

Chapter 2: Healthcare Systems: Structure, Dynamics, and Modernization in the Digital Era

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Abstract:

A healthcare system is an organized framework consisting of providers, practitioners, policies, and resources committed to enhancing or maintaining the health of individuals and/or populations. The purpose of a healthcare system is to provide a comprehensive level of care by including multiple layers of care (primary, secondary, and tertiary) and to support health from preventive services through to the most specialized services available. In addition to providing direct clinical care, healthcare systems include public health strategies designed to influence social determinants of health and to ensure equitable access to high-quality services. Today's healthcare systems are utilizing technology, including artificial intelligence, telemedicine, and precision medicine, to improve the effectiveness of the healthcare delivery process; to enhance the accuracy of diagnosis and treatments; and to increase the efficiency of delivering health services. Despite these advancements, there continues to be challenges related to rising cost of healthcare, reducing health inequities, protecting patient confidentiality, and ensuring responsible governance. Therefore, healthcare systems represent a vital social institution that provides a balance between meeting individual health/wellness needs and contributing to the overall social/developmental needs of society. To continue meeting the health/wellness needs of the ever-changing demographics of a population and the increasing number of global health threats, a healthcare system must employ a sustainable approach to deliver healthcare services to its patients that are both inclusive and centered on the patient's needs.

Keywords: *Healthcare Systems, Public Health, Artificial Intelligence in Healthcare, Precision Medicine, Health Equity.*