

## Abstract

# Unveiling the Impact of Electronic Health Record Systems: A Comprehensive Exploration through Systematic Review and Meta-Analysis <sup>†</sup>

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## 1. Objectives

Understanding the impact of Electronic Health Record (EHR) systems is vital for improving the efficiency of healthcare administration. This study can offer insights to streamline processes, reduce administrative burdens, and enhance overall healthcare operations by identifying best practices and challenges. Insights gained from the research can help in optimizing healthcare practices, leading to better diagnoses, more accurate treatments, and improved overall patient outcomes. Thus, we conducted a systematic review and meta-analysis on this topic.

## 2. Methodology

We researched related scientific databases to identify studies that investigated outcome indicators associated with EHR implementation. Data were extracted according to the PRISMA guidelines. Quality control was performed using Cochrane Collaboration's tool—the Newcastle Ottawa Scale (NOS)—in order to assess the risk of bias. We performed the meta-analysis using the appropriate software (RevMan 5, Nordic Cochrane Centre, Cochrane Collaboration, Copenhagen, Denmark).

## 3. Results

According to our current results, we expect to identify an association between EHR systems and reduced documentation time, as well as higher guideline adherence. (The study is still in progress. Detailed results to follow).

## 4. Implications

This study carries significant implications across various domains in healthcare and beyond. Policymakers and healthcare administrators can use the study's insights to make data-driven decisions regarding EHR adoption, resource allocation, and policy formulation. Healthcare institutions can optimize their EHR implementation strategies, addressing challenges identified in the study and adopting best practices. Moreover, businesses and governments can conduct cost-benefit analyses based on the study's findings, evaluating the economic impact of EHR adoption, in terms of efficiency gains, reduced paperwork, and overall cost savings.



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## 5. Originality Value

The originality value of our research study lies in its unique contribution to the existing body of knowledge, by covering a broad spectrum of aspects; it provides a holistic understanding of EHR systems' influence on healthcare administration. Moreover, by synthesizing diverse studies [1–6], the research study can draw nuanced conclusions, identify patterns, and offer evidence-based insights that go beyond the scope of individual studies.

## 6. Contribution

This research study makes several significant contributions to the field of healthcare administration and digital health technology; by synthesizing diverse studies, it offers a comprehensive understanding of EHR systems' impact, saving time and effort for professionals seeking evidence-based insights. Additionally, it identifies gaps in the existing research, suggesting avenues for future innovation and exploration. This contribution drives ongoing advancements in EHR technology and healthcare administration practices.

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