

ABHA

Key to Your Digital Health Journey

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One needs to maintain lots of prescriptions, lab reports, radiological reports from different type of health facilities and individual doctors for keeping our health records. As on today, all these are being maintained in paper form in a very unorganised manner. Even though some of the health facilities have already started maintaining health records in electronic form but they are still giving papers to the patients. The ultimate objective is to provide electronic health records in the hands of the citizens through their mobile and share the electronic health record with proper consent. To achieve this objective, Government of India through Ministry of Health & Family Welfare has taken lots of initiatives in recent years.

First effort was made by notifying the Electronic Health Record (EHR) Standard in 2016. The set of standards given therein were chosen from the best available and used standards applicable to Electronic Health Records from around the

ABHA number is a 14 digit number that will uniquely identify participants in India's digital healthcare ecosystem. It will enable the participants to share and access their health records digitally and help them to avoid long lines for registration in healthcare facilities across the country. Moreover, it will establish a strong and trustable identity that will be accepted by healthcare providers and health insurance payers across the country.

world keeping in view their suitability to and applicability in India. The primary aim of these standards was to ensure syntactic (structural) and semantic (inherent meaning) interoperability of data amongst systems.

In 2017, the Government of India released National Health Policy where in need for digital health technology ecosystem, application of digital health and leveraging digital tools for AYUSH were envisaged. These digital health policy

initiatives paved way for action on ground and lots of initiatives were taken around it.

Meta Data and Data Standards (MDDS) for health domain were notified in 2018. The objective again was to have interoperability among eGovernance applications for health sector requires exchange of information across applications. For which, commonly accepted data definitions for the various data elements and code directories used in eGovernance systems in Healthcare were defined.

National Digital Health Blueprint (NDHB) was released in 2020 which envisaged leveraging 'the potential of digital health for 2-way systemic linkages between primary, secondary and tertiary care to ensure continuity of care'. The key features of the blueprint include a federated architecture, a set of architectural principles, a 5-layered system of architectural building blocks, Unique Health Identifier (UHID), privacy and consent management, national portability, EHR, applicable standards and regulations, health analytics and above all, multiple access channels like call centres, India Digital Health portal and MyHealth App.

To implement the recommendations of NDHB, the pilot project was launched with the name of National Digital Health Mission (NDHM) in the six union territories in 2020. The nationwide rollout of this pilot project was announced by the Hon'ble Prime Minister, Shri Narendra Modi in 2021 with the name "Ayushman Bharat Digital Mission" (ABDM), with an aim to develop the backbone necessary to support the integrated digital health infrastructure of the country. It will bridge the existing gap amongst different stakeholders of Healthcare ecosystem through digital highways.

ABDM building blocks include Ayushman



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▲ Fig. 9.1: Registration process at Healthcare Centre using Personal Health Record apps

Bharat Health Account (ABHA) Number, Health Professional Registry (HPR), Health Facility Registry (HFR), Unified Health Interface (UHI). The purpose of ABHA Number is to standardise the process of identification of an individual across healthcare providers. This is the only

▼ Table 9.1: ABHA implementation statistics

Health Application	ABHA Number Created	ABHA Linked with Health Record	OPD Registration through Scan & Share
Aarogya Setu	4,97,393	Not Available	Not Available
eHospital & Online Registration System	4,38,363	9,42,501	140617
Reproductive and Child Health (RCH) & ANM Online (ANMOL)	5,74,320	29,32,489	Not Available
Sickle Cell Anemia Control Monitoring System	658	In Progress	Not Available
Central Government Health System (CGHS)	47	In Progress	In Progress

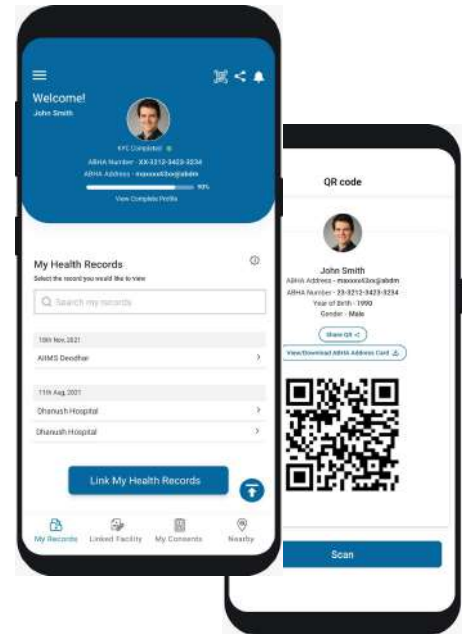
way to ensure that the created medical records are issued to the correct individual or accessed by Health Information User through appropriate consent.

Collection of basic details including demographic, location, family / relationship and contact details are required. Ability to update contact information easily is the key. The ABHA number is used for the purposes of uniquely identifying persons, authenticating them and threading their health records (only with the informed consent of the patient) across multiple systems and stakeholders.

HPR is a comprehensive repository of all healthcare professionals involved in delivery of healthcare services across both modern and traditional systems of medicine. HFR is a comprehensive repository of health facilities of the nation across different systems of medicine. It includes both public and private health facilities including hospitals, clinics, diagnostic laboratories and imaging centres, pharmacies, etc.

Potential of these building blocks of ABDM can be leveraged if ABHA Number is seeded into the electronic health records of individuals and integrated view of electronic health record is available to the patients through a mobile app. To make this happen, a number of health applications have been developed by government as well as private sector which captures health records electronically.

eHospital Suite of applications consist of eHospital - Hospital Management Information System (HMIS) having 10 modules, Patient Portal – Online Registration System, eBloodBank, Tele-Radiological Portal – eCollabDDS. Reproductive and Child Health (RCH) is an application to monitor pregnant women and children up to 6 years. Central Government Health Scheme (CGHS) is another health application, which has 22 modules to take care of G2G and G2C services. Sickle Cell Anaemia Disease Control Programme Monitoring System is the latest addition in



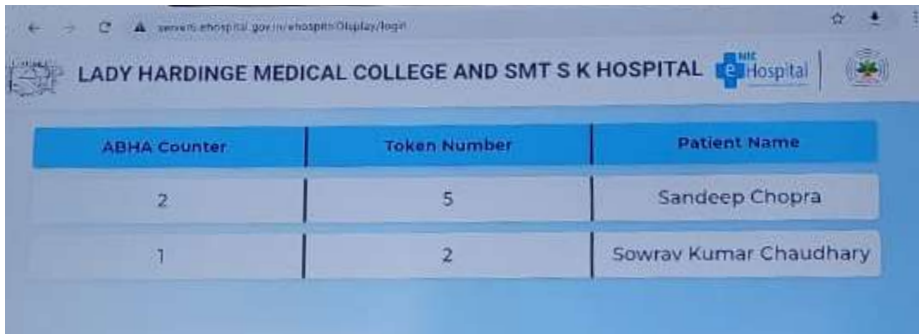
▲ Fig. 9.2: Abha app

healthcare applications. In these applications, health record of individuals is captured. All these applications are at different milestones of ABDM building blocks compliance.

Any health application can be made ABDM compliant which includes 3 milestones. First milestone includes ABHA Number creation and capture & verification for seamless patient registration. Second milestone includes building Health Information Provider (HIP) services to share digital health records via any Personal Health Records (PHR) apps like Aarogya Setu, ABHA PHR App etc. Third milestone includes developing Health Information User (HIU) services to provide view of patient's medical history to authorised healthcare workers with complete consent.

To create ABHA number, view the integrated health record electronically and use other functionalities, Personal Health Record (PHR) apps from NHA (Aarogya Setu, ABHA APR App, etc.) and private sector (eka.care, Driefcase etc.) are already available.

Recently these PHR Apps have been enabled with Scan & Share facility. Every Hospital Registration Area has been assigned a counter agnostic QR Code, which is displayed at different places. Patients or their kith & kin are encouraged to scan the QR Code. In case any PHR app is not installed on the mobile of the person then it prompts to download any of the various PHR apps. Once any PHR app is installed on the mobile then person can create ABHA Number, if not available or login using ABHA Number, if already created. After the login, person can scan the same QR Code available in the registration area. Scanning of QR Code will send the demographic details to eHospital HMIS and PHR app will receive the Token Number. In the registration area, Counter Number, Token Number and Name of the Patient is displayed on a monitor. Person can sit in the



▲ Fig. 9.3: Appointment taken at Lady Hardigne Medical College using ABHA app

registration waiting area and go to the respective counter whenever his or her assigned token is displayed and get the OPD Registration slip without any hassles.

This has facilitated 1.5 lakh patients within three months. Patients have skipped the long queues and reduced the turnaround time at the counter significantly, increased the data quality and authenticated patients.

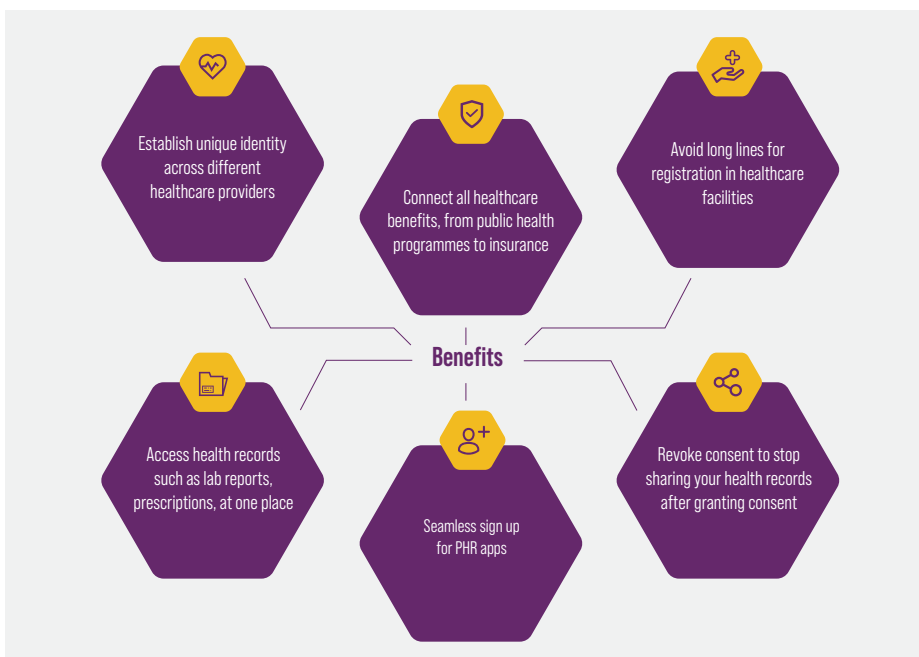
Moreover, the process of transforming Aarogya Setu App from Tracing App into National Health App has already started. Users of Aarogya Setu can create ABHA Number, Scan & Share QR Code for faster OPD Registration, View Integrated Health Record. It also facilitates registration for CoWIN, searching of vaccination slot availability, schedule / reschedule / cancel appointment for vaccination, download vaccination certificate and raise issues. A person can search nearby Laboratory, Hospital, Blood Bank using this app. Covid Updates, helpline number and other information services are also available in this app. Registration,

Retrieval of Patient-ID & Token Number, OPD timing and view tele-consultation prescription for eSanjeevini is also available on Aarogya Setu App. Soon, Aarogya Setu App users will be able to create ABHA numbers for others also using OTP and Face Authentication. This app is also being enabled for Unified Health Interface (UHI) based services.

UHI, like UPI, will soon become reality and will be a boon for patients for booking of appointment from any hospitals or doctors available on different appointment platforms, make electronic payments and do physical or tele consultations.

Once visit to hospital is over, in case electronic health record is created and linked to ABHA Number then it can be viewed on the same PHR App. In case patient goes to different health facilities and his or her electronic health record is created and seeded with ABHA Number then electronic health record of all such health facilities will be viewable on the same PHR App using same ABHA number.

▼ Fig. 9.4: ABHA app benefits



ABHA has laid a crucial foundation for integrating electronic health records. Smartphone based integrated health records have ushered a new revolution in the delivery of healthcare services. I want to take this opportunity to congratulate NIC for enabling their health applications especially eHospital, ORS, CGHS, Sickle Cell and more with ABDM building blocks. I am glad that NIC is supporting NHA in transforming Aarogya Setu into a National Health App, enabling ABHA creation. This feature will expand the utility of Aarogya Setu and contribute to it's further success.



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Sickle Cell Anemia Disease Control Programme Monitoring Mobile App and Portal has been developed by NIC to monitor the screening process in 17 states. Mobile App has been facilitated with ABHA creation through all the 3 methods of Aadhaar authentication viz. OTP, Fingerprint and Face Auth. This will facilitate in integrating health record electronically and viewable by patients through ABDM enabled Personal Health Record (PHR) Apps.



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It is just a beginning and the journey has started to replace paper-based prescriptions, diagnostic reports with integrated electronic health records in our hands through mobile.

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