



THE IMPACT OF THE USE OF ELECTRONIC MEDICAL RECORDS (EHR) IN HEALTH CARE.

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Abstract:

Electronic health records (EHRs) have revolutionized the way healthcare organizations manage patient information, improve patient care and streamline workflow. The implementation and use of EHR systems brings many benefits to healthcare organizations, such as: B. Increased efficiency, improved patient outcomes, and improved data security. However, in addition to these benefits, implementing an EHR system also comes with various challenges. This article explores the implications and challenges of implementing and using EHR systems in master's-level healthcare organizations.

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

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Introduction

An electronic health record (EHR) is a digital version of a patient's record that contains all necessary information about a patient's medical history, diagnosis, medications, treatment plans, vaccination records, allergies, radiology images, and laboratory test results. EHR systems have become an important tool for healthcare organizations to improve patient care, improve clinical decision-making, and increase operational efficiency. The adoption of electronic medical record systems has increased significantly over the past decade, with many healthcare organizations transitioning from paper records to electronic systems.

Electronic health record (EHR) systems have revolutionized health care by digitizing patient records and streamlining medical processes. While implementing an EHR brings many benefits, healthcare organizations also face challenges. Let's explore the implications and challenges of implementing and using an EHR system:

Impact of EHR Implementation:

Improved access to patient information: EHR systems allow healthcare professionals to quickly and easily access comprehensive patient information, including medical history, medications, allergies and test results. This helps better coordinate care, reduce medical errors and improve patient safety.

Improved communication and collaboration: Electronic medical records enable seamless communication and collaboration among healthcare providers. You can securely share patient information, exchange messages, and collaborate on treatment plans to improve the quality and coordination of care.

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

Decision support and clinical recommendations: EHRs often include decision support tools such as alerts and reminders based on evidence-based guidelines. These tools help healthcare providers make informed decisions, reduce medical errors, and improve clinical outcomes.

Data analytics and population health management: Electronic medical records generate large amounts of data that can be analyzed to identify trends, monitor population health, and improve health care 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 when implementing and maintaining an EHR system.

Workflow disruption and learning curve: Transitioning from paper-based systems to electronic medical records can disrupt established workflows and force employees to adapt to new processes. The learning curve associated with EHR implementation can initially impact productivity, requiring appropriate training and support to ensure a smooth transition.

Interoperability and data sharing:

Interoperability issues arise when EHR systems from different vendors cannot share data seamlessly. A lack of standardized data formats and disparate data entry practices can hinder the exchange of patient information between healthcare facilities and impact coordination and continuity of care.

Privacy and Security Issues: EHR systems store sensitive patient information, so privacy and security are critical. Healthcare organizations must implement strict security measures, encryption, access controls and privacy policies to protect patient data and comply with regulations.

User Satisfaction and Provider Burnout: EHR system usability and user experience can impact provider satisfaction and contribute to burnout. Poorly designed interfaces, excessive documentation requirements, and increased data entry time can lead to frustration among healthcare providers and impact 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 resolve system failures promptly and minimize the impact on patient care.

Training and ongoing support: Proper training is critical for healthcare professionals to effectively use EHR systems. Inadequate 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 protection laws (such as HIPAA in the United States). For healthcare organizations, ensuring compliance and keeping up with ever-changing requirements can be challenging.

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

Method

This article uses a qualitative research approach to examine the impacts and challenges of implementing and using EHR systems in healthcare settings. To provide an in-depth analysis of this topic, a comprehensive review of the existing literature on EHR systems, implementation strategies, and challenges faced by healthcare organizations was conducted.

Results

Implementing EHR systems in healthcare organizations has resulted in several positive outcomes, including increased patient safety, improved clinical outcomes, more efficient medical record management, and better coordination of care among healthcare providers. EHR systems also improve communication between healthcare professionals and patients, thereby increasing patient satisfaction.

However, despite the many benefits of EHR systems, there are also many challenges associated with implementing and using them in healthcare settings. These challenges include high initial implementation costs, resistance from healthcare providers, data security and privacy concerns, interoperability issues between different EHR systems, and difficulties transitioning from paper records to electronic systems.

Discussion

Implementing EHR systems in healthcare organizations has the potential to transform the way healthcare is delivered, improve patient outcomes, and reduce healthcare costs. However, successful implementation of an electronic medical record system requires careful planning, effective training of healthcare professionals, and ongoing support from healthcare leaders. Healthcare organizations must also address various challenges associated with EHR systems, such as: B. Data security issues, interoperability issues, and healthcare provider resistance.

Conclusion

In summary, electronic health records (EHRs) have a significant impact on healthcare organizations by improving patient care, improving clinical

decision-making, and increasing operational efficiency. While EHR systems offer many benefits, their implementation and use present several challenges that healthcare organizations must address to maximize the benefits of electronic health records. By understanding the impacts and challenges of EHR systems, healthcare organizations can develop effective strategies to overcome these barriers and ensure successful adoption of electronic health records.

Healthcare Organizations.

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), 729-788.
10. Blandford, A., & Furniss, D. (2006). Diaries: analyzing complex human data. *Design*: 109, 7.