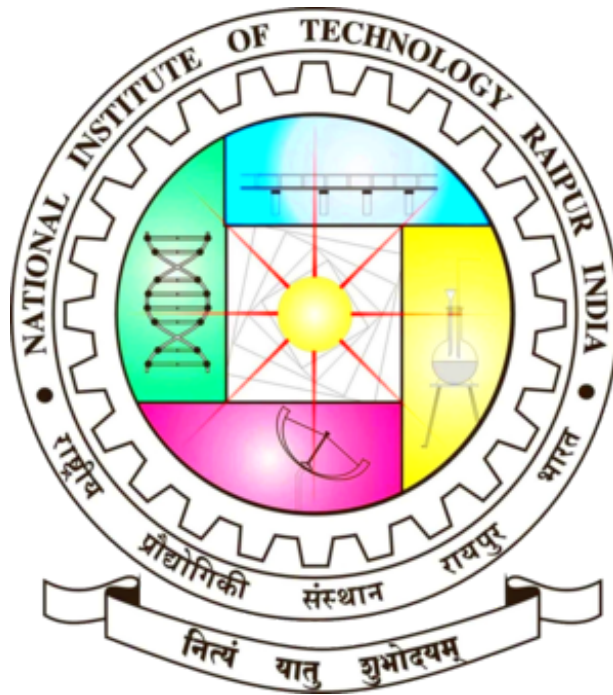


National Institute of Technology Raipur **(C.G.)**



Assignment 04 **Basic Biomedical Engineering** **Subject: Disruptive Innovative in healthcare**

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1 "DISRUPTIVE INNOVATION IN HEALTHCARE"

1. INTRODUCTION:

Innovation is no stranger to the healthcare sector. New therapies, medical devices, and healthcare management practices are adopted all the time. Disruptive innovations are those that cause radical change and often result in new leaders in the field. They overturn the usual way of doing things to such an extent that they have a ripple effect throughout the industry.



Innovations are happening day by day in the world of science. With new innovations, the use of old machines is decreasing. In the modern world, better technologies and better machines are being discovered and leading to advances in the medical field.

The five most cited disruptive innovations in healthcare are 'omics' technologies, mobile health applications, telemedicine, health informatics and retail clinics. The concept 'disruptive innovation' has diffused into the healthcare industry.

2. SOME EXAMPLES OF DISRUPTIVE INNOVATIONS IN HEALTHCARE:

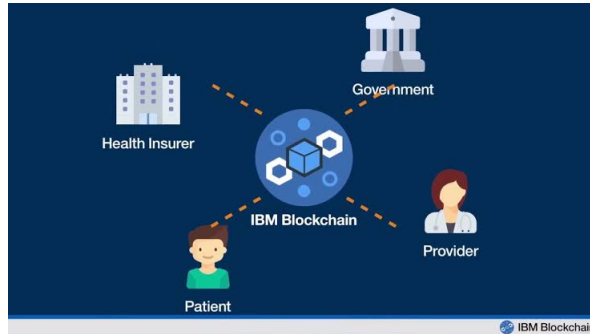
1) Consumer devices, wearables, and apps:

In the past, a patient could get only biometric data about their pulse, heart rate, blood oxygen, and blood pressure when they went to the doctor's office. Now, consumers take charge of their own health journey, using data gathered from their Fitbits, smartwatches, and mobile phone fitness apps. Physicians can use the data gathered from these wearables to make treatment decisions, although the vast amount of personal information collected by these apps has led to legal and ethical concerns over data privacy.

2) AI and machine learning:

AI applications can manage patient intake and scheduling as well as billing. Chatbots answer patient questions. With natural language processing capabilities, AI can collate and analyze survey responses. AI will probably increase in use as a way to bring down healthcare costs and let doctors and staff focus

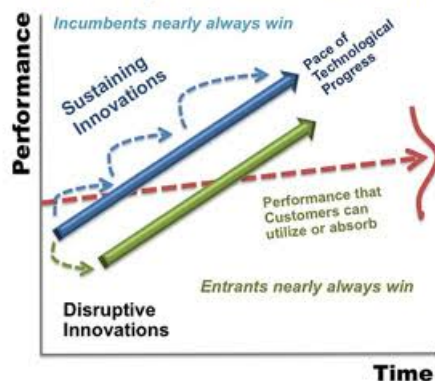
on patient care. Healthcare leaders must be knowledgeable about the issues surrounding database management and patient privacy.



3) Blockchain:

Blockchain is a database technology that uses encryption and other security measures to store data and link it in a way that enhances security and usability. This innovation facilitates many aspects of healthcare, including patient records, supply and distribution, and research. Tech startups have entered the healthcare sector with blockchain applications that have changed how providers use medical data.

The Disruptive Innovation Model



4. CONCLUSION:

Disruptive innovation is a term that has diffused into the healthcare industry, but there is widespread ambiguity in the use of the term. It may have become a victim of its own mainstream success. Poor identification can lead to poor understanding of the characteristics and potential of an innovation. This in turn can contribute to delay in its translation into tangible economic and health outcomes based benefits because we fail to understand the potential barriers to adoption and ways to overcome them. We suggest that a more precise

healthcare-specific definition, achieved through an expert consensus process, would be a precursor to better identification of potentially beneficial disruptive innovations and shortening their journey to translation and diffusion.