

“EMPOWERING INDIA THROUGH DIGITAL TRANSFORMATION : A SUSTAINABLE APPROACH”

Volume - I

Editors

Dr. M.V. Sathiyabama
Dr. B. Indira Priyadharshini
Dr. T. Kiruthika
Dr. N. Ponsabariraj

Editorial Committee

Ms. M. Sudha
Ms. P. Anu Shruthi



Empowering India through Digital Transformation – A Sustainable Approach

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Editors

Dr. M.V. Sathiyabama

*Associate Professor and Head, Department of Commerce (E-Commerce)
Nallamuthu Gounder Mahalingam College*

Dr. B. Indira Priyadharshini

*Assistant Professor, Department of Commerce (E-Commerce)
Nallamuthu Gounder Mahalingam College*

Dr. T. Kiruthika

*Assistant Professor, Department of Commerce (E-Commerce)
Nallamuthu Gounder Mahalingam College*

Dr. N. Ponsabariraj

*Assistant Professor, Department of Commerce (E-Commerce)
Nallamuthu Gounder Mahalingam College*

Editorial Committee

Ms. M. Sudha

*Assistant Professor, Department of Commerce (E-Commerce)
Nallamuthu Gounder Mahalingam College*

Ms. P. Anu Shruthi

*Research Scholar, PG & Research Department of Commerce,
Nallamuthu Gounder Mahalingam College*

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- A Sustainable Approach, Volume - 1

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Dr. B. Indira Priyadharshini
Dr. T. Kiruthika
Dr. N. Ponsabariraj

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An Impact of Digitalization in Health Care Sector

Ms. V. RUBA

Assistant Professor, Department of Commerce,
Nallamuthu Gounder Mahalingam College, Pollachi.

Dr. P. ANITHA

Associate Professor and Head, PG Department of Commerce with Computer Applications,
Nallamuthu Gounder Mahalingam College, Pollachi.

Abstract

Technological innovation has become an integral aspect of our daily life. Technology is doing wonders to the health care world. Health care is one of the leading sectors in which innovation plays a key role. Even though there is a tremendous improvement in Healthcare technology Researchers are still finding ways to improve the system. Digital Health is using digital tools and platforms to improve healthcare outcomes, such as providing personalized patient care, increasing access to healthcare through mobile apps, or using neural networks to diagnose diseases. This paper helps to know the impact of the use of new technology in healthcare and how modern medical equipment and technology have saved the innumerable patients.

Introduction

Medical treatment in India has well progressed and is still technological advancement. Medical and healthcare technology is changing and new medical developments and technologies have enhanced health care. Digital health is a field that aims to improve patient care through the use of technology, such as telemedicine, mobile health, electronic health records, and artificial intelligence, are the major changes in the medical sector. Medical technology is a large area in which innovation plays a key role in the health sustainability. Innovation in medical devices such as advanced systems for tracking and convenient imaging equipment allows patient to spend their time less on rehabilitation. Through the introduction of medical

devices and Telehealth, Robotic procedures have been implemented where the doctors need not to be with the patient even during the operations. Moreover Technological innovations in the Healthcare sector continue to provide doctors with new and modern ways of improving their patients' quality of care.

Objectives of the Study

- ❖ To know about the various digital technologies used in healthcare.
- ❖ To identify the issues and challenges in Digital healthcare.

Technologies In Digital Health

The word “Digital Health” describes the applications of technology to have a better health and healthcare. Many of us use digital health technologies daily, whether we are aware of them or not. It includes a variety of applications, including telemedicine, electronic Health Records (EHRs) for storing and sharing the Patients' information. Wearable Technology users can receive their regular updates on their activity, such as their heart rate or step count from the devices like or smart watches. Artificial \intelligence (AI) for analysis and decision making in the medical field. Let us see some of the Digital Health technologies used in health care briefly:

Telemedicine

Telemedicine is the remote diagnosis and treatment of patients using telecommunication technology. Through secured video conferencing, appointment schedules, and other digital platforms, patients can consult with healthcare professionals from their homes. The development of user-friendly telemedicine platforms and mobile apps is democratizing access to healthcare services and facilitating faultless communication between patients and healthcare professionals.

Electronic Health Record

An EHR is a digital version of a patients' health chart. EHR are patient – centered records that make medical information available instantly and securely to authorized users. EHR contains the medical and treatment histories of the patients, diagnoses, medications, treatment plans, and laboratory and test results. It helps the health providers to make decisions about a patient's care. It also helps to share the medical report of the patients with other healthcare providers and healthcare centers.

Wearable Technology

In Healthcare wearable technology refers to devices that patients attach to their bodies to collect their health and fitness data, which they may provide to their doctors, other relevant parties are to know their health conditions by themselves. Some of the wearable technologies are smart watches, Blood pressure monitors and biosensors.

Clinical Decision Support System

It is projected to improve healthcare delivery by enhancing medical decisions with clinical knowledge, patient information and other health information. CDSS are computer programs that are proposed to provide expert support to health professionals making clinical decisions. They use inherent clinical knowledge to examine the data of patients and assist dental health professionals in taking decisions concerning diagnosis, prognosis, treatment and avoidance of disease.

Block Chain

In Healthcare Block chain is used for everything from securing patient data to manage the pharmaceutical supply chain. It facilitates the secured transfer of Patient's medical records, strengthens healthcare data defenses.

Electronic Prescription

It is a computer based Electronic Medical prescription used in Health care centers. E- Prescription allows a physician, Physician assistant, Pharmacist or nurse practitioner to use digitalized prescription software to electronically transfer a new prescription or renewal authorization to a community or mail-order.

M Health

Mobile Health is a general term for the use of mobile phones and other wireless technology in medical care. The most common application of M Health is the use of mobile devices to educate consumers about preventive healthcare services. It is also used for disease surveillance, treatment support, epidemic outbreak tracking and chronic disease.

Issues and Challenges in Health Care

Even though Digital health is a stirring and fast growing field, it has many challenges. As Technology advances and more health care organizations move to digital solutions, several obstacles must be overcome to ensure digital health solutions are practical and secure.

Digital Literacy

It is common that inadequate of digital literacy in rural areas among patients. Many may become hesitant to learn how to use the new technology. Due to a lack of awareness regarding how to use the devices, issues like privacy and security may cause.

Privacy

One of the biggest challenges to be faced by Health care organization is to maintain privacy and safe of patient's record. Data breaches and cyber attack are the major problems in the health care industry

because these organizations gather and hold huge volume of sensitive information. To protect these data from cyber security these health care organizations must invest in cyber security, which helps them stay safe in threat times.

Interoperability

Interoperability refers to the standardizing of data, gathering data from different sources, and converting that data into a universally readable format. It enables healthcare organizations to seamlessly move data between health professionals, departments, providers, and services – without manual intervention.

Failure to account for interoperability can lead to information silos and miscommunication, impacting a healthcare organization's ability to share and receive information as well as streamline the patient journey.

Lack Of Personalized Healthcare

Variety of health services were provided in Digitalized healthcare. Due to increase in the volume of patients and the limited of healthcare workers maintenance of patient data is a complex task. As mass of patients which requires health services and the availability of limited number of healthcare workers, providing highly customized patient care is extremely challenging.

Cost

Incorporating new digital technologies in healthcare is costly. it is vital to consider these costs prior to making any changes or improvements and they should be addressed early and often in the planning stages, well before any outlay. To guarantee successful investments in such solutions, you'll need to thoroughly assess solutions before purchase and ensure that any return on investment validates the cost associated with implementing them over time.

Conclusion

Advance in technology provides the opportunity to reconsider what good – quality, effective health and care looks like. It can improve access to information to enable better decisions about what will work for an individual and can enable individuals to have more knowledge about their health.

Along with these opportunities there come challenges. Because technology works for some not for many, and is affordable to lots of but not to all, so it is important to make sure that implementation of technology does not exacerbate inequalities. The most precious resource in the health and care system is its staff. Technology is enabled by infrastructure and the skills and expertise of the users, which will require investment if the benefit of these tools is to be realized.

Above all the health and care system must not lose sight of the human need driving use of technology to improve outcomes, quality of life and the care it provides with the limited resources available.

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