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National Health Id For All Indians To Strengthen The Country's Healthcare System

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Overview

In light of the launch of India's National Health ID, which was announced by the Prime Minister of India himself, at the celebration of the country's 74th anniversary of independence, this paper will discuss the relevance of the National Health ID and its merger with the Electronic Health Record (EHR). The national health ID uses biometric authentication of patients to access health records. This paper also highlights the significance of EHR and how it aids in the automation of the health sector through the use of a biometric-based national health ID.

Introduction

The health care sector is facing continuous revolutionary changes. "Healthcare 4.0" refers to the use of digital information and communication in the health industry. In reality, the health care industry cannot avoid digitalization and AI algorithms when it is raining in all other sectors. Personalized health care powered by AI is the face and future of the healthcare system. AI can assist people and hospitals by offering an in-depth picture of an individual's health status by analysing personalised health histories collected in Electronic Health Records. It may also leverage this massive amount of health data to provide immediate health advice to patients. Thinkers and experts predict that AI will gradually replace doctors and eventually be able to supply expert solutions for hospitals and medical personnel.

High-quality health care at a low cost is the need of the hour; hence, many companies have stepped forward with health care apps and online services for patients. However, the central EHR created by various governments around the globe is the cornerstone of the development of health care 4.0. During the 2000s, the United States and European countries started implementing EHRs. The European Union included the EHR in their action plan for 2020 as a part of their digitalization initiative. As of September 2021, Australia had registered over 23.1 million health records for its citizens. To that end, India launched the National Health ID on September 27 as part of the digital initiative Ayushman Bharat Digital Mission (ABDM), which is one of the largest in the world of its kind. This paper will discuss the specifics of EHR, health ID, and how biometrics is used to identify patients in the country.

Healthcare 4.0

Following in the footsteps of Industry4.0, which brought digitalisation and IoT to the industrial sector, the health care sector is leveraging big data and cloud technology to provide patients with real-time personalised treatment. Healthcare 4.0 primarily focuses on networked self-care and homecare devices, electronics, and microstructure technology, which are employed constructively to improve the efficiency of treatment models and auxiliary procedures.

EHR is a component of Healthcare 4.0, intending to facilitate clinical procedures through safer and faster methods that are also cost-effective. Furthermore, it allows for the remote collection of real-time patient information, enabling monitoring of their condition and allowing continued care after clinical procedures. Not only for patients, but it can also improve healthcare services, work routine of caregivers, and knowledge management and sharing across hospitals.

Electronic Health Record

The EHR is a collection of various medical data generated during various medical examinations of a person in their lifetime. The digitally saved record keeps a record of relevant or irrelevant health information. The relevance depends on the current patient condition. Consequently, the EHR can give better insight into a patient's medical condition and improve the quality of medical care. The EHR information is sharable with the authentication of the patient and can communicate across the healthcare continuum. Thus, the patient's progress can be tracked in multiple treatment contexts. Patients and the various health professionals that treat National or Regional Health Service patients keep the EHR up to date.

Public, private hospitals, clinics, and other healthcare facilities can add data and extract information to evaluate patient conditions. Some of the AI-powered EHR software can also help in decision making. The EHR may reduce the risk of losing medical records and paperwork, and it also has the advantage of interconnecting different healthcare systems distributed across a country to interact, exchange, and transfer data acquired in various healthcare institutions and consolidate it into a single file.

In September 2013, the Government of India first notified the standard for EHR in India. To address the rise of self-care and homecare devices and systems, that could generate healthcare data 24x7, which would also have long-term clinical relevance.

According to a recent study, out of 13 hospitals in India, 8 are EMR to record clinical data. And all of the hospitals are about to adopt EHR systems. The EHR aims to provide benefits to more than 100 crore residents of the country that include better and evidence-based care, increasingly accurate and faster diagnosis that translates into better treatment at lower costs of care, avoiding repeating unnecessary investigations. The system may also include robust analytics or predictive analytics to support personalised care, improved health policy decisions based on a better understanding of the underlying issues, etc., and ultimately a better life for all.

The National Institution for Transforming India (NITI Aayog) has suggested the "National Health Stack," a futuristic digital architecture, with the goal of creating digital health data for all Indian people by 2022. (2018, NITI Aayog). The Indian government also enacted the Digital Health Information in Healthcare Security Act (DISHA). "An act to provide for the establishment of National and State eHealth Authorities and Health Information Exchanges; to standardise and regulate processes related to the collection, storing, transmission, and use of digital health data; and to ensure the reliability, data privacy, confidentiality, and security of digital health data, and such other matters and incidental thereto".

National Health ID for India's Digital Health Ecosystem

National Health ID was launched in September 2021 as a part of the Ayushman Bharat Digital Mission, revolutionising Indian medical infrastructure. The National Digital Health Mission gives every Indian citizen a unique health ID, digitalized health records, as well as a registry of doctors and health facilities. The initiative focuses on improving efficiency, accessibility, inclusivity, and security while saving time and money in fulfilling the healthcare requirements of a country of 1.38 billion people. The complete digitization of health records is important for providing social health services, pharmaceutical distribution, and nutrition distribution for women and children, as well as for fighting epidemics.

The national health ID will provide:

- Unique identification
- Authentication
- Complete Personal Health Record (PHR)

Every Indian can receive their unique identification by registering at the national health ID portal. Or else, one can ask officials at the health centre to create health ID for them. Patients can authenticate themselves at authorised doctors across the country to provide their medical history to doctors.

The health ID may contain:

- The whole test history
- History of disease a patient had and current status
- Doctor visits
- Medicines history
- Diagnosis done

Personal Health Record (PHR) stores the complete medical history of a person from his/her birth. National health ID registration allows registration with demographic details and mobile numbers or with Aadhaar biometrics. With the assistance of the Health Information Exchange and Consent Manager (HIE-CM), patients can share their health records with the doctor. To answer the security concerns NHA has confirmed that ABDM does not store any health records of the beneficiary. The records are held with healthcare information providers and are shared over the ABDM network in encrypted form only after the consent of the beneficiary. Parents can create health IDs for their children so that data can be gathered from their birth.

Biometric For Health Record Authentication

According to Data Bridge Market Research, the healthcare biometrics market is predicted to gain market growth at a CAGR of 19.60% in the forecast period of 2020 to 2027. In which a significant share holds for the Asia-Pacific region. This is mainly because of the increasing trend of digitalization of health records. The various governments allowed health institutions to use biometric authentication to secure the EHR.

The Ayushman Bharat Yojana leverages biometric usage to secure EHR. Hospitals can use either Aadhaar-based fingerprint sensors or iris scanners to authenticate patients. The identification entirely depends on the UIDAI database (Unique Identification Authority of India). The UIDAI will validate real-time biometric data compared with the UIDAI database.

Conclusion

The national ID programme is a game-changer in public and private health services, streamlining the process of patient registration and treatment follow-ups from primary health centres to multi-speciality hospitals. This is very much important in the sustainable development of the health care of 1.38 billion residents.

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+91-79-49068001

sales@mantratec.com