Medical technology

Medical technology, also known as medtech or healthcare technology, refers to the use of technology in the field of healthcare to diagnose, treat, monitor, or prevent diseases and medical conditions. It encompasses a wide range of tools, devices, equipment, and software applications that aid healthcare professionals in delivering better patient care and improving overall health outcomes.

Here are some examples of medical technologies:

Imaging Technology.

Surgical Technology.

Medical Devices:

Telemedicine: Telemedicine involves the use of communication technology to deliver healthcare services remotely. It enables doctors to provide consultations, diagnoses, and even treatment recommendations to patients who are located at a distance. This technology has gained significant importance, especially during the COVID-19 pandemic, allowing patients to receive medical care without physical visits.

Electronic Health Records (EHRs): EHRs are digital versions of patients' medical records, including their medical history, diagnoses, medications, and test results. EHRs improve the accessibility and sharing of patient information among healthcare providers, enhancing coordination of care and reducing medical errors.

Genomic Medicine: Advances in genomics have opened new possibilities for personalized medicine. Genetic testing, genome sequencing, and gene therapy are examples of medical technologies that allow healthcare providers to understand an individual's genetic makeup, identify genetic disorders, and develop targeted treatments.

Artificial Intelligence (AI) in Healthcare: AI has the potential to transform healthcare by analyzing vast amounts of data, aiding in medical imaging interpretation, assisting in diagnosis, predicting patient outcomes, and optimizing treatment plans. Machine learning algorithms and natural language processing are used to develop AI-powered applications in healthcare.

These examples represent just a fraction of the many medical technologies that exist today. The field of medical technology continues to evolve rapidly, leading to improved patient care, better disease management, and enhanced quality of life.

Technological progress has been proposed as the main driving force behind the growth of health care expenditures [1) 2)].

see Instruments

see Companies

Neurosurgery is a rapdily evolving speciality and has often taken a lead in adopting new technologies. Advancing technology however is not the only force driving change in this discipline.

In the current boom of technology, the combination of 'big data' and artificial intelligence [3) 4) 5)] creates the opportunity to comprehensively integrate evidence based decision making into the healthcare system. These factors are converging during a time when we are seeing significant increases in Electronic Health Record (EHR) adoption following the Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009, from 3.2% among eligible hospitals before the Act to 14.2% after [6)].

Mixed Reality technology

Optical technology

Single-cell technology

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