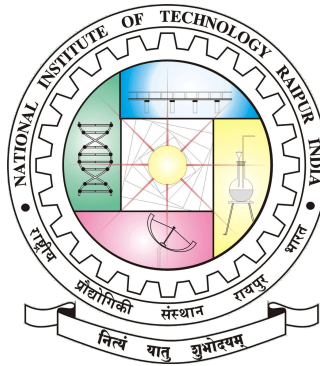


National Institute Of Technology, Raipur



Assignment-5

”Two page write-up on Emerging Technologies in Healthcare.”

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1 Introduction

Technology development has been transforming and adding values to health-care service providers and practitioners. With the advent of new trends and innovations, it became more exciting to work in any field. The Day is not far when Diagnostic body scans will be Our Daily Life. Some of the Emerging technologies I had Mentioned below.

2 Emerging Technologies

1. Smartphone-Based Healthcare

❑ **Chatbots** : Chatbots in healthcare offers a wide variety of benefits that we're very excited about. With the potential for improvement in the organization of patient pathways, medication management, help in emergency situations or with first aid. Options are endless for chatbots, from customer service to potential diagnosis of mild conditions.

❑ **E-Pharmacy** : The introduction of e-Pharmacy stores has made drugs and medicines available even at remote corners. For example, PharmEasy, Netmeds, 1MG, Truemeds, etc.

❑ **Online Consultancy Services** : Services like Practo, Mfine, Tata Health, etc., have made Doctors available for patients for every single second of the day. This system is helpful for busy patients and those who don't want to wait in long queues.

❑ **VoiceSearch** : Since 20% of Google searches are voice searches in 2018, voice has become one of the main health technologies healthcare. Voice is a huge healthcare marketing technique.

❑ **Personalized mobile apps** : Mobile apps are great for engagement with Huge Number of Patients. From requesting physician appointments, checking in, uploading a patient's medical history to getting test results via a mobile app Mobile apps are a great way to communicate and stay in touch with your patients, long after they left your health facilities. There's so much potential in health mobile apps to Serve the Patients in a Great Way.

❑ **Advanced social media** : As more people have become active on social media, the medical field has embraced it and now incorporates social media into a number of health care strate-

gies. As more people look to social media and the internet for answers regarding medical questions, it is important for public health workers and health educators to establish an online presence.

2. **Remote Trackers** : Another digitalization trend in healthcare technology is the increased use of wearables and mobile devices for remote patient monitoring. New instruments in this dimension will let patients and doctors monitor a larger number of vitals, including glucose levels and blood pressure, and store this data in medical databases for further analysis. This way, physicians can track the patient's progress.
3. **Tissue Engineering** : The loss or failure of an organ or tissue is one of the most frequent, devastating, and costly problems in human health care. A new field, tissue engineering, applies the principles of biology and engineering to the development of functional substitutes for damaged tissue.
4. **Telesurgery and Robot Surgery** : This is Less Invasive And more Accurate Tool For Diagnosis And Treatment, however faces many challenges. Zero-latency time and improvement in haptic feedback technology are required for precise and well-done surgeries.
5. **Genotyping and Gene Therapy** In gene therapy, a normal gene is inserted into the genome to replace an abnormal gene responsible for causing a certain disease. This creates substantial opportunities for regular patients who can learn more about their genetic inheritance disorders. As well as associated risks for such diseases as diabetes, heart disease, and cancer.
6. **AI-Powered Decision Support Systems** : Modern AI decision support systems including [the Watson system](#) developed by IBM have already produced highly positive initial results. These solutions utilize big data and machine learning capabilities to study all patient records. As well as all available medical literature and recent practice related to similar cases.
7. **Internet of Medical Things (IoMT)** : The Internet of Medical Things (IoMT) is a combination of medical devices and applications, links various systems to make the system more efficient.

8. **Blockchain** : The important thing about blockchain is digital data storage. It creates the transaction ledger. Which is not only transparent but impossible to manipulate. When you use blockchain to get data. The information you enter and other data will stay with you. Rather than being stored on some server owned by the company providing the services.
9. **Augmented Reality (AR)** : It has the potential to construct live visuals of 'the insides' of patients. Using 3D scans and CAT scans. It allows us to see through the patient's internals to Doctors using scans.
10. **Virtual Reality (VR)** : Virtual Reality (VR) also assists in clinician preparation. Through simulation, patient education, and treatment help. to distract a patient from their pain and offer relief, VR Pain Relief uses a virtual world of landscapes and changing seasons. This can have some great applications for child specialists.
11. **Medical Tricorder** : A portable device that scanned patients and gave out a diagnosis Like the medical tricorder used in the fictional Star Trek series.. We could be close to something like that. It is one of the finest emerging healthcare technology.
12. **3D Drug Printing** : 3D drug printing helps to print the pills with complex structures. It is more efficient than normal drugs as it has a more accurate dosage. The improved rate of release control of 3D drugs has beaten the traditional drug system in every way. This also helps in the prevention of several dangerous drug interactions.

3 Conclusion

There's so much to be excited about when it comes to technology and health-care in 2022. Technology and the reform of health care will continue to bring both significant challenges and opportunities in the future !

Now The Time has come to embrace & work together to see a better world. Where everything and everyone can benefit from these technological advances.