Basic Biomedical Engineering
Assignment 2

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Evolution of Modern Health Care System

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1 Evolution of Modern Health Care System

1.1 Overview

Technological advancements have changed the face of modern healthcare. Technology has been utilized in medicine for decades to operate specialized medical equipment such as MRI scanners and x-ray machines. Technology is increasingly being used to improve the patient experience and perform a more efficient practice. Along with providing required standards of care, modern healthcare necessitates the adoption of new ways of working and communicating with patients.

Between the years 1750 and 2022, the healthcare system evolved from a simple system of home remedies and nomadic doctors with little training to a complex, scientific, technological, and bureaucratic system often called the "medical-industrial complex."

1.2 Improved doctor-patient communication

One of the most important aspects of modern healthcare is the push towards patient-centered care. Physicians used to be highly regarded, paternalistic figures that patients trusted to act in their best interests.In today's world, apps like chatbots are utilised to connect with patients regarding routine questions.Video messaging is another option for medical practitioners to incorporate parts of modern healthcare to improve contact with their patients. Telemedicine allows patients to communicate with their healthcare provider without having to take time off work. It is expected that providing this degree of ease will result in improved patient satisfaction and continuity of care.

1.3 Efficient recording of information in real-time

Data is at the heart of modern healthcare. Doctors used to record information on paper charts, which was the customary method. These charts would have to be distributed to the various doctors involved in the patient's treatment. Charts were more likely to be misplaced when paper was moved around. The procedure of recording information in modern healthcare has

improved. Results and patient data are entered into a system that is accessible to a variety of healthcare practitioners. In addition, mobile devices are employed to keep track of real-time talks with patients. Because secretaries are no longer obliged to transcribe notes, which could lead to errors, more accurate reporting is possible.

1.4 Better connectivity with Internet of Things (IoT)

When physical items (known as connected or 'smart' devices) are implanted with software, sensors, and electronics to gather and exchange data, this is referred to as the Internet of Things (IoT). The increase in the number of wearable devices, higher prevalence of chronic diseases, better access to high-speed internet, and expectations of cheaper treatment and disease management are all contributing to the IoT's expansion.

1.5 The rise of wearable tracking devices

Wearable devices, often known as gadgets, are electronic devices that are worn by customers all the time to record or track biometric data relevant to their health or fitness. Wearable devices, such as Apple's Watch or Samsung's Gear Watch, or more specific tools like the Fitbit One wireless activity and sleep tracker and monitor, are new incarnations of items that people wear. One of the most important sources of data generation is wearable devices with biometric tracking capabilities. They will record data of various types and from a range of situations in a continuous and uninterrupted manner.