# Article information:

impact of electronic health records on healthcare quality: a systematic review and meta-analysis | European Journal of Public Health | Oxford Academic
<https://academic.oup.com/eurpub/article/26/1/60/2467302>

# Article summary:

1. Electronic health records (EHR) can improve healthcare quality by reducing documentation time, increasing guideline adherence, and decreasing medication errors and adverse drug effects.

2. Meta-analysis of 47 studies showed a significant association between EHR use and improved healthcare outcomes, such as reduced documentation time (-22.4%), higher guideline adherence (RR=1.33), lower medication errors (RR=0.46), and decreased adverse drug effects (RR=0.66).

3. Subgroup analysis revealed that EHR systems with decision support systems (DSS) had better outcomes in reducing medication errors and adverse drug effects compared to those without DSS, highlighting the importance of proper EHR implementation strategies for maximizing benefits in healthcare quality.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article titled "Impact of Electronic Health Records on Healthcare Quality: A Systematic Review and Meta-Analysis" published in the European Journal of Public Health provides a comprehensive analysis of the effects of electronic health records (EHR) on healthcare quality. The study conducted a systematic review and meta-analysis of published studies to evaluate the association between EHR implementation and various process or outcome indicators.

One of the strengths of this article is its thorough methodology, following PRISMA guidelines for meta-analyses and systematic reviews. The search strategy was well-defined, and data extraction and analysis were conducted rigorously. The inclusion criteria were clearly outlined, and the selection process was transparent.

The results presented in the article suggest that EHR use is associated with reduced documentation time, higher guideline adherence, lower medication errors, and adverse drug effects. These findings are supported by meta-analysis results showing significant associations between EHR use and these outcomes. However, it is important to note that there was high heterogeneity among the studies included in the analysis, which may affect the generalizability of the results.

One potential bias in this article is the lack of consideration for potential confounding factors that could influence the relationship between EHR use and healthcare quality. Factors such as healthcare provider experience, patient population characteristics, and organizational culture could impact the outcomes measured but were not adequately addressed in the analysis.

Additionally, while the article highlights the benefits of EHR implementation on healthcare quality, it does not thoroughly explore potential risks or drawbacks associated with EHR systems. For example, issues related to data security, privacy concerns, user satisfaction, and system interoperability are important considerations that should be discussed in a balanced manner.

Furthermore, there is limited discussion on potential limitations of EHR systems or challenges faced during implementation. It would have been beneficial to include a more nuanced discussion on barriers to successful EHR adoption and strategies to address them.

Overall, while this article provides valuable insights into the impact of EHR on healthcare quality, there are areas where further exploration and critical analysis could enhance its credibility. Addressing potential biases, considering alternative perspectives, acknowledging limitations, and providing a more balanced discussion would strengthen the overall validity of the findings presented.

# Topics for further research:

* Challenges of EHR implementation in healthcare
* Data security risks associated with electronic health records
* Interoperability issues in EHR systems
* User satisfaction with electronic health record systems
* Privacy concerns related to electronic health records
* Strategies to address barriers to successful EHR adoption

# Report location:

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