Artificial intelligence in care: a challenge for Nursing

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In recent years, the presence and use of artificial intelligence (AI) in different areas of daily life have become more evident, taking part of the daily life of people of various age groups, health conditions, and social conditions. In this way, AI has emerged as a transformative technology in various areas of society. In the case of the health area, it may revolutionize care, diagnosis, research, and data management. For this reasons, AI has captured the attention of experts, academics, and health professionals globally.

Artificial intelligence is defined as the ability of a computer, computer network, or computer-controlled robot network to perform tasks associated with intelligent human beings, with the advantage of articulation between different computer systems. [1]

The term artificial intelligence (AI) is attributed to John McCarthy, who in 1956 referenced the idea that data could one day be fed to electronic devices to simulate human thought. [2]

The use of artificial intelligence in care and general health opens a world of diverse opportunities to improve aspects related to social justice, equity, coverage, and access. However, before delving into the possibilities of AI, it is necessary to review ethical aspects that could imply its use [3].

First of all, privacy and data security must be considered. In most countries, there are regulations regarding access to and use of personal information about each patient. Artificial intelligence becomes more necessary since it can be used from a predictive point of view of health conditions and thus limit access to insurance of this nature. [3]

Another interesting aspect is the biases in data entry when the AI is being trained. This can lead to diagnostic and treatment errors in the case of underrepresented populations and discrimination against other minority groups. There is a need to address these biases and ensure equity in access and quality of AI-powered healthcare. [4]

AI will change the nurse-patient relationship, improving quality and efficiency. Although direct nursing care is irreplaceable, the impact of artificial intelligence health technologies will require rethinking nursing practice that will include new concepts. This change entails new nursing roles, virtual care delivery models, and updated workflows. [5]

From the point of view of the application of AI, its uses can be as varied as assistive robots, humanoid and mobility robots, predictive analytics, clinical decision support systems, smart homes, and virtual assistance chatbots. [6]

Currently, nursing professionals use robots in their clinical practice to develop different activities, such as support with exercise sessions for the older, rehabilitation, as a distraction tool for pain management, and patient education, among others. [6]

Other health professionals, including nurses, have relied on assistive robots to reflectively understand their patients. In long-stay centers, AI is used to stimulate the memory of residents with dementia. This same technology is used as emotional support to reduce loneliness in institutionalized elderly and people in palliative care. [7]

From the point of view of general health, AI can be used to specify treatment with personalized attention. By analyzing clinical and genetic data, AI algorithms can identify the most effective therapies for each patient, considering their genetic profile, medical history, and other relevant factors. It can also be used to automate administrative tasks, such as medical appointments, consultations, and primary patient education. [8]

Big data analytics is another area of AI use, where it is possible to find patterns and relationships to identify risk factors, predict epidemics, and improve understanding of complex diseases in multiple applications. [8]

In conclusion, AI can transform the health sector, improving the quality of care, optimizing data management, and promoting equity in access to health services. However, its implementation requires a careful approach and solid ethical considerations to address the challenges associated with privacy, security, and fairness. Governments, academic institutions, health professionals, and technology developers must work together to establish regulations and ethical standards in the use of AI in the health field; in this way, it will be possible to improve health results, promote equity and provide quality care for all.

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