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Artificial Intelligence in Nursing: A Short Review

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Abstract:

The concept of Artificial Intelligence (AI) is being more and more implemented to healthcare systems, and it has been shown to have a great impact on nursing practice. AI can be said to be computer-based technologies capable of doing tasks that demand the use of human intelligence, i.e., data analysis, learning and decision-making. AI is applied in nursing to assist with clinical decisions, patient care, reporting, and health management. AI-based systems like clinical decision support tools, electronic health records, and wearable monitoring tools can assist nurses in analysing high amounts of patient data and detecting possible health risks in their initial stages. These technologies make work more efficient and workload less and quality and safety of the work with patients better. Moreover, AI helps in personalized care where nurses can generate personalized care plans through predictive analytics and patient health trends. Although the application of AI in nursing is advantageous, issues of data privacy, ethical concerns, and adequate training of healthcare practitioners are also raised connected to the implementation of AI in nursing. On the whole, AI can be used to revolutionize the nursing practice by enhancing clinical accuracy, improving patient outcomes, and aiding the delivery of healthcare when applied in tandem with professional nursing judgment.

Keywords: Artificial Intelligence, Nursing Practice, Clinical Decision Support Systems

INTRODUCTION:

Artificial Intelligence (AI) continues to take over the healthcare systems through enhanced clinical decisions, patient monitoring, and healthcare management. AI is a computer system that is programmed to execute processes that would normally require the use of the human intellect such as learning, reasoning, and pattern recognition. AI technologies in nursing practice can help analyze and assess patient data and record patient information to provide quality and efficient treatment to a patient. There are vast opportunities associated with

the artificial intelligence to revolutionize the healthcare delivery process [1] as it enhances the accuracy of the diagnostic process, and aids in the clinical decision-making process.

Implementation of Artificial Intelligence in Nursing.

Clinical decision support systems (CDSS) are based on the usage of AI in interpreting patient data and determining possible health risks. There are electronic health records (EHRs) systems that analyze them and offer evidence-based recommendations to medical staff. Intelligent assistive systems can aid nurses in identifying the early signs of complications like infection or the aggravation of the patient [2].

Patient monitoring is another useful application. The use of AI technologies such as wearable sensors and remote monitoring mechanisms is used to constantly monitor the vital signs of patients and notify nurses about the presence of abnormal values. Artificial intelligence-based surveillance systems can help nurses to recognize high-risk patients and avoid the adverse event in hospitals [3]. AI is also involved in nursing documentation and administration. The machine learning algorithms have the capacity to sort out patient-related data in the electronic records and save the nurses involved in the paperwork. AI-enhanced documentation systems enhance the productivity of a workflow and enable the nurses to spend more time in direct patient care [4].

Artificial Intelligence in Nursing Pros.

There are a number of benefits associated with the use of AI in nursing. Clinical accuracy AI enhances the analysis of vast amounts of health information and the tendency to identify trends that humans may not notice easily. It is also efficient in automating monotonous processes like records and schedules. Moreover, AI contributes to the individualistic treatment using their history of a patient and predicting analytics, helping the nurse create a unique care plan [3]. Early complications detection is also another contribution of AI systems. The predictive models can be used to identify patients with a risk of developing sepsis, falls, or hospital readmission to allow nurses to intervene early and positively impact patients [2].

Difficulties and Moral Concerns.

Although AI use in nursing has benefits, there are numerous challenges with its use. The issue of privacy and security of data is still a significant concern since AI systems require substantial quantities of patient data. Moreover, healthcare practitioners need to be well-trained to be able to utilize the AI technologies in clinical practice. Issues of ethics like patient confidentiality and responsible AI use should be handled with caution to bring about safe application [4]. The other issue is that it could result in excessive reliance on technology. Although AI may help in clinical decision-making, it will not substitute the ability of nurses to think critically, empathize, and offer compassionate care.

Conclusion

The concept of Artificial Intelligence is becoming relevant in nursing practice. The applications of AI technologies assist nurses with the clinical decision-making process, patient monitoring, and healthcare management. In spite of the fact that AI can enhance the efficiency and patient outcomes, it must be implemented as an auxiliary system instead of human care substitution. Ethically trained and integrated into healthcare systems with appropriate training, AI can contribute to the further improvement of nursing practice and patient care significantly.

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