# National institute of Technology , Raipur

submitted by: Saurabh Raj Roll no: 21111053

Feburary 2022

### 1 Emerging Technology in Healthcare

#### 2 introduction

The Emerging technology commonly refers to technologies that are currently developing, or that are expected to be available within the next five to ten years, and is usually reserved for technologies that are creating, or are expected to create, significant social or economic effects. These include smart phones, tablet pcs, Touch screens, digital ink, voice recognition, Electronic Health Records , Health Information Exchange , Nationwide Health Information Network , Personal Health Records , patient portals, genome-based personalized medicine.

#### 3 voice search

voice search has become incredibly popular around the world. voice is a huge healthcare marketing technique smartphones and smart speaker were first released optimize your marketing campaigns and landing pages for voice. With the rise in popularity of smart speakers and native voice search as a whole Siri,Google Now, Cortana etc voice presents some of the most amazing opportunities for marketing healthcare executives in 2022and beyond.

## 4 3-D Printing

The future go for medical services is comprehensively observed with 3D printing technology with printing the body tissue till the artificial appendages, veins, pills, and some more. Organizations are delivering skin tissues with the platelets that help in supplanting the skin burn, and other skin related issues faced by the patients. The medications printed from 3D printing advances have been used since 2015.3D printing have been medical devices such as orthopedic implants; more than 100 have been reviewed. Such a manufacturing approach offers several clinical advantages. For example, manufacturers have used 3D printing technologies to create devices with complex geometries such as knee replacements with a porous structure, which can facilitate tissue growth and integration. 3D printing also provides the ability to create a whole product or device component at once while other manufacturing techniques may require several parts to be fabricated separately and screwed or welded together.

## 5 nanotechnology

Nanotechnology deals with the engineering of systems at the atomic and molecular level. It combines components of molecular chemistry and physics with

engineering to gain an advantage over the unique changes to the properties of materials that occur at a nanoscale.

A major challenge facing the health care industry is the human body's inability to sometimes absorb entire doses of drugs. This is where nanotechnology comes into the picture. Nanotechnology can be used to transport the drug to specific cells in the body, which not only ensures a more precise treatment but also reduces the chances of failure or rejection.

The ability to examine the human body, its drug therapies and medical devices at the nano level, ultimately ensures a much higher level of accuracy in medicine. The healthcare industry is leveraging this technology for two broad applications: Diagnostics and medical devices, and nanomedicine. With the rapid advancement in nanotechnology, the scope is endless for further development of new diagnostics and treatments with higher success rates.

Here are the four major ways in which nanotechnology is changing the future of healthcare:

#### 6 Telemedicine

Telemedicine enables patients to receive medical attention at the convenience of both doctor and him, and at the same time, he is safe. This may imply that a person does not need to take time off from work or arrange childcare. Going to the doctor's office entails sitting in close quarters with others can cause infection. This is especially risky for people who have chronic medical problems or a weakened immune system. It prevents the possibility of contracting an infection at the doctor's hospital. Telemedicine service providers could have lower overhead rates. Clinicians may find that telemedicine supplementing their income by allowing them to take care of more patients. When caregivers see patients online, they are not exposed to the infections that the patient may bring. The patient may be happy with their physician if they do not have to fly to the office or wait for treatment or get infected from the hospital. Telemedicine has improved the capacity of healthcare providers to take care of many people without physically being there. Furthermore, now that it has proved its worth, it will be around for a long time. Although introductory video conferencing brought many providers to telehealth, the new wave of telemedicine technologies would have much more to offer. For example, during a patient, clinicians can use natural language processing to take notes automatically. During emergency operations, specialists will weigh in from afar. The knowledge gathered by healthcare instruments may be submitted to internet of things.

## 7 Augmented Reality

Augmented reality is a technology that blends real-world elements with virtual ones. For example, a person might visit a trade show and aim their smartphone at a display to activate an AR experience that allows them to see a computer-

generated version of a product. This approach is particularly useful for getting people excited about prototypes or helping them understand the potential of any item not yet finalized.