Review Article

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Emerging Role of Artificial Intelligence in Nursing

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ABSTRACT

Artificial Intelligence (AI) is an expanding field of technology designed to seek, integrate, learn, process and provide intelligence from various clinical and data sources. These technologies facilitate and, in some cases, even complement human tasks. Artificial intelligence can enhance clinical capabilities by quickly processing multiple data sources, making recommendations, predicting outcomes, and helping make decisions in patient care. Artificial intelligence generally refers to the ability of computers to automatically transform data into information, make decisions or act individually. AI tools in nursing include decision support, mobile health and voice based technologies, voice assistants, and robotics. Decision support combined with AI can provide predictions and recommendations with accuracy and specificity beyond human capabilities. AI based decision support analysis includes diagnostic results, risk prediction, and decision trees to prevent catheter-associated urinary tract infections.

Keywords: Artificial Intelligence; Electronic Medical Records; Computing; Technological Change; Gamification; Clinical Decision.

INTRODUCTION

[1]Artificial Intelligence, commonly known as AI, is the ability of computers to process data and provide information to make or guide independent decisions. Smart tools such as mobile health, voice assistants, medical decision support and robots are gaining importance in care. AI combined with decision support provides predictions and recommendations that exceed human capabilities in accuracy and specificity. It's now possible to get nursing diagnoses, fall risk predictions, decision trees for preventing catheter associated urinary tract infections, and that's just the beginning. While these concepts are not new, AI has three advantages over traditional methods: the ability to process large amounts of data, increase specificity, and the ability to automatically modify selection and calculation. AI can identify at-risk patients by analyzing a variety of patient data from electronic health records (EHRs) and other sources. However, to ensure that AI based clinical decision support

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tools support nursing practice and benefit patient outcomes, it is important for nurses to be involved in their development and direction.

Artificial Intelligence and Nursing

[1]The potential of AI in decision making includes helping nurses advise patients and identify in consistencies and problems. Therefore, nursing students and nurses need to have the necessary knowledge and skills to evaluate Artificial Intelligence Health Technologies (AIHTs) and be safe with what can be seen to be created to promote patient care in practice.

There are three levels. Artificial intelligence; narrow intelligence, general intelligence and super intelligence. ANI, also known as artificial intelligence, is a level of artificial intelligence that includes machines that can easily interpret certain tasks. Artificial General Intelligence AGI, also called artificial intelligence, is a stage in the evolution of artificial intelligence where machines can think and make decisions like humans.

Artificial Super Intelligence (ASI)[2] is a level of artificial intelligence where computers can exceed the capabilities of humans. Microsoft is committed to using AI technology in three healthcare application areas (medical, financial and operational) and working with the monitoring team to identify patch locations where AI technology can provide added value to healthcare teams and patients. A Microsoft spokes person said: Nurses are integral to the design, development and implementation of health information systems. Our team's experts are helping Microsoft support nurses' digital transformation in the healthcare industry. For example, Cincinnati Children's Hospital Medical Center (CCH) conducted an experiment to innovate using mobile applications designed to improve the patient experience. At CCH, data collected from the EMR helps predict disease and determine how to prevent adverse events.

Mc Carthy predicts that AI systems will work in the background and nurses will come to process the information provided by AI tools. When evaluating this information with the knowledge gained from nursing, consider the features.

Mc Carthy suggests that AI teams can be successful if they incorporate the following work flows into their AI projects: with frontline users (doctors, nurses, and allied health professionals) who need to deal with pain. Pain points must be important enough that team members devote time to completing the project.

Develop a growth mind set, embrace new practices, and accept failure as part of the process.

Culture and leadership are the key to success.

Identify measurable results that are meaningful and contribute to the organization's goals.

Look beyond healthcare to understand how AI technology is helping other industries and learn from others.

Applications of Artificial Intelligence

It includes social media, chat bots, driverless cars, space exploration, gaming, banking and finance. Finance Business Health Business. We need AI nursing care because it can save time, energy and money, avoid going to hospital without a minor illness, avoid the heavy burden of going through OPD/IPD in tertiary hospitals, provide specialized care to rural people, prevent fraud, convenient care to those in need Connect these surrounding hospitals to high grade pain hospitals that use radiation.[3]

The role of artificial intelligence in healthcare, cancer diagnosis, early detection of blood clots, customer service, chat bots, virtual healthcare, rare healthcare, treatment, continuous treatment, medical records management, drug addiction reduction, robotic assisted surgery, imaging, new drug development, better medical service. According to research reports and stakeholders including business representatives, researchers and doctors, artificial intelligence in healthcare has the potential to provide many benefits.

Generally speaking, AI tools support service providers rather than replacing them. Research shows that results are better when service providers and AI tools work together rather than in isolation. These are the tools in patient care.

The clinical artificial intelligence tools to augment patient care are:

- Predicting health trajectories
- Recommending treatments
- Guiding surgical care
- Monitoring patients
- Improving medication adherence
- Recording digital notes
- Automating laborious tasks

1. Predictive Health Trajectories is a machine learning CDS that can help predict the

likelihood of a patient's disease worsening. For example, in 2013-2014, a large integrated healthcare system successfully applied a machine learning model to identify patients at risk of entering the intensive care unit. Other applications in this category include prediction of kidney damage and Clostri. Clostridium difficile infection.

2. Treatment recommendations are AI powered CDS tools that can recommend treatments to doctors that can help them make better decisions and recruit tailored patients. Example: Respirators save lives, but long term use and premature removal can lead to complications, increased death rates, and increased hospital costs.
3. Clinical Introduction In medical surgery, planning and postoperative care are the most common applications of machine learning CDS tools. Other applications, including real time CDS surgery and intelligent surgeons, are also areas of research. This robotic device can sound an alarm if the surgeon works longer than average.
4. Patient monitoring is a smart tool that can use increasingly more health information, including data from electronic medical records, portable devices, and other sensors, to help monitor patients in medical facilities. Patient care is one of the areas where AI will have the biggest impact, according to a recent analysis. For example, doctors can use AI to monitor vital signs for cardiovascular and respiratory care in the intensive care unit.
5. Improving Medication Compliance: To solve compliance issues, organizations are looking for better solutions that use artificial intelligence (AI) and machine learning (ML) to improve patient compliance. Some of the currently successful solutions in this field are: Chatbots, Smart Medicines, Body Sensors, Gamification, Applications and Smart Packaging Fellow Smart Pillbox is used as an example of products such as Clever Cap and Sensor that fit into medicine boxes. In inhalers from companies like Propeller Health.
6. Digital medical record collection helps doctors begin typing digital text into her systems using speech recognition and advanced speech technology. Although the use of electronic medical records has been reported to improve collaboration and decision making, it has also been associated with physician satisfaction.
7. Unscheduled tasks can be simple but labor intensive, allowing providers to spend more time with their patients. Hospital nurses spend most of their time moving around patient rooms and medical facilities. Surgical nurses go the extra mile when working to obtain supplies and equipment.

Some of the problems faced by the Indian healthcare system are the lack of qualified doctors and infrastructure, as evidenced by the ratio of 0.76 doctors and 2.09 nurses per 1,000 people. Additionally, healthcare in India is facing a shortage of hospital beds with 1.3 hospitals remaining. Affordability: Private expenses cover 70% of medical costs and 62% are out of pocket. Poor attitudes towards healthcare are mainly due to lack of knowledge, lack of services and attitudes. Most private medical facilities are concentrated in first and second tier cities and surrounding areas, so patients have to travel far to receive basic and high quality treatment. Inequalities in access to healthcare across countries continue to be a significant barrier to preventive and rehabilitative healthcare, as do disparities between urban and rural India. AI has three advantages over traditional methods: Rapid prediction of risk in data improved tailored intervention (flagging patients at highest risk) Variable selection and automatic calculation of calculation.

[1]Artificial Intelligence identifies at-risk patients by analyzing multiple patient records from EHRs and other databases. To ensure that AI based clinical decision-making tools support nursing practice, care outcomes, and patient outcomes, nurses will be involved in their development and implementation. The potential of AI in decision support includes helping nurses advise patients and identify conflicts and problems. The determination to achieve better patient outcomes at lower cost drives disruptive technologies to replace existing ones. Advances in technology such as energy efficiency; more information, observation, study and behavior can be combined and used for personal and public monitoring. As artificial intelligence develops, it is changing healthcare organizations and care.

CONCLUSION

The intellectual problem is new and complex and there is still much to learn. Healthcare organizations must leverage the power of artificial intelligence to

create the best outcomes for doctors and patients. Nurses understand how AI can contribute to patient care and outcomes, and therefore they must be pioneers and advocates of AI in healthcare.

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