

BIOMEDICAL ENGINEERING PROJECT: EVOLUTION OF MODERN HEALTHCARE SYSTEM.

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1 Introduction

1.1 What is healthcare?

Healthcare is the organized provision of medical care to individuals of a community. In other words healthcare is the maintenance or improvement of health via the prevention or diagnosis, treatment, amelioration or cure of diseases, illness, injury, and other physical and mental impairments in people.

1.2 What is the essence of healthcare?

The fundamental purpose and essence of healthcare is to enhance life quality by enhancing health i.e. by assessment and certification of health status, prognostication and segregation of the ill to limit communication of illness and helping to cope with the problems of illness.

1.3 How did Healthcare evolve?

There were days when the delivery of healthcare was confined to the four walls of a hospital unlike now. Now certain advancements are made so that in the present covid scenario one doesn't need to keep searching for beds in govt. or private hospitals. The 'hospital at home' model was launched by Mayo clinic which is on the way to get success. It has autonomous vehicles delivering Covid-19 tests. Maccabi healthcare services in Israel plans to deploy an AI system that can identify people at risk of developing Covid-19 complications. Simply put the hospital of tomorrow will quite look different from the one to which we all are accustomed. There also has been a sudden hike in the telemedicine field. The virtually overnight pivot to telemedicine in response to the pandemic has shown us that much of our healthcare can be managed remotely. For many patients it is not only more convenient, it's safer to avoid physically going to the hospital environment for general checkups. Even before covid - 19, the

centers for disease control and prevention estimate there are 1.7 million hospital acquired infections annually ,which lead to 99k deaths Also macheneries and other health instruments have been developed starting from a thermometer to surgery techniques and there is a fair prediction that more techniques would be upgraded using AI and new quantum techniques .

1.4 Conclusion

Therefore we see there is a fair chance for a sudden boom in this field as health sector is one of the most preliminary sector ,so innovators and future biomedical engineers would be coming up with new innovations to make health care accessible to all and making instruments and machinerics cost effective and portable and exploring other aspects of innovation to outclass and nullify the demerits.