

”The Future of Healthcare”



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The Future of Healthcare :-

0.1 Telehealth

0.2 Nanotechnology

1 Telehealth

Telehealth is the use of digital information and communication technologies, such as computers and mobile devices, to access health care services remotely and manage your health care. These may be technologies you use from home or that your doctor uses to improve or support health care services.

Telemedicine, also referred to as telehealth or e-medicine, is the remote delivery of healthcare services, including exams and consultations, over the telecommunications infrastructure. Telemedicine allows healthcare providers to evaluate, diagnose and treat patients without the need for an in-person visit. Patients can communicate with physicians from their homes by using their own personal technology or by visiting a dedicated telehealth kiosk.

For patients at home, a typical telemedicine exam involves downloading an app such as LiveHealth or calling a telemedicine number, which generally is provided by a primary care physician's office or patient's employer as part of health benefits. After sharing information about medical history and symptoms, the remote patient will be connected to a clinician. Based on the clinician's evaluation, the call will end with the patient receiving further instructions – such as to take over-the-counter medication, fill a prescription, go to a hospital or schedule a follow-up appointment.

The Health Resources Services Administration defines telehealth as the use of electronic information and telecommunications technologies to support long-distance clinical health care, patient and professional health-related education, public health and health administration. Technologies include video-conferencing, the internet, store-and-forward imaging, streaming media, and terrestrial and wireless communications.

Telehealth is different from telemedicine because it refers to a broader scope of remote healthcare services than telemedicine. While telemedicine refers specifically to remote clinical services, telehealth can refer to remote non-clinical services, such as provider training, administrative meetings, and continuing medical education, in addition to clinical services. According to WHO, telemedicine is the delivery of healthcare services by using information and communication technologies for the exchange of information for diagnosis, treatment and prevention of disease. “Telemedicine” is often still used when referring to traditional clinical diagnosis and monitoring that is delivered by technology. “Telehealth” is now more commonly used as it describes the wide range of diagnosis and management, education, and other related fields of health care.

2 Nanotechnology

Nanotechnology involve the ability to see and to control individual atoms and molecules. Everything on Earth is made up of atoms—the food we eat, the clothes we wear, the buildings and houses we live in, and our own bodies.

The ideas and concepts behind nanotechnology started with a talk entitled “There’s Plenty of Room at the Bottom” by physicist Richard Feynman at an American Physical Society meeting at the California Institute of Technology (CalTech) on December 29, 1959, long before the term nanotechnology was used. In his talk, Feynman described a process in which scientists would be able to manipulate and control individual atoms and molecules. Nanotechnology is the term given to those areas of science and engineering where phenomena that take place at dimensions in the nanometre scale are utilised in the design, characterisation, production and application of materials, structures, devices and systems. Although in the natural world there are many examples of structures that exist with nanometre dimensions (hereafter referred to as the nanoscale), including essential molecules within the human body and components of foods, and although many technologies have incidentally involved nanoscale structures for many years, it has only been in the last quarter of a century that it has been possible to actively and intentionally modify molecules and structures within this size range. It is this control at the nanometre scale that distinguishes nanotechnology from other areas of technology.

Clearly the various forms of nanotechnology have the potential to make a very significant impact on society. In general it may be assumed that the application of nanotechnology will be very beneficial to individuals and organisations. These include materials in the form of very thin films used in catalysis and electronics, two-dimensional nanotubes and nanowires for optical and magnetic systems, and as nanoparticles used in cosmetics, pharmaceuticals and coatings. The industrial sectors most readily embracing nanotechnology are the information and communications sector, including electronic and optoelectronic fields, food technology, energy technology and the medical products sector, including many different facets of pharmaceuticals and drug delivery systems, diagnostics and medical technology, where the terms nanomedicine and bionanotechnology are already commonplace. Nanotechnology products may also offer novel challenges for the reduction of environmental pollution.