhania and Meirini (2022) and Asmadi et al. (2023). They said that the ABC method can reduce errors in cost calculations, prevent costs from being too low or too high, and help in making decisions about setting inpatient rates. (Ramadhania & Meirini, 2022) (Asmadi et al., 2023).

In addition, the research by Igusti et al., (2025) shows that the cost per unit varies across different inpatient care classes, indicating that the current fees do not fully reflect the actual cost of the services provided. (Igusti et al., 2025). On the other hand, Varzaru (2022) highlights that adopting digital technology in cost accounting systems can improve hospital efficiency, but better cost control and more effective budget planning are still needed to reduce resource waste. Overall, the data extraction results show that using proper cost accounting methods, whether through responsibility accounting, ABC, or digital technology support, provides positive benefits in improving efficiency and sustainability of health services. (Varzaru, 2022).

Based on the data extracted, it was found that the reviewed studies were conducted in various types of healthcare facilities, such as general hospitals, private hospitals, health centers, and clinics. The most commonly discussed interventions included the application of cost accountability accounting, activity-based costing (ABC), unit cost analysis, internal control, and the use of accounting information systems and digital technology. The main findings from these articles show that proper cost accounting can improve the accuracy of cost information, help control operational expenses, and support managerial decisions that focus on efficient healthcare services.

## CONCLUSIONS

Based on the systematic literature review conducted, it can be concluded that cost accounting plays an important and strategic role in improving the efficiency of healthcare services. The use of various cost accounting methods, such as responsibility accounting, activity-based costing, unit cost analysis, internal control, and the use of accounting information systems and digital technology, has been proven to improve the accuracy of cost information, control operational expenses, and support better management decision-making. Cost accounting is not just a tool for financial recording, but also a management tool for optimizing the use of resources and maintaining the sustainability of healthcare facilities. Therefore, strengthening the application of cost accounting, supported by good management capabilities and adequate information systems, is an important factor in creating efficient, sustainable, and high-quality healthcare services.

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