REVIEW
DERLEME

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Use of Electronic Health Records in Nursing

Hemşirelikte Elektronik Sağlık Kayıtlarının Kullanımı

ABSTRACT

Nurses are one of the health professionals who spend the longest time with patients and play an active role in recording health data. With the use of electronic health records by nurses, time saving and efficiency, reduction of error rate, improvement of communication and coordination, patient safety, increase in quality of care, and reduction of workload are provided. However, nurses experience difficulties such as technological inadequacies and need for training, feeling of burnout, data security and confidentiality, high cost and technological dependency when using electronic health records. This traditional review study was conducted to emphasize the importance of the use of electronic health records in nursing and to draw attention to the difficulties experienced. It is important to involve nurses in the process of creating electronic health record systems and to increase their awareness of the process.

Keywords
Electronic health record, informatics, nurse, technology

ÖZ

Hemşireler, hastalarla en uzun süre vakit geçiren ve sağlık verilerinin kayıt altına alınmasında etkin rol oynayan sağlık profesyonellerinden biridir. Elektronik sağlık kayıtlarının hemşireler tarafından kullanımı ile zaman tasarrufu ve verimlilik, hata oranının azalması, iletişim ve koordinasyonun gelişmesi, hasta güvenliği, bakım kalitesinin artması ve iş yükünün azalması sağlanmaktadır. Ancak hemşireler elektronik sağlık kayıtlarını kullanırken teknolojik yetersizlikler ve eğitim ihtiyacı, tükenmişlik hissi, veri güvenliği ve gizliliği, yüksek maliyet ve teknolojik bağımlılık gibi zorluklar yaşamaktadır. Bu geleneksel derleme çalışması, hemşirelikte elektronik sağlık kayıtlarının kullanımının önemini vurgulamak ve yaşanan zorluklara dikkat çekmek amacıyla yapılmıştır. Elektronik sağlık kayıt sistemlerinin oluşturulması sürecine hemşirelerin dahil edilmesi ve süreçle ilgili farkındalıklarının artırılması önemlidir.

Anahtar Kelimeler
Elektronik sağlık kaydı, bilişim, hemşire, teknoloji

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What is known about the field

- Nurses are the professionals who spend the most time in the patient care process and play the most active role in recording health data.

- The use of electronic health records by nurses facilitates time management, reduces error rates, strengthens communication and coordination, and improves the quality of care and patient safety.

- Nurses also face various challenges such as the high cost of systems, training needs, data security issues, dependence on technology, and burnout.

Contribution of the article to the field

- Electronic Health Records (EHR) are shown to enhance care quality, strengthen patient safety, and contribute to clinical efficiency in nursing practice.

- Despite the critical role of nurses as intensive users and key data contributors, challenges such as training needs, technological dependence, and data security concerns remain significant.

- It is emphasized that EHR awareness should be fostered from nursing education onward, and that nurses need to be actively involved in the design and implementation of digital health systems.

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INTRODUCTION

The healthcare field has undergone a remarkable transformation driven by technological advancements, particularly in the digital recording and management of patient information, which now forms the backbone of modern healthcare delivery. One of the most significant transformations is the shift toward storing and managing patient health information in digital environments. Electronic Health Records (EHR) are systems that enable the collection, storage and sharing of information about patients' health history in electronic environment (1, 2). The widespread adoption of this comprehensive technology by healthcare professionals is increasing day by day. Nurses are one of the healthcare professionals who spend the longest time with patients, play an active role in recording health data, and use EHR the most (3).

Nurses gain many advantages with the use of EHR in their profession. These advantages include saving time and increasing efficiency, reducing the error rate, improving communication and coordination, ensuring patient safety, improving the quality of care and reducing the workload (3, 4). The difficulties encountered during the use of EHR in nursing are technological inadequacies and the need for training, feeling

burnout, data security and confidentiality, high cost and technological dependence (5). To increase the use of EHR in nursing and reduce the difficulties; it is of great importance to include nurses in the processes of creating EHR and to increase their awareness of the process (4). This traditional review aims to explore both the benefits and challenges of EHR use in nursing, enhance awareness among healthcare professionals, and contribute to the development of future research in this area.

Electronic Health Records

EHR is systems in which patient records are digitized, stored, modified, transferred to different systems, and accessed by patients and healthcare professionals at different levels (1, 2). These digital systems provide fast and accurate information for nurses and other healthcare professionals and improve healthcare systems. It is important to know the features of these systems to use them correctly and effectively. These features are as follows (3, 6):
- Consisting of private and vital data
- Data entry by more than one health professional
- Users can log in and make changes to the areas they are authorized
- Use of special applications to access the system
- Large storage space for big data
- Updating in certain periods

Advantages of Using Electronic Health Records in Nursing

EHR usage in nursing offers numerous benefits, including enhanced time efficiency, reduced error rates, improved communication and coordination among healthcare providers, and increased patient safety (3, 4).

1.Time Saving and Efficiency: Nurses can access patients' health data quickly thanks to EHR. This reduces the time nurses spend on manual record keeping and allows them to spend more time on patient care.

2.Decreased Error Rates: By eliminating illegible handwriting and manual entry mistakes, EHR help ensure that health data is recorded accurately and systematically, thereby minimizing the risk of errors in clinical practice.

3.Improvement of Communication and Coordination: EHR facilitates information sharing among health professionals. Nurses can better coordinate diagnosis and treatment processes as a result of fast and reliable sharing information with other health professionals.

4.Patient Safety: EHR enables the recording of critical information such as the patient's past history, family history, disease history, allergies, drug in-

teractions and the holistic follow-up of the patient. This facilitates the patient's diagnosis, treatment and care processes and reduces the risk of possible complications (3, 4, 7).

Challenges in the Use of Electronic Health Records in Nursing

Despite its numerous advantages, the rapid evolution of EHR and the constant demand for skill updates present significant challenges for nurses (5, 8). Among the challenges encountered are technological inadequacies and the need for training, data security and confidentiality, high cost and technological dependence (9-11).

1. Technological Inadequacies and Training Needs: EHR is constantly developing and changing systems. Nurses need to have knowledge about rapidly changing systems and receive the necessary training at certain times. Therefore, nurses who do not have sufficient knowledge about technology may have difficulty in adapting to EHR (8, 11).

2. Data Security and Privacy: The fact that EHR contain large amounts of sensitive data makes these systems risky in terms of cyber-attacks and data breaches. This may lead to security gaps and violation of patient privacy. Nurses and all other healthcare professionals have the responsibility to keep patient data confidential and ensure the security of the data.

3. High Costs: Installation and maintenance of EHR, continuous updating and renewal in line with technological developments can be costly for healthcare organizations. Small-sized healthcare organizations may have difficulty in procuring costly systems. This situation causes nurses to have difficulty in using current EHR.

4. Technological Dependency: The use of EHR makes nurses dependent on technology for access to data. In case of malfunctioning of EHR, access to patient data becomes difficult and health services may be disrupted. This situation may cause a delay in patient care by requiring nurses to find alternative solutions (8, 10).

Investigation of the Use of Electronic Health Records in Nursing in Line with Literature

The fact that nurses are among the health professionals who spend the longest time with patients makes it obligatory for nurses to be an active user in EHR. In the literature (12, 13), it is emphasized that nurses are among the health professionals who use EHR the most and that nurses should be involved in the creation processes of EHR. This literature finding emphasizes the importance of increasing the awareness of nurses while creating EHR in their institutions and the need to include them in the processes. Nurses should have a high level of knowledge about the use of technology in EHR utilization processes. In a study (14), nurses stated that they wanted to receive training on the use of technology in in-service training. However, while providing these training courses, it is of great importance to consider the specialty areas of nurses and to provide training for the unit they work in (15). In a different study (16), it was found that the training given to newly recruited nurses increased their EHR utilization rates. In the study conducted by Kipturgo et al. (17), it was determined that nurses with a high level of computer use had a higher level of compliance with the use of EHR. In different studies (18, 19), it was found that nurses who received training on the use of EHR had higher compliance with rapidly developing processes. This literature finding indicates that training is important in increasing the rate of EHR use in nurses.

The use of EHR in nursing improves the quality of health services. In the study conducted by Hill et al. (20), it was stated that the quality of patient care increased with the use of EHR. In studies (21-23); it is stated that the use of EHR can improve care outcomes, reduce clinical errors, and reduce care costs. In different studies (24-26), it was found that nurses allocated more time to their patients with the use of EHR. In studies (27, 28), in which nurses' experiences related to EHR was questioned, nurses stated that the quality of care they provided to the patient increased with the use of EHR. This literature finding is important in terms of emphasizing that the use of EHR in nursing increases the quality of patient care. While the use of EHR in nursing provides many advantages for nurses, the rapid development of existing systems and the need for nurses to continuously improve themselves may cause nurses to experience different difficulties. In studies (29-31), it is emphasized that the necessary time should be allocated, and appropriate conditions should be created for the effective use of EHR. However, nurses may have difficulty in creating appropriate conditions due to their busy work schedule (32).

Nurses need support to create appropriate conditions. In a study (33), 35% of nurses stated that they did not use EHR and needed support. In a study conducted by Laramee et al. (34), it was found that nurses' expectations were not met due to lack of interdisciplinary communication and training during the use of EHR. In studies (35, 36); it is stated that the motivation of nurses who cannot receive the necessary support from their colleagues and the institution where they work decreases. Although nurses need support during the use of EHR, they are also

concerned about ensuring the security of EHR data. In different studies conducted with nurses (37, 38), it was emphasized that health data should be protected against cyber-attacks. This literature finding emphasizes that nurses experience different difficulties during the use of EHR. In preventing these difficulties, it is important to create secure systems, provide a suitable working environment and institutional support.

It is of great importance to raise awareness about the correct and reliable use of EHR in nursing at the student stage. In studies (39, 40), nurses recommend the use of EHR in nursing education, the inclusion of courses on this subject in the nursing curriculum and increasing the awareness of students and trainers on this issue. In different studies (41-45); it is stated that the use of EHR in simulation education will contribute to the well-equipped graduation of students. However, studies (46, 47) revealed that students do not know the processes and use of EHR. This literature finding emphasizes that awareness of the use of HER in nursing should be created at the student stage.

CONCLUSION AND RECOMMENDATIONS

This traditional review study was conducted to draw attention to the advantages and difficulties of using EHR in nursing and to examine the findings in line with the literature. The literature findings show the following:
• As nurses are among the healthcare professionals who spend the most time with patients, it is necessary for them to be active users of EHR.

• Nurses should have a high level of knowledge about the use of technology in the EHR utilization processes.

• The use of EHR in nursing improves the quality of health services

• While the use of EHR in nursing provides many advantages for nurses, the rapid development of existing systems and the need for nurses to continuously improve themselves may cause nurses to experience different difficulties.

• It is of great importance to raise awareness about the correct and reliable use of EHR in nursing at the student stage.

Our recommendations within the scope of the findings obtained as a result of the literature review:
• Increasing awareness of nurses and nursing students on the use of HER.

• Ensuring communication between health professionals and the institution regarding the use of HER.

• Involving nurses in the creation of HER.

Author Contributions
Concept: DY, Design: DY, Supervision: DY, Data collection and/or processing: DY, Analysis/Interpretation: DY, Literature search: DY, Writing of the article: DY, Critical review: DY.

Conflict of Interest
The principles of publication ethics were followed during the creation of this article, and there is no conflict of interest the author related to the study.

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