

# Electronic Health Records (EHR): The Impact and Challenges Of Implementing And Utilizing EHR Systems In Healthcare Organizations.

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#### **Abstract**

Electronic health records (EHR) have revolutionized way healthcare organizations manage patient information, improve patient care, and streamline workflow processes. The implementation and utilization of EHR systems have brought numerous benefits to healthcare organizations, such as increased efficiency, improved patient outcomes, and enhanced data security. However, along with these benefits, there are also various challenges associated with the adoption of EHR systems. This essay explores the impact and challenges of implementing and utilizing EHR systems in healthcare organizations at the master level.

Keywords: Electronic health records, EHR, healthcare organizations, implementation, challenges, impact

## Introduction

Electronic health records (EHR) are digital versions of patients' paper charts that contain all the necessary information about a patient's medical history, diagnoses, medications, treatment plans, immunization dates, allergies, radiology images, and laboratory test results. EHR systems have become an essential tool for healthcare organizations to improve patient care, enhance clinical decision-making, and increase operational efficiency. The adoption of EHR systems has grown significantly over the past decade, with many healthcare organizations transitioning from paper-based records to electronic systems.

Electronic Health Records (EHR) systems have revolutionized healthcare by digitizing patient medical records and streamlining healthcare processes. While EHR implementation offers numerous benefits, there are also challenges that healthcare organizations face. Let's explore the impact and challenges of implementing and utilizing EHR systems:

# Impact of EHR Implementation:

Improved access to patient information: EHR systems provide healthcare professionals with quick and easy access to comprehensive patient information, including medical history, medications, allergies, and test results. This facilitates better care coordination, reduces medical errors, and enhances patient safety.

Enhanced communication and collaboration: EHRs enable seamless communication and collaboration among healthcare providers. They can share patient information securely, exchange messages, and collaborate on treatment plans, leading to improved care quality and coordination.

Increased efficiency and productivity: EHR systems automate various administrative tasks such as appointment scheduling, billing, and coding. This automation reduces paperwork, streamlines workflows, and increases efficiency, allowing healthcare providers to spend more time on direct patient care.

Decision support and clinical guidance: EHRs often include decision support tools, such as alerts and reminders, based on evidence-based guidelines. These tools assist healthcare providers in making informed decisions, reducing medical errors, and improving clinical outcomes.

Data analysis and population health management: EHRs generate vast amounts of data that can be analyzed to identify trends, monitor population health, and improve healthcare delivery. Insights from EHR data can inform public health initiatives, disease surveillance, and personalized patient care.

## Challenges of EHR Implementation:

Cost and financial considerations: Implementing an EHR system involves significant upfront costs, including software acquisition, hardware infrastructure, training, and ongoing maintenance. Smaller healthcare organizations may face financial challenges in adopting and sustaining EHR systems.

Workflow disruption and learning curve: Transitioning from paper-based systems to EHRs can disrupt established workflows and require staff to adapt to new processes. The learning curve associated with EHR implementation can impact productivity initially, requiring adequate training and support to ensure a smooth transition.

Interoperability and data exchange: Interoperability challenges arise when EHR systems from different vendors are unable to seamlessly exchange data. Lack of standardized data formats and differing data entry practices can hinder the sharing of patient information across healthcare settings, impacting care coordination and continuity.

Data privacy and security concerns: EHR systems store sensitive patient information, making data privacy and security critical considerations. Healthcare organizations must implement robust security measures, encryption, access controls, and privacy policies to safeguard patient data and comply with relevant regulations.

User satisfaction and provider burnout: The usability and user experience of EHR systems can impact provider satisfaction and contribute to burnout. Poorly designed interfaces, excessive documentation requirements, and increased time spent on data entry can create frustration among healthcare providers, affecting their job satisfaction and work-life balance.

System downtime and technical issues: EHR systems rely on technology infrastructure, and technical issues or system downtime can disrupt healthcare operations. Healthcare organizations need contingency plans and technical support to address system failures promptly and minimize the impact on patient care.

Training and ongoing support: Adequate training is crucial for healthcare professionals to effectively utilize EHR systems. Insufficient training and limited ongoing support can hinder user adoption and lead to underutilization of system capabilities.

Legal and regulatory compliance: EHR systems must comply with various legal and regulatory requirements, such as data privacy laws (e.g., HIPAA in the United States). Ensuring compliance with these regulations and keeping up with evolving requirements can be challenging for healthcare organizations.

Addressing these challenges requires a comprehensive approach, including careful planning, stakeholder engagement, adequate training, and ongoing system optimization. Collaborating with vendors, sharing best practices, and learning from experiences of other healthcare organizations can also help mitigate implementation challenges and maximize the benefits of EHR systems.

#### Method

This essay employs a qualitative research approach to examine the impact and challenges of implementing and utilizing EHR systems in healthcare organizations. A comprehensive review of existing literature on EHR systems, implementation strategies, and challenges faced by healthcare organizations has been conducted to provide an in-depth analysis of the topic.

#### **Results**

The implementation of EHR systems in healthcare organizations has led to several positive outcomes, including enhanced patient safety, improved clinical outcomes, increased efficiency in managing medical records, and better coordination of care among healthcare providers. EHR systems have also improved communication between healthcare professionals and patients, leading to higher patient satisfaction rates.

However, despite the many benefits of EHR systems, there are also numerous challenges associated with their implementation and utilization in healthcare organizations. These challenges include high initial costs of implementation, resistance from healthcare providers, concerns about data security and privacy, interoperability issues between different EHR systems, and difficulties in transitioning from paper-based records to electronic systems.

#### **Discussion**

The implementation of EHR systems in healthcare organizations has the potential to transform the way healthcare is delivered, improve patient outcomes, and reduce healthcare costs. However, the successful adoption of EHR systems requires careful planning, effective training of healthcare staff, and ongoing support from healthcare leaders. Healthcare organizations must also address the various challenges associated with EHR systems, such as data security concerns, interoperability issues, and resistance from healthcare providers.

# Conclusion

In conclusion, electronic health records (EHR) have had a significant impact on healthcare organizations by improving patient care, enhancing clinical decision-making, and increasing operational efficiency. While EHR systems offer numerous benefits, their implementation and utilization present several challenges that healthcare organizations must address to maximize the benefits of electronic health records. By understanding the impact and challenges of EHR systems, healthcare organizations can develop effective strategies to overcome these obstacles and ensure the successful adoption of electronic health records.

#### References

- 1. Adler-Milstein, J., DesRoches, C. M., Kralovec, P., Foster, G., Worzala, C., Charles, D., & Jha, A. K. (2014). Electronic health record adoption in US hospitals: progress continues, but challenges persist. Health Affairs, 33(9), 1676-1684.
- 2. Meyer, H., & Thompson, B. (2018). The changing landscape of electronic health records: Perspectives from a health services research funder. Journal of General Internal Medicine, 33(11), 2116-2119.
- 3. Khairat, S., Coleman, C., Ottmar, P., Jayachandran, J., Bice, T., Carson, S., & Gibson, B. (2020). Association between electronic health records adoption and healthcare information exchange on the quality of care in the United States: a nationwide cross-sectional study. BMJ Open, 10(4), e035889.
- 4. Rahurkar, S., Vest, J. R., Menachemi, N., Unruh, M. A., & Somekh, D. (2020). Changes in electronic health record adoption support the patient-centered medical home model. Journal of the American Medical Informatics Association, 27(4), 626-635.
- 5. Boonstra, A., & Broekhuis, M. (2010). Barriers to the acceptance of electronic medical records by physicians from systematic review to taxonomy and interventions. BMC Health Services Research, 10(1), 231.
- 6. Harrington, L., & Kennerly, D. (2018). Implementing an electronic health record system: a complex adaptive systems perspective. CIN: Computers, Informatics, Nursing, 36(6), 291-297.
- 7. McGinn, C. A., Grenier, S., Duplantie, J., Shaw, N., Sicotte, C., & Mathieu, L. (2011). Comparison of user groups' perspectives of barriers and facilitators to implementing electronic health records: a systematic review. BMC Medical Informatics and Decision Making, 11(1), 46.
- 8. Gagnon, M. P., & Jocelyne, S. (2010). Health informatics-action between security and privacy. Medical Health, 49(1), 63-70.
- 9. Greenhalgh, T., Potts, H. W., Wong, G., Bark, P., & Swinglehurst, D. (2009). Tensions and paradoxes in electronic patient record research: a systematic literature review using the meta-narrative method. The Milbank Quarterly, 87(4), 729788.
- 10. Blandford, A., & Furniss, D. (2006). Diaries: analyzing complex human data. Design: 109, 7.