

National Institute of Technology, Raipur

ASSIGNMENT-5

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TWO PAGE WRITE-UP ON "EMERGING TECHNOLOGIES IN
HEALTHCARE"



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Contents

1	Emerging Technology in Health Care :-	4
1.1	Artificial Intelligence	4
1.2	Virtual Reality	4
1.3	Blockchain	5
1.4	Nanotechnology	6
1.5	SMARTER PACEMAKERS	7

1 Emerging Technology in Health Care :-

"I believe that technology will make our health-care system easier and more efficient to do complex tasks, making it more user-friendly and convenient for individuals in the future."

Some examples of Emerging Technologies are:-

1.1 Artificial Intelligence



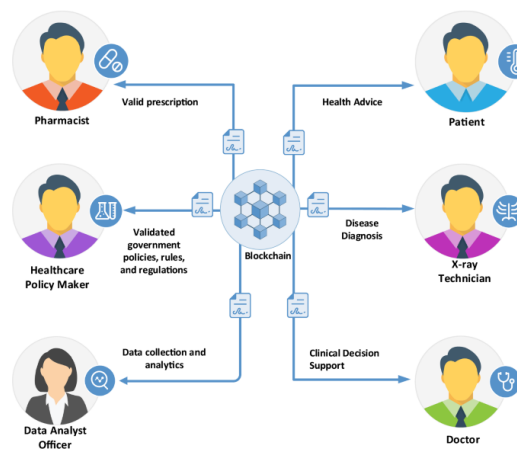
Artificial intelligence has the potential to revolutionise healthcare by assisting professionals in making better decisions, reducing human error, and reducing the likelihood of avoidable scenarios. Advanced technology helps generate more efficient and precise solutions, from imaging tools and immunotherapy for cancer patients to identifying infectious disease patterns. Learning algorithms will have a substantial impact on healthcare services, such as diagnostic techniques, treatments, and care processes, as they evolve and become more accurate.

1.2 Virtual Reality



Virtual reality (VR), which is also a new technology in healthcare, is a versatile tool that may be used to teach autistic children speech and social skills, as well as to engage patients in activities and games for rehabilitation. Through cognitive behavioural therapy and meditation training, virtual reality solutions can help people regulate hot flashes and decrease pain. Some apps use Google Glass and augmented reality to help with clinical and medical documents, such as reminders, orders, and referrals.

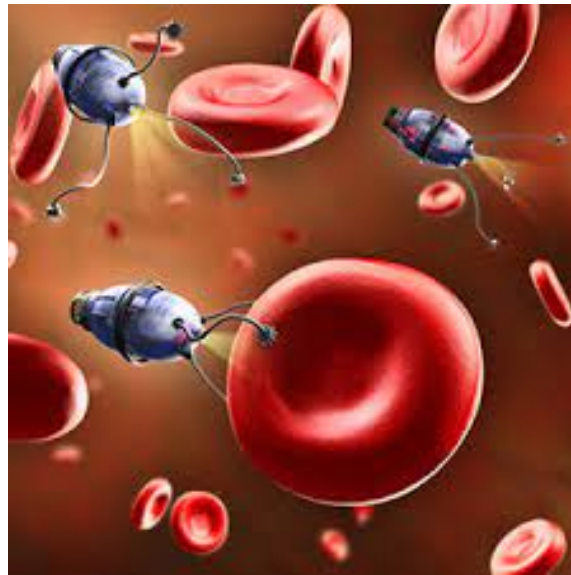
1.3 Blockchain



The collecting and storage of medical history is projected to be fundamentally transformed by this technology. Not only would it be easier to store and access data via blockchain, but security risks would be reduced as well. It would

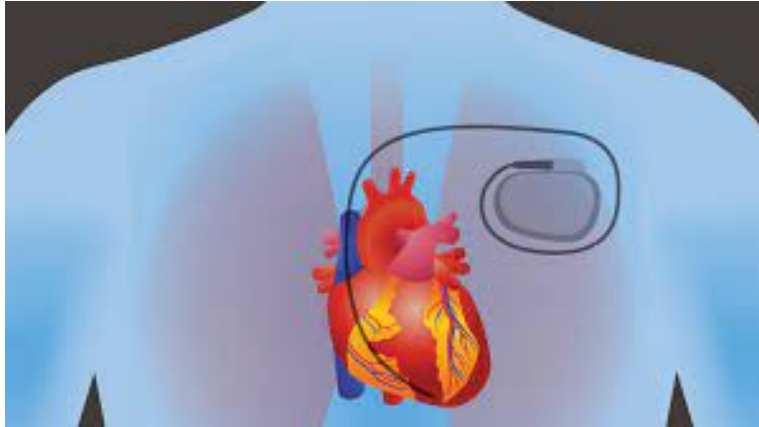
provide clinicians access to a patient's whole medical history, including any inherited disorders or allergies, allowing them to tailor treatment to provide the best care possible. The blockchain notion for healthcare is still in its infancy.

1.4 Nanotechnology



Nanotechnology in the healthcare field has been in the works for quite some time. It investigates molecular structure in order to create precise medical devices and treatments. Nanorobots and nanomedicines are two examples of nanotechnology breakthroughs. In 2018, nanotechnology was used to create an electronic pill that can be controlled after being released in the patient's body to relay diagnostic information or release medications in a specified area of the body. The technique is currently being used to create smart patches that can monitor wounds and promote speedy healing. The majority of this application is still in development.

1.5 SMARTER PACEMAKERS



The artificial pacemaker, which has been around for almost a century, is still a vital piece of medical equipment, with over a million patients relying on it. They can prevent or repair life-threatening heart arrhythmias by providing electrical impulses to heart muscle chambers. The ability to remotely monitor these devices is critical to their operation. Historically, that monitoring has been subpar, relying on complicated interfaces that the patient may not fully comprehend. Pacemakers will become a little wiser in 2021. Pacemakers can be linked to smartphone-based mobile apps that patients can better understand and use if they are enabled with Bluetooth technology. As a result, remote monitoring and, as a result, patient outcomes will improve. Medtronic, one of the world's top medical technology businesses, has already implemented the system.