NATIONAL INSTITUTE OF TECHNOLOGY RAIPUR

BIOMEDICAL ENGINEERING

ASSIGNMENT

FUTURE OF HEALTH CARE

Submitted By:

Name: Rudrapratap patel

RollNo.:21111046

Semester : First

Branch - Biomedical Engineering

Under The Supervision Of:

Dr. Saurabh Gupta

Department Of Biomedical Engineering

NIT Raipur

1 ""FUTURE OF HEALTH CARE""

Telehealth has made it possible for patients to receive care without an in- person office visit. Remote patient monitoring is becoming more widely ac- cepted. This now includes wearable technology with impressive capabilities, from remote monitoring of vitals to remote echocardiograms. If not for the pandemic, it would have taken the healthcare industry another decade to reach where it is today. Achieving universal health coverage (UHC) requires health financing systems that provide prepaid pooled resources for key health services without placing undue financial stress on households. Understanding current and future trajec- tories of health financing is vital for progress towards UHC. We used historical health financing data for 188 countries from 1995 to 2015 to estimate future scenarios of health spending and pooled health spending through to 2040.

In the third century B.C.E., the ancient Greek historian Polybius maintained that we should not examine societies in isolation. He insisted on looking at the world as a whole , which would help us understand countries in context and compare them to one another. As a result, health systems in the modern era should be addressed on a global scale, yet they rarely are.

Achieving universal health coverage (UHC) requires health. What are the major broad-scale trends affecting health-care systems? We identi- fied five recurring issues after conducting a thorough review of the health policy and systems literature: sustainable health systems, the genomics revolution, emerging technologies, global demographic dynamics, and new care models. We give a quick rundown of each.

1.1 Nanotechnology

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, phar- maceuticals 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 challengies for the reduction of environmental pollution. Although in the natural world there are many examples of structures that exist with nanometre dimensions (here- after 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 in- tentionally modify molecules and structures within this size range. It is this control at the nanometre scale

that distinguishes nanotechnology from other areas of technoloNanotechnology 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 enti- tled "There's Plenty of Room at the Bottom" by physicist Richard Feynman at an American Physical Society meeting at the California Institute of Tech- nology (CalTech) on December 29, 1959, long before the term nanotechnol- ogy 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 mate- rials, structures, devices and systems

1.2 telehealth

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 edu- cation, public health and health administration.

Technologies include video- conferencing, the internet, store-and-forward imaging, streaming media, and terrestrial and wireless communications.Telemedicine, also referred to as telehealth or e-medicine, is the remote delivery of healthcare services, including exams and consultations, over the telecommunications in-frastructure. 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.

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.After collecting passive data, IoT healthcare devices would send this critical information to the cloud so that doctors can act upon it. Thus, IoT-based healthcare ser- vices not only improve a patient's health and help in crit- ical situations but also the productivity of health employ- ees and healthcare organizations' workflows

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 deliveryof healthcare services by using information andcommunication technologies for the exchange of information for diagnosis, treatment and pre-vention 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.