E-HEALTH TECHNOLOGIES

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ABSTRACT

Electronic health refers to techniques that support health care through computers. It discusses health initiatives that use digital platforms to deliver healthcare data and information. Its benefits are numerous and include: managing paperless records; fast access to patient medical records; departmental collaboration within hospitals made simpler; enhanced hospital and healthcare work efficiency; accurate information provided, lowering the likelihood of error in the process of maintaining medical records; ability to schedule medical check-up appointments; variable pricing list subject to insurance policies; and graphical report generation. It is imperative that information and communication technology advancements in the future propel e-health technology forward, since it has the potential to completely transform the healthcare sector. Healthcare practitioners will choose automated solutions because they allow patients to get electronic health information from providers. The field of e-health is expanding quickly thanks to new tools, services, and apps offered to the medical community. Strategic consideration of the effects of e-health technology on patient satisfaction, care quality, and healthcare services is crucial.

Keywords – e-health, technology, information, computers, healthcare.

E-HEALTH

In India, e-health is a new field. It provides hospitals, insurance companies, and healthcare providers with internet-based information delivery services. Through networking, healthcare organizations are attempting to think globally. In the past, doctors recorded medical data about patients using a conventional approach. They were making use of prescription charts, hard files, lab reports, documents, and X-ray pictures. They found it increasingly difficult to manage massive amounts of data on paper charts as a result. For this reason, healthcare providers needed new technology to enable them to move from labor-intensive tasks to straightforward data storage systems. Thanks to e-health technologies, this is achievable. Healthcare providers can now store and share patient medical records thanks to technological advancements. (1-5)

The term "e-health," which is an acronym for "electronic health," describes the application of technology, particularly the internet, to healthcare services. Electronic methods of supporting healthcare services are known as e-health. It explains health programs that distribute healthcare information and data via digital platforms.

The field of e-health is expanding quickly thanks to new tools, services, and applications offered to the medical community. Here are a few of the services offered:

- Patient portal accessible online
- Safe text messaging

- Mobile clinical support services
- Telemedicine
- Resources for patient education
- A summary of the clinical case
- Communities of online providers.

NEED OF E- HEALTH

Insufficient patient data and medical records have a negative impact on healthcare costs and quality, jeopardizing patient safety and care. It has been suggested that information technology (IT) is a crucial instrument for keeping track of medical records and resolving issues related to delivering high-quality care. Medical professionals are constantly in need of precise patient data. EHR contains comprehensive patient and medical care data. Advanced decision-making is aided by e-health since it reduces redundant procedures and response times. According to the World Health Organization, e-health technology offers new protocols for utilizing medical resources and enhances their efficient utilization. Medical errors and costs associated with healthcare will be decreased with the use of IT applications. Drug barcoding and electronic chronic disease management are two applications of e-health. (6-8)

IMPORTANCE OF E-HEALTH

The provision of healthcare services is significantly aided by e-health technology. (9) The following are just a few advantages:

- Because patient medical records are kept in a centralized database system, it aids in the management of paperless records. This prevents using too many papers.
- It provides quick access to a patient's medical record, including their prescription history, pathology and diagnostic reports, and billing information. It only takes a few clicks to access any patient-related information.
- Since different doctors and surgeons can view the same data, it facilitates simple departmental collaboration within hospitals.
- Because digital health technology functions automatically and facilitates the retrieval of records, it improves the effectiveness of hospital and healthcare operations while saving staff time and effort.
- Making appointments for physical examinations is possible. Additionally, it permits equipment reservations in advance, removing the possibility of double booking.
- It offers a variable pricing list that is dependent on insurance policies, which streamlines and expedites the billing process.
- It offers safe storage for medical records and creates graphical reports using patient data. Patient information is easily navigable through this user-friendly mobile application.
- Accurate information is provided by e-health technology, reducing the possibility of error throughout the whole health record maintenance process.

The type of e-health information is used to categorize healthcare software. Figure 1 provides information on the various types of healthcare software, electronic health records, and prominent Indian healthcare software providers of e-health systems and

software. Some of the top-rated e-health software is displayed in Figure 2, according to users of e-health technology.

CHALLENGES AND FUTURE OF E-HEALTH PRACTICES

Security issues arise when electronic data is transferred over a network. The protection of medical records and their ethical use thus present the main challenge in the use of e-health technologies. Keeping confidentiality in e-health is a major challenge. Since these are private details that are shared with the staff members of the laboratories, pharmacies, nursing homes, and doctors, confidential information leads to many issues. In addition, a significant issue is that patients do not place enough trust in e-health-driven advice because it might contain inaccurate, erroneous, or unreliable health information that could be harmful to their health. Because they are worried about sharing their medical records, a large number of patients avoid receiving e-health care. One of the main issues is health literacy because e-health information is necessary for everyone involved in healthcare services to understand. In addition, offering healthcare staff training programs to help them adjust to new e-healthcare software and communication tools presents a challenge for service providers on a tight budget. (10-11)

E-health technology is predicted to revolutionize the healthcare industry in the future, necessitating ongoing advancements in information and communication technology development. Healthcare practitioners will favor automated systems because they allow patients to access electronic health information from providers. It is projected that e-health will play a major role in the infrastructure of contemporary healthcare, and that healthcare organizations will need to create policies for the use of e-health data security. A lot of hospitals use biometric systems, which contribute to patient data security. It will be widely used in hospitals in the near future to provide quick, secure access to patient data. The expansion of e-health in developing nations will require staff training and patient awareness of e-health technology.

CONCLUSION

E-health technology will assist healthcare providers in using medical records more effectively by enhancing healthcare services. India's medical professionals must embrace and put e-health technology into practice. The only ways to make use of e-health technology are to develop e-health software, support information technology, and invest in telecommunications equipment. It is a fact that digital tools will not replace physicians; however, they will facilitate information sharing and communication between patients and healthcare providers. Policies for the usage of e-health technologies must be developed by the healthcare sector in order to protect patient data. By tackling the main problems, better e-health technology can be developed to support improved healthcare in the future.

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Healthcare Software Companies in India	Categories of Healthcare software	E- Health record
• Lybrate • Livehealth • Clinicia • Patient Click • Niramai • Datazymes • Practo • MUregency • Accutest • Advancells • Portea • Addresshealth • Forus Health • Mitra Biotech • Medibox Technologies • Medikabazaar • Thrymr Software • BookMEDs.com • Rxpress	• Hospital Management software • Chiropractic Software • Long Term Care Software • Medical Billing Software • Medical scheduling Software • Medical Transcription software • Mental Health software • Patient case Management Software • Patient Management software • Dental Practice Software • Dental Charting Software • Medical Practice management software	• Patient Management System • Patient Contact information • Emergency Contact information • Prescription notes • Past medical History • Surgical note • Physician orders • Treatment Plan • Billing Information • Discharge summaries • Consent of patients • Past and future medical appointments

Fig. 1: Various categories of healthcare software

Fig. 2: Top rated e-health software