NATIONAL INSTITUTE OF TECHNOLOGY
RAIPUR

BIOMEDICAL ENGINEERING

ASSIGNMENT

Future of Healthcare

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1 Introduction

The future of Healthcare is advancing towards digital systems that would enable healthcare providers to identify diseases earlier,hence it would be easy to monitor and cure diseases through non-invasive devices.There are many exciting innovations that are coming up in healthcare which could really change the the way we see our health and diseases such as Artificial intelligeence,Virtual Reality,Augmented Reality,NanoBots,Gene editing,3-D printing etc.

2 Changes we Expect:-

More Technology - As time will go on we will have more information and data about differenet diseases which will help in building great technological health ecosystem.The more the technology will grow the less invasive devices will be built.Some great technologies that could change the healthcare are Virtual Reality,Augmented Reality,Nanobots and 3-D printing etc.

Healthcare-Delivery - In the changing Era from traditional to digital health we have to make sure that people of all classes have uniform access to digital healthcare services. we have to make a brigde between the classes and it can only be done by making portable devices,stronger connectivity,big data analytics and spreading awareness to the local society.

Data Management - We have seen during Covid crisis that how digital help can reduce the burden of healthcare system.In future we expect more digital information would be available which would be used for identyfying the pattern of diseases and finding it's cure effectively at the prelimnary stage.It should be backed by strong cyber security.

3 Revolutionary Technologies in Healthcare:-

3.1 Artificial Intelligence

- Arificial intelligence algorithms can be used to mine and analyse the data and identify the pattern of diseases.

- AI can be used to create drugs way faster then humans.
- AI can bring the intelligence to medical devices that would help to learn and treat various life threatning diseases.

3.2 Virtual and Augmented Reality

- VR can help Surgeons to do operation from distance.
- AR can help future medical surgeons to learn and practice
- VR can play a huge role in mental health,it can calm the mind by tavelling to different places from hospital only,it can decrease pain by distractcting the brain.

3.3 Nanotechnology

- Nanotechnology can be used for medical imaging which can help to view inside human body without cutting it.
- Nano robots can be used to cure various diseases at the micro level.
- Nanotechnology can be used to collect the data inside body which could be used to predict and learn about many healthcare aspects.

3.4 Trackers,wearable and sensors

- These can be used to monitor and track own health system and further can be used to control it.
- These can also be used as diagnostic such as calming down through headset with meditation.

3.5 3-D printing

- 3-D printing can be used to create artificial body parts
- It can be used to print skin with tissues which can help burnt patients.