

NATIONAL INSTITUTE OF TECHNOLOGY  
RAIPUR

BIOMEDICAL ENGINEERING

ASSIGNMENT

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## Disruptive Innovation in Health Care

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In the healthcare industry, innovation is a given. New medicines, medical equipment, and healthcare management techniques are constantly being implemented. Disruptive breakthroughs in healthcare, on the other hand, were significantly less common until quite recently. What is disruptive innovation, and how does it affect healthcare? Disruptive innovations are those that bring about major changes and frequently result in the emergence of new industry leaders. They upend the status quo to the point where they have an industry-wide ripple impact. The nine instances of disruptive healthcare breakthroughs below focus on technology, customer-centric care, and third-party developments.

## **1 Technology**

Because every part of healthcare is dependent on some type of technology, technology is the most important driver of many disruptive developments. Any new technology, from wearables and mobile phone apps to big data and AI diagnosis, has the potential to disrupt healthcare.

### **1.1 Blockchain**

Blockchain is a database system that stores data and links it in a way that improves security and usability. Many facets of healthcare, like as patient records, supply and distribution, and research, are made easier by this breakthrough. With blockchain applications, IT entrepreneurs have joined the healthcare sector, changing the way providers handle medical data.

### **1.2 AI and Machine Learning**

AI apps can help with patient intake, scheduling, and invoicing. Patients' questions are answered via chatbots. AI can compile and analyse survey results thanks to its natural language processing skills. AI will most likely become more widely used as a means of lowering healthcare expenses and allowing doctors and staff to focus on patient care. The concerns around database management and patient privacy must be understood by healthcare leaders.

### **1.3 Customer-centered care**

Consumer-centered care is an example of a disruptive innovation in health-care. The patient-healthcare-provider interaction has changed dramatically as healthcare has become more consumerized. The mix of technology and public policy has altered how patients obtain healthcare and engage with their physicians in this area.

### **1.4 Telemedicine**

COVID-19 has unquestionably accelerated telemedicine delivery, and experts agree that telemedicine is here to stay. It works, doctors will get paid for telemedicine consultations, and many patients prefer it. Telemedicine, on the other hand, is heavily reliant on internet connectivity, and some parts of the United States still lack it.

### **1.5 Patient Rights**

Data security in electronic health records, billing transparency, and access to medical records are all part of a dramatic shift in healthcare that guarantees patients have all the information they need to make informed decisions about their care. According to the Centers for Medicare Medicaid Services, hospitals must make their costs more transparent by early 2021. (CMS). Other future revisions include the use of internet pricing tools that allow patients to see their out-of-pocket expenses.