



Benefits of Robotics Technology in Health Care

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DESCRIPTION

Artificial intelligence and robotics are two technologies that have shown the potential to address many of today's problems and provide solutions to them. Robotics has been used in the manufacturing industry for quite some time. However, robots have also been used for 30 years in other areas such as laboratory research, Earth and space research, and transportation. The use of robots has reduced production costs and increased productivity, while creating many new jobs in the technology sector along with economic growth. Robots are primarily used when tasks require repetitive and monotonous work. But with Artificial Intelligence (AI), that range is expanding. They replace human workers with efficient results. According to the International Federation of Robotics, production automation is accelerating around the world.

Robots in the medical field are changing the way surgery is performed, streamlining the delivery and disinfection of consumables, and allowing providers to focus on patient care and care. Intel offers a diverse technology portfolio for the development of medical robots, including surgical assistants, modular and autonomous mobile robots. The use of robotics in the medical field enables a high level of patient care, an efficient process in a clinical environment, and a safe environment for patients and medical staff.

High-quality patient care

Medical robots support minimally invasive surgery, individualized and frequent monitoring of patients with chronic diseases, intelligent treatments, and social involvement of older patients. In addition, robots reduce the workload, allowing nurses and other caregivers to provide more empathy and human interaction to the patient, which can promote long-term well-being.

Streamlined clinical workflows

These robots can address staff shortages and challenges by tracking inventory, placing timely orders, and ensuring that

consumables, equipment, and medicines are where they are needed. Cleaning and disinfection enables rapid disinfection of hospital rooms and accommodates visiting patients, allowing staff to focus on patient-centric and value-centric work.

Safe work environment

To help keep healthcare workers safe, Autonomous Mobile Robots (AMRs) are used to transport supplies and linens in hospitals where pathogen exposure is a risk. Cleaning and disinfection robots limit pathogen exposure while helping reduce Hospital Acquired Infections (HAIs)—and hundreds of healthcare facilities are already using them. Social robots, a type of AMR, also help with heavy lifting, such as moving beds or patients, which reduces physical strain on healthcare workers.

Future of robotics in healthcare

With new applications and features, healthcare robots are expected to improve the quality, operational efficiency, accuracy, and safety of healthcare service delivery. Advances in AI bring a new dimension to robotics. As expected, the combination of artificial intelligence and robotics makes operations faster and safer. Apart from that, data analysis and improvements in hardware and software systems will diversify the use of robots in other areas of healthcare. Investment and cooperation between robot companies and healthcare providers will further boost the healthcare robot market. However, the cost of robots and their affordability for the average person remain important challenges to address. In medical facilities, robots are used in various situations. They directly or indirectly affect the patient's life. They take care of the elderly and disabled patients and let them talk so that they do not suffer from pain or boredom. Medical robots also have many advantages.

The main advantage of medical robots is that the operations performed with the help of robots are smoother and error-free. The success rate of the operation is also high. In addition, the robot operates accurately within the allotted time and work parameters. This is another important advantage of medical robots. Other benefits of medical robots include proper patient

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monitoring, perfect performance, reduced risk of infection and wasted time.

CONCLUSION

Robots have long been used in healthcare and operate primarily behind the scenes. Over the last five years, the range of robotic applications in health care has grown rapidly to include assistive applications for doctors, nurses, caregivers, and patients in hospitals and care facilities. Medical institutions around the

world and regions use robotic technology to manage operations in a variety of areas, including surgery, pharmacies, rehabilitation, and telemedicine. As technology advances rapidly and costs continue to fall, more and more healthcare organizations are applying technology to proven areas. Technology has the potential to replace repetitive tasks, complete tasks with greater accuracy and speed, reduce workloads, serve remotely, and reduce costs.