No.PDC-Pb-23/ ४२९३   Dated: 17 /10/2023

Notice

All Registered Dental Professionals are directed that we are writing to inform you that the guidelines pertaining to ABDM (Ayushman Bharat Digital Mission) are to register all the professionals (public and private) in HPR (Healthcare Professionals Registry) under ABDM to provide better health care in the Public.

Enrolling in the Healthcare Professional Registry will enable healthcare professionals to get connected to India's digital health ecosystem and network. Registration in digital health through ABDM is voluntary.

National Health Authority only provides the technology platform for HPR.

Facilities to access health records of patients from other healthcare providers will be available to such Dentists who are part of ABDM.

Enrollment in HPR is a 3-step process, if requisite documents are readily available (registration certificate, degree and proof of Employment in case of Government Employee): -

1) Enroll on the Portal for registration URL:https://hpr.abdm.gov.in/

2) Fill Registration Form

3) Verify submitted details.

The user manual is annexed.

Registration fees: - There is no fee required for any registration.

Dentists registered in the Health Facility Registry should upload their valid and renewed registration of Punjab Dental Council.

Please register your grievance on https://grievance.ndhm.gov.in/or call 1800 11 4477/ 14477

Thank you for your cooperation in complying with this important requirement.

Sd/-
Registrar,
Punjab Dental Council,
Mohali.

A brief guide on Ayushman Bharat Digital Mission (ABDM) and its various building blocks

Version 1.2

This document is a reference guide on ABDM and its various building blocks. This document will help in understanding the basics of ABDM, key objectives and its working.

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Chapter 1: Introduction and Evolution

I.   Introduction

The Ministry of Health and Family Welfare (MoHFW) has prioritized the utilization of digital health to ensure effective service delivery and citizen empowerment to bring significant improvements in public health delivery.

> *To ensure that cutting-edge digital technologies are leveraged, it is crucial to focus on creating an appropriate architecture and data structures which are both pan-India. With the current system of fragmented data capture by multiple stakeholders without any standardization, there is a serious risk of compartmentalization of digital health assets.*

A. About ABDM

The Ayushman Bharat Digital Mission (ABDM) has been launched by the Government of India for promoting digitization of healthcare and creating an open interoperable digital health ecosystem for the country. It aims to do so by prescribing common health data standards, developing core modules such as registry of health facilities, healthcare professionals etc required for interoperability; so that various digital health systems can interact with each other by enabling seamless sharing of data across various healthcare providers who may be using different digital health systems. Digitization of processes in the healthcare institutions shall be taken up by dovetailing various resources. Thus, ABDM seeks to bridge the gap among multiple stakeholders that are the part of the healthcare ecosystem.

The pilot project was launched with the name of National Digital Health Mission (NDHM) in the six union territories of Ladakh, Chandigarh, Dadra and Nagar Haveli and Daman and Diu, Puducherry, Lakshadweep and Andaman and Nicobar Islands on 15th August 2020. The nationwide rollout of this pilot project was announced by Hon'ble Prime Minister Shri. Narendra Modi on 27th September 2021 with the name "Ayushman Bharat Digital Mission" (ABDM).

B. The Need for an Ecosystem

India has a population of 139 crore with over 50 lakh healthcare professionals, and over 12 lakh healthcare facilities. Many of them are already using different digital health systems. It may not be possible for them to shift to a single digital health system prescribed by the government. Further, the requirements of all the stakeholders are different. Even between two doctors or two hospitals. the requirement of digital systems differ, depending on their processes and priorities. Therefore, it is necessary that all stakeholders be allowed to use different digital health solutions

as per their needs. Hence, ABDM seeks to provide an open, interoperable ecosystem rather than provide a single digital health solution to the stakeholders.

C. Challenges in digitization of Healthcare

Many sectors such as finance and banking, travel and tourism, hospitality, etc. have benefitted from digitization. However, the data generated and used in these sectors is relatively simpler and more structured compared to the data which is generated while providing healthcare. Healthcare data consists of different types of files and use medical terminologies which is not easily understood by everybody. These include radiological images, lab reports, prescriptions, OP records, in-patient records, etc. In addition, all of these are written in different standards and formats. More importantly the data in the healthcare system is very sensitive and personal in nature. Therefore, the digitization of healthcare is different, complex and more difficult compared to other sectors.

II. Evolution

Keeping the National Health policy as base, the NITI Aayog came up with a consultation paper in 2018 relating to National Health Stack to make health records available through cloud-based services. The National Health Stack (NHS) envisaged a centralized health record for all citizens of the country in order to streamline the health information and facilitate effective management of the same. The proposed NHS was intended to address the challenge with the help of latest technology; Big Data Analytics and Machine Learning Artificial Intelligence, to create a unified health identity of citizens - as they navigate across services across levels of care, i.e. Primary, Secondary and Tertiary and also across Public and Private.

After receiving feedback on Consultation paper, a committee was formed under the chairmanship of Shri J. Satyanarayana, former Chairman of Unique Identification Authority of India (UIDAI), and the Committee released the National Digital Health Blueprint (NDHB) in July, 2019. The Blueprint indicated the need of a specialized organization, called the Ayushman Bharat Digital Mission (ABDM), to facilitate the evolution of the National Digital Health Ecosystem.

National Health Authority was entrusted with the responsibility of taking ABDM forward and on August 07, 2020, released its strategic document detailing about digital registries of personal health records of persons, digital clinics, doctors, hospitals, pharmacies and insurance companies.

On August 15, 2020, Hon'ble Prime Minister, Shri Narendra Modi announced the National Digital Health Mission (now known as Ayushman Bharat Digital Mission, or ABDM), which will leverage the power of technology to ensure the attainment of the highest possible level of health and well-being for all citizens and create a healthier nation.

It is pertinent to note that the ABDM implementation is guided by the National Digital Health Blueprint along with the learning achieved from the Pilot phase implementation.

III. Vision

"To create a National Digital Health Eco-system that supports Universal Health Coverage in an efficient, accessible, inclusive, affordable, timely and safe manner, through provision of a wide range of data, information and infrastructure services, duly leveraging open, interoperable, standards-based digital systems, and ensuring the security, confidentiality and privacy of health-related personal information."

IV. Mission

To create a digital platform for evolving health ecosystem through wide range of data, information and infrastructure services while ensuring security, confidentiality and privacy.

V. Objectives

As in case of many other sectors, the healthcare sector is also undergoing rapid digitization. Digitization has helped the healthcare industry create, store, access, share and analyze records in a more efficient manner. Further, it also helps in proper clinical decision making and in public health and research. However, this ecosystem is extremely fragmented with hundreds of players and different types of standards being used. This does not allow for the sharing of information from one healthcare provider (hospitals, doctors, etc.) to another healthcare provider or from a stakeholder to another stakeholder unless they are using the same interconnected system. This is a major problem which has not allowed the benefit of digitization to reach citizens and healthcare providers. Therefore, it is a necessity to create a system which will bring all these different and disparate digital health systems together to create an integrated system of systems i.e. ecosystem. Thus, ABDM intends to create the National Digital Health Ecosystem (NDHE) for India.

The following specific objectives need to be achieved if the Vision of ABDM is to be realized:
1. To establish state-of-the-art digital health systems, for managing the core digital health data, and the infrastructure required for its seamless exchange
2. To establish national and regional registries to create single source of truth in respect of clinical establishments, healthcare professionals, health workers and pharmacies
3. To enforce adoption of open standards by all the actors in the National Digital Health Eco-system
4. To create a system of Electronic Health Records based on international standards, easily accessible to the citizens and to the healthcare professionals and services providers, based on citizen-consent
5. To promote development of enterprise-class health application systems with a special focus on addressing the Sustainable Development Goals related to the health sector
6. To adopt the best principles of cooperative federalism while working with the states and union territories for the realization of the vision
7. To ensure that the healthcare institutions and professionals in the private sector participate actively in the building of the NDHE, through a combination of prescription and incentivization
8. To ensure national portability in the provision of health services

9. To promote the use of Clinical Decision Support (CDS) Systems by health professionals and practitioners
10. To promote a better management of the health sector leveraging health data analytics and medical research
11. To provide for enhancing the efficiency and effectiveness of governance at all levels through digital tools in the area of performance management
12. To support effective steps being taken for ensuring quality of healthcare
13. To leverage the information systems existing in the health sector, by ensuring that they conform to the defined standards and integrate with the proposed NDHE

Chapter 2: Roles and Responsibilities

I.   Role of National Health Authority in implementation of ABDM

The National Health Authority (NHA) is an attached office of Ministry of Health & Family Welfare (MoHFW). It has been entrusted the responsibility of implementing the ABDM. However, the role is limited to creating an interoperable digital platform, enabling all other digital platforms to talk to or interact with each other. This task involves creation of building blocks or core modules with which all other digital health systems should integrate. It also involves recommending common standards and languages which the NHA will be doing in a consultative manner.

> *The NHA shall not enter into the domain of other authorities or entities. Therefore, if certain permission is granted by a certain authority, the same authority will continue to do so. Similarly, regulation of healthcare professionals shall continue to be done by respective councils.*

The role of NHA does not extend anyway into functions of other authorities. It just aims to fill the existing vacuum in the digital space so that authorities in the healthcare ecosystem can get integrated with the digital world in a seamless manner.

II.   Role of state government /UT administration in implementation of ABDM

State governments/UT administration in ABDM are expected to play a role in 2 capacities-
 as a Government and as healthcare provider (managing hospitals, clinics, etc)

1. **As a Government** – State Governments /UT Administrations are expected to provide support to Government of India for improving adoption of ABDM in the field. Government of India (National Health Authority) will be responsible for development and management of core building blocks such as Ayushman Bharat Health Account (ABHA – earlier known as Health ID), Health Facility Registry etc. However, in the field, the entities joining the ABDM adds citizen/individuals, doctors/other Healthcare professionals and hospitals/other healthcare facilities, Health Tech companies, etc will require intensive engagement. State governments/UT administration will help onboard and hand hold all the facilities to facilitate them joining the ABDM. For example, State Government /UT administration will undertake IEC and capacity building initiatives to maximize the reach and use of ABHA among citizens. They will undertake initiatives to get maximum doctors, hospitals etc on boarded on to the

platform. They will further coordinate with the medical councils of all respective pathies in that state to help facilitate early verification of doctors and other healthcare professionals. Through district administration or any such entity as may be decided by the State governments/UT administrations, they will be verifying the existence of the healthcare facilities and accordingly the healthcare facilities shall be marked in the Healthcare Facility Registry. State governments/UT administrations are also expected to act to redress grievances, queries etc that may be coming from the field. The National Health Authority shall provide necessary guidance in this regard.

2. **As a Healthcare provider** – In addition to its role as a regulator and a facilitator, for the digital health ecosystem, State Government/UT administration also has a significant role to play as a Healthcare provider. They have huge number of hospitals, clinics, laboratories and other facilities providing necessary healthcare to citizen/individual in their jurisdiction. States/UTs are expected to get their facilities and professionals on boarded in the respective registries. They are expected to upgrade their hardware and digital solutions in their healthcare institutions. There is no specific suggestion from the Government of India about the type or specifications of digital health solutions. They are expected to be decided by their respective authorities depending upon their requirement and user convenience. However, National Health authority shall provide necessary guidance if required. Basically, the role of State Government and UT administration in the capacity of healthcare provider will be the same as that of any healthcare provider

III. Role of District Administration in implementation of ABDM

District administration led by District Collector/Deputy Commissioner/District Magistrate is an extended arm of state government or UT administration at the district level. They will reach out to the community and healthcare providers, engage with them, do IEC and capacity building and help them to join ABDM. The head of the health department at district level (Civil Surgeon, Chief Medical Officer, District Medical Officer, District Health Officer, etc. will be the District Nodal Officer and is expected to provide leadership under the guidance of District collector/Deputy Commissioner/District Magistrate.

The District Nodal Officers shall appoint a verifier at their level who shall verify the existence of various healthcare facilities and accordingly mark the same in the Health Facility Registry. This task should not be exclusively done by only district administration and it is intended that many such "verifiers" are available in the ecosystem. District administration shall not have any role to play as far as verification of the healthcare professionals is concerned, this shall be done by the respective council. However, state government may provide the authority to district administration to verify healthcare professionals only if they are working for the state government /local bodies.

IV. Relationship to AB PM-JAY

Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PM-JAY) is a scheme to provide health cover or health insurance of up to INR 5 lakh per family per year for certain beneficiaries. Like

ABDM, it is also implemented by the National Health Authority. AB PM-JAY is leveraging the platform of ABDM, so that its delivery becomes more efficient and transparent. Similarly, any other such scheme or health programme can leverage the common building blocks or design of ABDM so that its efficiency can improve. The integration of ABDM with AB PM-JAY is like its integration with any other digital health system such as the one of NIKSHAY (antiTB programme), CoWIN (COVID vaccination portal), hospitals, etc. Apart from this integration, both the schemes have different goals. Thus, they are two different schemes being implemented by the same authority/office.

V.   Relationship to AYUSH

ABDM is being implemented by National Health Authority, which is an attached office of Ministry of Health & Family Welfare (MoHFW). MoHFW is separate ministry than the Ministry of Ayurveda, Yoga, Naturopathy, Unani, Siddha, Sowa-Rigpa and Homoeopathy i.e. Ministry of AYUSH. Thus, MoHFW and NHA are separate from Ministry of AYUSH administratively. The word Ayushman Bharat in this case denotes our vision for an India with long life and AYUSH in ministry of AYUSH is an acronym representing different systems of medicines.

However, ABDM has been designed to onboard healthcare facilities and healthcare professionals from all the systems of medicine including AYUSH.

Chapter 3: The ABDM Architecture

The ABDM intends to create interoperability between different digital health systems. Therefore, there is no requirement for storing all the digital health records in one place or in one system. It is planned that all the digital health records which have been and shall be created while providing healthcare shall continue to be stored in the same digital system which the respective healthcare provider (hospital, doctor, etc.) is using currently. Thus, if a particular healthcare facility or a doctor is using a digital health solution provided by an IT developer with storage at a particular place, the same storage will continue. In this way, the storage will be in different places as per the choice of the healthcare provider.

Similarly, digital health solutions used by patients will also continue to be used in the same way and the records will also continue to be stored in the same way, be it on a server or on their devices (mobiles, laptops, etc.). Thus, the digital health records will be stored at multiple places as per the choice of hospitals, doctors, and patients.

There is no centralized repository of healthcare records. This is known as a federated architecture in IT or digital system.

Only the data collected through registries such as Health ID registry, Healthcare Professional Registry and Healthcare Facility Registry is stored centrally. It is necessary for these datasets to be stored centrally because they are essential in providing interoperability, trust, identification and single source of truth across different digital health systems.

The key features include:
- All digital health data and applications will be held in a decentralized manner, following the principle of minimality
- Patient data will be held at the Point of Care (Health facility location where the treatment will be carried out) or at the closest possible physical location
- Citizen shall be in full control of the 'processing of health data' relating to him/ her
- Entities will be able to access data only through links, subject to the applicable permissions and consent.

I. The Big Picture

ABDM leverages India's rich repository of existing digital public goods and the JAM (short for Jan Dhan-Aadhaar-Mobile) trinity as the base. Using the JAM trinity and open & interoperable standards, public and private providers can create software/applications to provide various innovative means to access healthcare and health records. ABDM gives utmost importance to data security and is, therefore, built on 'privacy by design' principle. ABDM does not store any health data and has a federated architecture. Health data is always created and stored by healthcare

providers. ABDM only facilitates secure data exchange between the intended stakeholders on ABDM network after the patient's consent. Hence, through ABDM compliant applications, patients will also be able to choose which health records they want to link with their ABHAs, securely store their digital health records on their devices, securely access their records online, and securely share their health records with healthcare providers after their consent. Only the data collected for registries such as ABHA registry, HPR and HFR is stored centrally. It is necessary for these datasets to be stored centrally because they are essential to provide interoperability, trust, and identification and single source of truth across different digital health systems. This data is stored and processed in secure and safe manner.

Figure 3.1 is a representation of ABDM architecture which highlights its modular and interoperable nature.
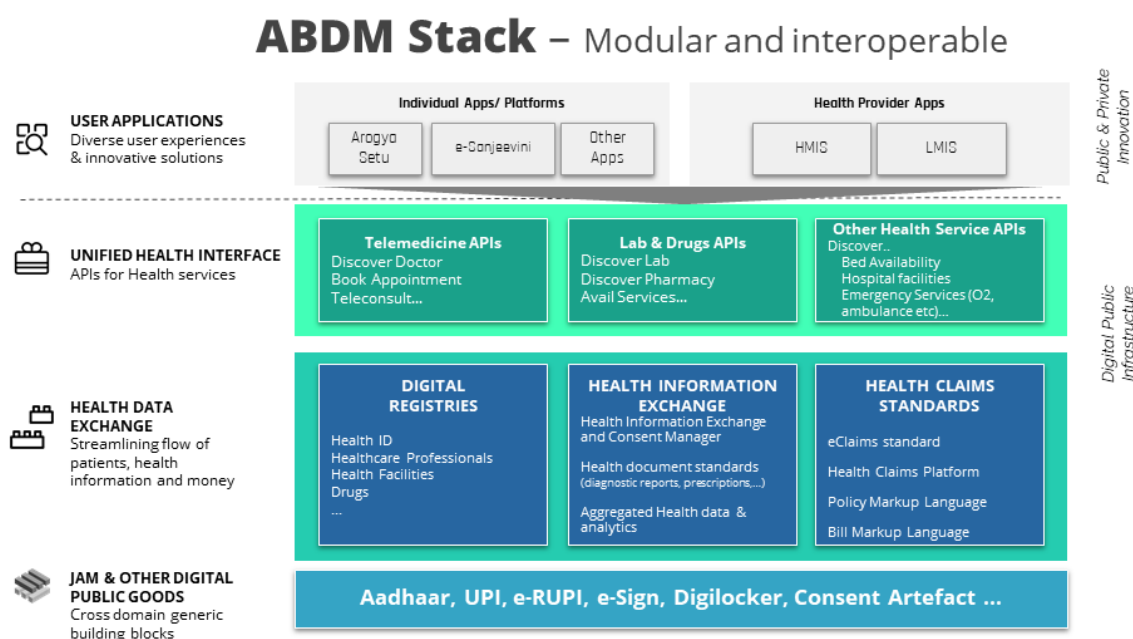
Figure 3.1 The ABDM Stack. Modular and interoperable

The entire data flow and registries are designed in a way that envisages access, efficiency, effectiveness, security and transparency of healthcare delivery system in the country.

The information flow between various entities will follow the below steps:
- The point of health record generation such as Doctors who have treated the patient in the past, diagnostic centers that generated lab reports in the past etc. are categorized as Health Information Providers (HIP).

- Similarly, the point of request to access the health records such as Doctors who wish to see the medical history before making an informed decision, citizens who wish to view their medical records etc. are categorized as Health Information Users (HIU).
- The information is exchanged via Health Information Exchange – Consent Manager. It is one of the building blocks of the ABDM architecture that acts as a gateway and ensures that **a health data linked to a ABHA is shared with HIU by the HIP only when the owner of the ABHA gives consent**.

Please refer the National Digital Health Blueprint for more details. Illustrated below is the diagram showing the flow of records.
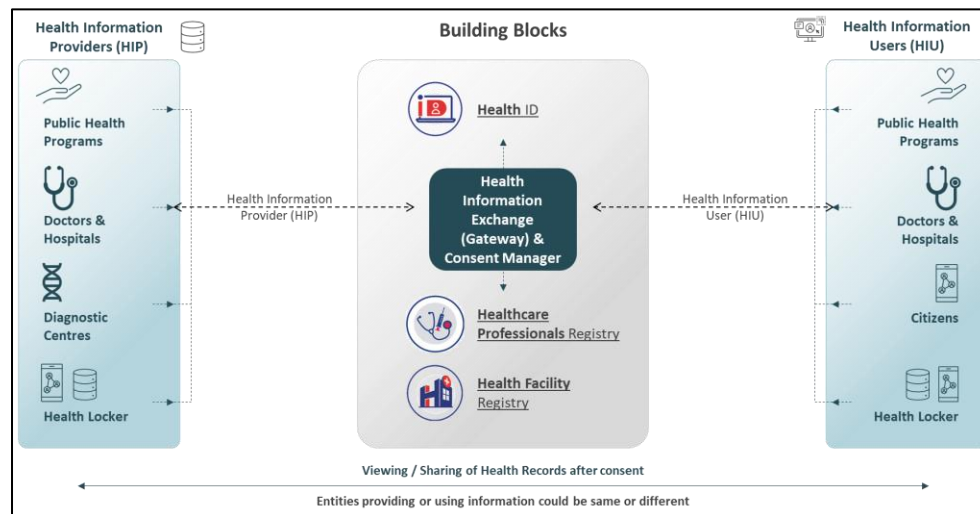
Figure 3.2. Illustration depicting generation and sharing of records on ABDM platform

II.   The working of ABDM

ABDM intends to create a digital health ecosystem for the country. It aims to promote digitization of healthcare in a big way. One way of executing the same is by promoting interoperability and connectivity between hundreds of different, disparate existing digital health systems. This is done by way of certain core building blocks or modules such as registries of individuals/citizens/patients (ABHA registry), registry of healthcare professionals (Healthcare Professionals Registry) and registry of healthcare facilities including hospitals, laboratories, pharmacies, etc (Health Facility Registry). In these registries, each of these entities is provided with a unique identifier across the ecosystem.

Since there are hundreds of players in the ecosystem, this unique identity is essential to identify the respective entity (individual, doctor, hospital, etc.) in order to create linkages. Take the case of health records generated in a particular hospital for a particular patient by a particular doctor. The said patient may end up going to some other healthcare provider for subsequent treatment. It is desirable that his/her health records which are stored in the previous hospital are also available to the subsequent healthcare provider for comprehensive healthcare provision. This is made possible by unique entity (ABHA) which identifies the patient's health records across all the

national
health
authority
Ministry of Health
and Family Welfare
Government of India

healthcare providers. With the patient's consent, these records are made available to the current healthcare provider.

Similarly, doctors may be providing healthcare services in more than one hospital. The doctor's unique identity created through ABDM makes it possible for him/her to access health records with consent of his patient even if they are created by the other healthcare provider. For this purpose, his identity must be unique. In the presence of hundreds of players with different digital health systems, the government (National Health Authority) has taken this task of development, population and maintenance of these registries. However, the government does not intend to mandate or force any specific solutions to be used by healthcare providers and users. They can continue to use solutions as per their choice.

In addition to registries, NHA has also developed a digital system called Health Information Exchange and Consent Manager (HIE-CM). This system ensures that the identity of persons intending to share information is first verified, consent of the person/patient is taken, logged and only after that, the health records are shared. Going forward, private players may also come out with such HIE-CMs.

Various digital health solutions can integrate with the core modules of ABDM through application programming interfaces (APIs). E.g.- A telemedicine solution provider can connect to all these modules using its API connections with HFR and HPR. The telemedicine solution provider can show the list of those healthcare providers who are willing to provide telemedicine services and then the patient can choose the telemedicine provider/doctor as per his/her choice. Similarly, Health (or Hospital) Management Information System (HMIS) or Hospital Information System (HIS) of various hospitals can also integrate with these core modules and as and when the health records get generated, they can be linked with the respective ABHA.

Thereafter, whenever the patient goes to any other healthcare provider, the patient can provide access of the health records to them through ABHA. Digital healthcare solution providers for health record locker or health locker can also use its API connections with ABHA module to link all the records in that solution. In this manner, health records can be made available to intended healthcare providers at subsequent stages. This type of arrangement is possible for all the healthcare solutions in the digital health ecosystem.

ABDM does not recommend any specific digital health solution to any of the users. It is for the user to check available options and choose the most suitable solution as per his/her requirement.

III. Becoming a part of the ABDM Ecosystem

Anyone can become a part of the ABDM ecosystem by registering or integrating themselves in respective capacity. E.g.- citizens/individuals/patients, healthcare professionals such as doctors of all systems of medicines, nurses, paramedics etc., healthcare facilities such as hospitals, clinics, laboratories, radiology centers, pharmacies, digital health solution providers, etc.

IV. Key Principles

The major principles of ABDM are:

A. Inclusivity

Inclusion is one of the key principles of ABDM. ABDM is designed to be a platform that enables greater access to healthcare and health records to all citizens. In addition to physical interactions, citizens will now have additional means of availing these services.

ABDM aims to act as an inclusive network for all citizens and healthcare providers to seamlessly access healthcare and digital healthcare services which will continue to expand. ABDM does not aim to exclude anyone from equitable access to healthcare on account of absence of ABHA, or participation by healthcare provider. Teleconsultation guidelines by competent authorities will have to be followed.

The connectivity challenges

Wherever needed, the Mission will provision for assisted mode, and going forward offline mode for creation of ABHA and Digital Personal Health Records. ABDM is not exclusionary. It aims to also function in situations wherever internet connectivity might be unsatisfactory or there would be unavailability of hardware or both. The experience of CoWIN portal for nationwide COVID vaccination is a case in point, where multiple means of access resulted in both urban and rural beneficiaries, including those digitally illiterate being able to access vaccines.

In fact, facilities like telemedicine kiosks may come up in remote areas from where individuals even in remote areas can consult with doctors and avail medicines.

Additionally, widespread Information Education and Communication (IEC) activities are also planned.

B. Free of Cost Registration

Registration in the ABDM system is free of cost. There is no fee required for any registration.

C. Opting out of the ABDM Ecosystem

You can opt out of the ABDM ecosystem. You can deactivate your account after which it can be reactivated. You can also delete your account after which the linkage with all the digital health records will be lost and the deleted account cannot be reactivated.

D. Single Source of Truth

The registries will act as a verified and single source of truth with no other parallel copies existing anywhere

E. Privacy by Design

The complete system will ensure security and privacy of data of citizens, healthcare professionals and healthcare facilities through federated architecture and encrypted transmission of information.

F. Voluntary Participation

Participation in ABDM is voluntary including for citizens. Participation of a healthcare facility or an institution is also voluntary and shall be taken by the respective management (government or private management). However, once the management decides to register the respective healthcare facility/institution in ABDM, it is essential for all the healthcare professionals serving the said facility/institution to register in Healthcare Professionals Registry so that the institution can become fully integrated with the National Digital Health Ecosystem (NDHE). It is possible for a healthcare professional to be a part of two facilities/hospitals, one of which may be a part of NDHE and the other one may not be a part NDHE. In such a case, the healthcare professional will be required to use their Healthcare Professional ID (HPID) only in the institution which is participating in the ecosystem.

V. Legal Compliance

The current legal framework in India consisting of various laws such as the Information Technology Act, 2000 including the relevant regulations and rules including various judgements of Hon'ble Supreme Court such as Puttaswamy V/s Union of India (2017), etc provide adequate legal framework for implementation of such a digital mission.

Foremost, it is necessary to understand what exactly is being attempted by implementing the ABDM. Currently, all the healthcare providers create and store the health records of patients seeking healthcare from them. These are either stored physically (in paper format) and/or digitally.

ABDM is essentially providing an interoperable platform between different digital health systems. The storage of data remains at the same place where it is currently residing. Therefore, no special law is required to be enacted as such for implementing this particular mission.

However, with due consideration to the sensitivity of health data, the 'Health Data Management Policy' has been formulated which emphasizes upon 'consent-based arrangement'. It is explicitly laid out that the health record should be linked to ABHA after taking consent of the patient for the purposes for which consent is provided. Such digital health ecosystem based on consent-based arrangement has adequate legal backing in the current legal framework of India.

Chapter 4: Ayushman Bharat Health Account (ABHA)

The ABHA is a unique 14-digit number assigned to individuals who want a hassle-free method of accessing their health records digitally. Presenting this ABHA to a compliant healthcare service provider will allow you to receive your lab reports, prescriptions, and diagnosis digitally from verified doctors and health service providers seamlessly.

An ABHA can be generated by self-registration or through assisted mode. You can do self-registration through the website - https://abdm.gov.in – and clicking on 'Create your ABHA' or downloading the ABDM provided health records application named 'ABDM Health Records'. It is also possible to generate your ABHA in any healthcare facility (hospital, clinic, etc) or any other centre where such service is available.

List of empaneled facilities can be seen at facility.ndhm.gov.in)The ABHA is a core building block in ABDM which can be integrated with any government/private healthcare solution. Through such integration, the ABHA can be generated using these solutions as well without any need to log on to https://abdm.gov.in website due to the backend integration which is already done as part of the interoperable ecosystem. E.g.- the government's reference app - the PHR app ('ABDM Health Records' app) available on the Google Play Store has such an integration done with ABHA and it can also be used to generate your ABHA.

Going forward, it is expected that multiple players in the market will allow for the generation of a ABHA due to their backend integration with ABDM's ABHA module.

It may be noted that irrespective of any way/mode/portal used for the generation of an ABHA, the said ABHA shall be unique and not be given to more than one user. It is not mandatory for all citizens to get a ABHA. Whoever wishes to participate in the Ayushman Bharat Digital Mission and wishes to have their records available digitally may create ABHA.

I. Importance of ABHA

Creating ABHA is your starting point in the journey of the Ayushman Bharat Digital Mission. An ABHA allows you to store all your digital health records at one place and share these records with hospitals/doctors you visit, with your consent, with suitable applications. Going forward, it will also help you in booking your hospital appointments online thereby avoiding long lines for registration in healthcare facilities, and avail healthcare services digitally.

1. **Universal Health Coverage** pan India giving seamless access to medical network across the country
2. **Hassle free access to medical records** across multiple health facilities* at a single place with ease
3. **Consent based access** giving privacy and security in the hands of the user
4. Facility to **deactivate/ delete the ABHA anytime** giving the user to opt out of the program temporarily or permanently

II. Key Benefits of ABHA

- **Easy access** to your medical information in a safe and paperless manner
- **Easy sign up** using basic details along with mobile number or Aadhar number
- **Voluntary opt-in** and **opt-out** at anytime
- **Secure consent driven access** to health data along with capabilities to manage and revoke consent
- **Reduced prescription and clinical errors** due to robust ID creation
- **Inclusive access** to the Digital Health ecosystem. People with smartphones, feature phones, and even no phones can enroll.

A. Benefits for citizens registering in ABDM

ABDM envisages to improve the access, efficiency, effectiveness, and transparency of healthcare delivery system in the country. It will have the following benefits for citizens:

1. **ABHA for citizens**– Allowing ease of registration and access to multiple digital health services available across the ABDM ecosystem now and in the future.
2. **Paperless health records** – Accessible anytime, anywhere
   a. No lost health records now - Patients will have opportunity to link, securely store and access their medical records on their phone or online. These may include prescriptions, diagnostic reports, discharge summaries, etc. The exact feature and facilities may depend upon the app/solution provided by the digital player. This will allow patients to build their longitudinal health records online, and never lose them.

      Patients will have control over their health records and will be able to choose what to share with their healthcare providers, with their consent. This will ensure patient privacy, while enabling healthcare providers to ensure appropriate treatment, follow-up and continuum of care.
3. **Access to healthcare** - Citizens will be able to access healthcare digitally (through teleconsultation) using apps integrated with ABDM. They can also book appointment for physical consultation with healthcare provider through such apps. In addition, they can search for desired services or service providers and other relevant information such as nearest hospital, once such apps are integrated with the ABDM.

III. Why ABHA and Not Aadhaar?

The Aadhaar Act provides for the use of Aadhaar number as proof of identity of a person, subject to authentication. However, the mandate of mandatory linkage of Aadhaar is restricted to availing only Direct Benefits Transfers (DBTs) and it can't be for any other purpose. Thus, Aadhaar number holders may only voluntarily use Aadhaar Number to establish their identity. Therefore, a distinct, independent, unique identifier is required to be identified as ABHA and hence, the ABHA is different from the Aadhar ID and one should not be confused for the other.

A. Difference between ABHA and Ayushman card/Golden card

These two are different. The National Health Authority implements two distinct health programs:

a) Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PM-JAY)– This is a program aimed at providing health cover of Rs 5 Lakh per family per year for secondary and tertiary care hospitalization to nearly 54 crore beneficiaries that form the bottom 40% of the Indian population. The households included are based on the deprivation and occupational criteria of Socio-Economic Caste Census 2011 (SECC 2011) for rural and urban areas respectively This program was started in 2018. Under this program, the beneficiaries (54 crore) are entitled for getting an Ayushman card (earlier known as Golden Card). The beneficiary can use this card for accessing cashless healthcare services in any of the empaneled hospitals throughout India. For more details, please visit https://pmjay.gov.in/

The Ayushman Card should not be confused with ABHA. ABHA is provided under different scheme (Ayushman Bharat Digital Mission) which is implemented by the same office (National Health Authority)

b) National Health Authority started implementing Ayushman Bharat Digital Mission (earlier known as National Digital Health Mission) in the six union territories of Ladakh, Chandigarh, Dadra and Nagar Haveli and Daman and Diu, Puducherry, Lakshadweep and Andaman and Nicobar Islands from August 2020. ABDM was rolled out throughout India on 27th September 2021. Under ABDM, all citizens can create ABHAs. These ABHAs are not limited to 54 crore eligible beneficiaries of Ayushman Bharat Pradhan

Mantri Jan Arogya Yojana. This ABHA does not provide services of any scheme but facilitates linkage of health records across all the hospitals (government and private).. Even though only ABHA number is sufficient for use, feature of taking printout is also provided in the ABDM platform for ease of carrying and remembering the number. Such ABHA card of Ayushman Bharat Digital Mission should not be confused with Ayushman Card of Ayushman Bharat PMJAY.

IV. Beneficiaries of ABHA

Any individual can enroll in ABDM to generate ABHA (https://healthid.abdm.gov.in/).

V. Information/ Documents required for Health ID

A Health ID can be created simply by using the following information:
a. Name
b. Year of birth
c. Gender
d. Address
In addition to this, you can use either your Aadhaar number, Driving License, or mobile number.

Please note that if you choose to create ABHA using your Aadhaar number, it is essential that your mobile number is linked to your Aadhaar number. If your Aadhaar is not linked to any mobile number, you can also visit the nearest participating facility and opt for biometric authentication using Aadhaar Number. After successful authentication, you will obtain ABHA at the facility itself.

It is recommended that the mobile number linked to Aadhaar should be updated to avail various facilities/benefits depending on Aadhaar.

Going forward additional options to authenticate your identity such as PAN Card, etc. shall also be provided.

VI. Creating the ABHA

You can create your ABHA in one of the following ways:

1. **Self-Enrollment: If you have** access to a Smartphone/ computer with an internet access. You can self-enroll yourself in one of the following ways
   a. Self-enroll by downloading the PHR mobile application on your phone from the App Store or Google Play store
   b. Self-enroll by visiting our online platform https://healthid.abdm.gov.in

2. **Assisted Enrollment:** In case you do not have access to a Smartphone/ computer, you can create your ABHA with assistance. For this:
   a. You can visit any participating Healthcare providers and request for the ABHA creation at the designated desks

b. Your ABHA will be created by collecting your Aadhaar/ mobile details and then validating it.

   Note: Authentication methods supported for Assisted ABHA creation through Aadhar are Aadhaar OTP and Aadhaar Biometric.

A. Paperless Registration

Complete registration for ABHA can be done within 5 minutes as you are only required to fill your basic details and authenticate your Aadhaar Number or Mobile Number. You are not required to submit any physical documents anywhere. Creation of ABHA is fast, paperless and hassle free.

There is no need for printing of your ABHA card. You may keep the copy of ABHA digital card in your phone. You can also write the number at a convenient place. However, if you wish so, you can take print out of the digital card and keep it for your convenience.

Users can also choose to create a Personal Health Record address (PHR address) such as "ajay@ndhm". Hence, users are not required to remember their ABHA, and can use their PHR address.

Various applications where this will be used are being encouraged to come up with options to login using various options such as mobile number, PHR address, Aadhaar number, email id, fingerprints, face recognition, etc. in addition to ABHA.

B. Linking ABHA with the Health Facilities

By searching and clicking on "link" button in the health records application linking can be done. Users can also scan the QR code displayed at the health facilities which will automatically link and authenticate ABHA/PHR address with the health facility.

VII. Using PHR Application to access Health records

PHR stands for Personal Health Record. It is a unique address similar to a virtual payment address or email ID which is created by an individual, as per their choice. This is provided as it is easier to remember such an address rather than remembering a fourteen-digit ABHA number. For example - ajay@ndhm, abc@ndhm, etc.

The ABDM Health Records are an electronic format of health-related information on an individual that can be drawn from multiple sources while being managed, shared, and controlled by the individual. The record can be shared on consent via a citizen facing Public Health Record (PHR) application.

A. About PHR Application

It is a reference application created by the government which is available on the Google Play Store. It can be used to:

- Create your ABHA
- Link your ABHA across various healthcare providers registered in ABDM
- Fetch health records and store them in your mobile

You can use this application to provide consent and share any of your health records with any participating healthcare provider of your choosing.

It is expected that many such applications will be available soon. Users shall be able to choose the application of their choice.

B. Download link for PHR application

The app is currently Live on Google Play store (Android Platform). the ABDM Health Records application is free for all individuals. The Health Records application (ABDM Health Records, previously NDHM Health Records) can be downloaded from the Google Play Store or by this link:

https://play.google.com/store/apps/details?id=in.ndhm.phr

Development of similar app is going on for iOS/Apple.

C. ABDM Health Records feature on PHR Application

This feature enables individual to get a longitudinal view of the records from various health care providers on a single platform and to manage exchange of their health records while ensuring privacy and safety. User can login using their ABHA/ PHR address and password.

Currently, each ABHA can be linked with one PHR address. Since there is only one HIE-CM at the moment (which is provided by ABDM), the fourteen-digit ABHA can be linked with PHR address such as ajay@ndhm (which in a few days will change to ajay@abdm). Going forward, it is expected that multiple HIE-CMs will be available in the market, then your ABHA can be linked

with one or more PHR addresses. Going forward, it is also possible that more than one PHR address will be provided by one HIE-CM for linking to one ABHA.

D. Key Benefits of PHR Application

- Creation of ABHA
- Single point of discovery of Health Information
- Linking of health records/ with a given ABHA
- View Health Records on a single platform for a specific duration across multiple healthcare providers
- Easy management of consents for sharing the data
- Availability of health locker for storing the health records

E. Beneficiaries of PHR Application

All citizens of India who wish to enroll themselves voluntarily

F. The PHR address and its difference from ABHA number

ABHA number is a system generated 14-digit random number, while PHR address (xyz@abdm) is user generated and will be used for accessing the PHR app.

You can use your fourteen-digit number while using the systems. However, ABDM is encouraging digital health solution providers to provide additional features such as use of PHR address, email address, mobile number, Aadhaar number, QR code or biometric features such as fingerprint, iris or your face to use the digital health system. You can use any of these features as may be provided by the participating digital health solution provider.

ABHA/PHR address can be obtained via self-registration or from a PHR mobile application or at any participating healthcare provider as well.

G. Using PHR to access ABDM Health Records

A user allows linking of health records created by the Health Information Provider (HIP, such as hospitals) to the ABHA and that information is stored on the HIE-CM as a link. The Health Information User (such as Doctors) pulls the medical records from the HIP based on patient's consent link and proceeds with the diagnosis and treatment.

H. Login and Password Recovery in the PHR App

User can login using their ABHA/ PHR address and password. Both username and password can be recovered by entering your details as asked by the application, if not resolved by this please contact us at ndhm@nha.gov.in or call us at our toll-free number 1800-11-4477 / 14477.

I. Getting the health records from the hospital to the application/phone

The health facility must be using a software that is compatible with ABDM and be able to create digital health records of the patient.

The health facility will seek the patient's consent and link their digital Health Records with their ABHAs, that the patient can access through PHR applications on their phone. The user can also upload their scanned reports to ABDM compliant health lockers via ABDM Health Records application and any other compatible PHR applications. Note that only the records created and uploaded by the doctors and the user themselves will be on the mobile application.

You can also link your health records using patient initiated linking which is a functionality provided in ABDM Health Records application.

J. Access to Health Records by healthcare providers

Currently, healthcare providers (hospitals, doctors, etc) who create a particular record have access to those records to provide suitable treatment. This will continue.

For other hospitals/doctors, who do not have access to records of the patient, 'consent' of the patient is required. Without the user's consent, they cannot access their health records. Your records will be shared with the other doctor or health facility only after your consent.

K. Other Similar Applications

It is expected that various digital health solution providers will have some or all of these features in their mobile applications. Some of these features could include - creation of ABHA, linking your health records, viewing your records from across the digital health ecosystem, retrieving them in your mobile, storing them in your mobile using various health/digital locker applications which are integrated with ABDM and sharing them with other healthcare providers after your consent. This can be provided by any entity provided they integrate with the ABDM platform. In addition, digital healthcare solution providers can also provide additional features such as booking appointments of your desired doctor or teleconsultation. It has been left to the market forces to come out with innovative digital health solutions to provide best user experience.

VIII.   Security of Health Records

ABDM does not store any medical records. These are always created and stored by healthcare providers as per their retention policies and this will continue. ABDM only facilitates secure data exchange between the intended stakeholders on ABDM network after the patient's consent.

Through ABDM compliant applications, patients will also be able to choose which health records they want to link with their ABHAs, securely store their digital health records on their devices, securely access their records online, and securely share their health records with healthcare providers after the patient's consent.

Only the data collected for registries such as ABHA registry, Healthcare Professional Registry and Healthcare Facility Registry is stored centrally. It is necessary for these datasets to be stored centrally because they are essential to provide interoperability, trust, and identification and single

national
health
authority
Ministry of Health
and Family Welfare
Government of India

source of truth across different digital health systems. This data is stored and processed in secure and safe manner.

IX. Data Anonymization and Aggregation

Anonymizing a particular data involves removing all the data fields by which identity of a person whose data is related to is erased or masked. This includes name, address, mobile number, email ID and such other details by which it may be possible to identify the person. This can be done by use of specific software and algorithms which can mask or erase such data before forwarding it for further analysis.

Aggregation means compiling of the individual health records together to create an aggregated data set. e.g. if there are 10 cases of COVID-19 in a particular district on a particular day which are in different hospitals, the information that there are 10 such patients in different hospitals can be compiled and it can be forwarded without forwarding of individual health records by stating that there are 10 such cases in this district on this particular day. This means that counting of certain attributes (in this case the type of disease) can be done. This do not involve transferring individual health record but only the final count of a certain value in a specific attribute. This is known as aggregation.

Anonymization and aggregation can ensure that the trend of diseases and other such information can be made available to policy makers, while ensuring privacy and confidentiality of patients, who can then decide on appropriate policy interventions.

Let us take an example to understand this. If anonymization and aggregation of data of cases of a particular disease is done, then it shall be easy to understand which districts/states of the country have higher number of cases, which districts/states have cases from strains targeting specific age group (working age group) and so on. This can help in formulating proper policy interventions such as taking specific measures only in a limited area rather than country or the state. This can be used to effectively tackle the public health problems while limiting inconvenience to the public. While doing such analysis through anonymization and aggregation identity of the person remains masked and therefore privacy and confidentiality of his personal information is not breached while the larger public interest is achieved.

The government will first decide the policies and technologies for doing such anonymization and aggregation before attempting any such thing. Such policies and technologies will be decided after extensive consultation process. This will involve but not be limited to publishing of a consultation paper on the ABDM website on which comments from all the stakeholders including healthcare professionals, health facilities, researchers, citizens, privacy activists etc. shall be sought. Only after considering all such comments and by following all necessary steps,

the policy will be finalized. Till then, no such anonymization or aggregation of the data or use of the data for public health purpose as mentioned above is envisaged.

Protocols for anonymization and aggregation of data and use of such data will be defined after extensive stakeholder consultations. After that, anonymous records can be used by the government to make policies and other relevant interventions in the interests of the public. Till this is done, health records will not be used by the government.

The importance of availability of digital health records from various parts of the country was evident while management of COVID-19 pandemic. It is in the larger public interest that data such as that of epidemiological pattern of a disease are available to policy makers to take suitable action.

However, health records are of extremely sensitive, private and confidential nature. Therefore, it is not possible to simply collect and compile these records for any use including public health purpose. Therefore, the process of anonymization and aggregation can be done before any such analysis is done. This will have to follow all necessary laws, rules and regulations as applicable. This will not be done unless the protocols and guidelines for the same are finalized. It will be done only after extensive consultation with stakeholders

X.   Consent based Sharing of Health Records

Only you can share your own records with other doctors/hospitals using different digital health systems after giving your consent. No other entity will have access to such data. No additional means of accessing such data is being created or envisaged in the current ecosystem.

One of the options of getting consent is by submitting the OTP (one-time password) received on your Aadhaar linked mobile number. Digital health solution providers are also being encouraged to provide other features of providing consent through the use of biometric authentications using fingerprint, iris scan or facial authentication.

The consent provided digitally need not be for all the health records linked to the ABHA at a time. It can be provided for sharing only selected health records as per the choice of the patient. Therefore, one need not be afraid that by linking all your health records to your ABHA you will end up sharing all your health records when providing consent. The consent is thus granular consent "which can be provided separately for each of the health record as per the wish of the patient".

The consent can be given not only in granular fashion (thereby meaning that only some of the records linked can be shared) but it can also be given for a fixed period of time. Thus, it is possible for you to provide consent for, say 48 hours or 7 days to a healthcare provider during which time it will be accessible to the healthcare provider through his/her digital system. After this period expires, the healthcare provider will not have access to this record. However, during

the period of access, it is possible that the healthcare provider may download or take photograph or store the health record in his/her system. In such a case, the records shall be available with him/her till the time he/she desires. It may be noted that this is the case even now with physical documents. When health records created by one healthcare provider are shared with another healthcare provider, they sometimes keep a copy of the same in the file for effective management, clinical decision making and continuum of care.

It is therefore suggested that every person should have only one ABHA and PHR address in which he/she can link his/her record and share his/her health record as per their choice. This feature has been provided because legally patients have control of their records when it comes to sharing with other doctors or healthcare providers.

However, it is recommended that you provide consent to share all health records with your doctor so that he can make correct clinical decision. Withholding of consent to share a particular record or partial consent is not recommended.

XI. Deleting the ABHA

ABDM supports a feature that enables any participating user to opt out of the ABDM ecosystem. On availing the feature, a user can temporarily deactivate or permanently delete their ABHA.

On deactivation, you will lose access to all ABDM applications for the period of deactivation. Until you reactivate your ABHA, you will not be able to share your ABHA at any health facility or share your health records over the ABDM network. In case of deactivation, a user can later choose to reactivate their ABHA.

On deletion, your ABHA will be permanently deleted, along with all your demographic details. You will not be able to retrieve any information tagged to your ABHA in future. You will never be able to access ABDM applications or any health records over the ABDM network with your deleted ABHA.

XI. Helpline and Grievance Support
In case you are facing a problem creating or accessing your ABHA, you can either speak at our call center number, 1800-11-4477 / 14477 or can file an online grievance at grievance.ndhm.gov.in

Chapter 5: ABDM Registries

These are digital repositories that seek and hold critical information about Health facilities such as Hospitals and Clinics, and Healthcare Professionals such as Doctors, Staff Nurses etc.

These registries help us list and identify nearest healthcare support available for any medical assistance.

The two key registries linked to ABDM are:

1. Health Facility Registry
2. Health Professional Registry

I.   Health Facility Registry

The Health Facility Registry (HFR) is a comprehensive repository of all the health facilities in the country across both modern and traditional systems of medicine - Modern Medicine, Dentistry, Physiotherapy, Ayurveda, Unani, Siddha, Sowa-Rigpa, Homeopathy.

It includes both public and private health facilities including hospitals, clinics, diagnostic laboratories and imaging centers, pharmacies, etc.

A. Importance of HFR

It provides basic information about the facilities available in the National Health Ecosystem. The details include attributes like name, facility type, ownership - public or private, geo-location, contact details etc.

The HFR also contains available service attributes for each facility, which vary across facility types such as hospitals, clinics, diagnostic laboratories etc.

B. Key Benefits of HFR

Health facilities enrolling in the Health Facility Registry will have access to several benefits. Some envisaged benefits are covered below and more such benefits will be added over time as adoption increases.

- Online presence and discoverability: Health facilities can share about their specialties available, and services offered, address, contact details and geo-location enabling easier access for individuals
- Building trust and reputation: Listing on national platform of verified health facilities instills trust in citizens
- Ease of doing business: Consented access of health facility information to various entities enabling easier registration and renewal of licenses, ease in empanelment with insurance agencies and TPAs etc.

- Digital Health Records: Consented access to electronic medical records with seamless retrieval. Ability to go paperless for diagnostic reports, discharge summaries, prescriptions etc.
- Telemedicine: Eligible healthcare facilities may offer teleconsultation to individuals

C. Voluntary Enrollment

Enrolment in Health Facility Registry is voluntary. The decision about participation will be taken by the management of the facility including State Governments/UT Administration.

D. Beneficiaries of HFR

The Health Facility Registry is open to registration of all health facilities in India providing healthcare services across both modern and traditional systems of medicine such as Modern Medicine (Allopathy), Dentistry, Physiotherapy, Ayurveda, Unani, Siddha, Homeopathy and Sowa-Rigpa systems of medicine. These include hospitals, clinics, diagnostic laboratories and imaging centres, pharmacies, blood banks, etc. of both government and private sector.

E. Role of NHA in HFR

National Health Authority (NHA) is implementing the Ayushman Bharat Digital Mission which focuses on developing the technological backbone for India's digital health ecosystem. Health Facility Registry (HFR) is a key building block of Ayushman Bharat Digital Mission under the purview of NHA. HFR will serve as the single digital source of truth for health facilities registered on ABDM platform and verified/ self-declared by respective entities.

Unlike councils for doctors, there is no single body which has updated repository of all healthcare facilities in the states or India. Therefore, HFR will follow slightly a different approach which is different from that for HPR to compile the registry. Self-declaration of the health facility and its verification by multiple verifiers is allowed in Health Facility Registry. Users are advised to see these details (self-declared or verified) about information available on the HFR.

F. Response from state government/ district administration

All the state governments have responded positively to the initiative of ABDM and there is no such feedback as of now. However, certain requests have been received, to provide the feature of verification by other entities (entities other than government entities). Such feature will be allowed soon. Then third parties can provide the service of verification of various data attributes of facilities. However, the government or ABDM shall not take the onus of veracity of any such verifications done. It is expected that, the concerned verifier will build its reputation and trust which can be suitably relied upon by the users of the information. Please read details on HFR consultation paper at https://abdm.gov.in/assets/uploads/consultation_papersDocs/Consultation-Paper-on-Health-Facility-Registry.pdf

G. Registering a Health Facility in HFR

Enrolment is a simple process requiring 20-30 minutes if all information is readily available.

The applicants are advised to keep clear photographs of their health facility – building photograph and board photograph ready.

The applicants are also advised to keep their address proof (in the case of private and public private partnership facilities) ready before starting the enrolment process. The address proof may include CEA registration certificate, electricity bill, water bill, landline telephone bill, rent agreement, title deed, property/land record, any other proof as accepted by the respective State/UT authorities.

- **For Government Facilities:**
  - **Step 1: Registering the Facility Manager**

    The 1st step is identifying the facility managers and signing them up for a Healthcare Professional ID which will be used to map the health facility. Here are the steps to do that:

    1. Visit the website https://facility.abdm.gov.in/, and click on Govt. Officials Registration.
    2. Register as a Facility Manager and sign up for an e-KYC authenticated Healthcare Professional ID.
    3. Provide this ID to your State/ District Administrator

  - **Step 2: Mapping the facility to the Facility Manager**

    The State/District Administrator will then login to the HFR and assign the government health facility to respective Facility Manager's Healthcare Professional ID, post that the Facility Manager is notified and can login to update the details

  - **Step 3: Completing the registration formalities**

    The Facility Manager will login to the HFR using the Healthcare Professional ID, and submit basic details such as facility name, address, geo-location, contact details, ownership, facility type, timings, photographs etc.

  - **Step 4: Verifying the submitted details**

    Once the submitted details are verified, the facility can participate across the National Digital Health Ecosystem. The District Verifier essentially verifies the existence of a health facility

- **For Private and Public-Private-Partnership Facilities:**
  - **Step 1: Locating the facility in the Health Facility Registry**

    The 1st step involves searching for the health facility to check if it already exists in the NHRR database incorporated in Health Facility Registry

1. Open the website https://facility.abdm.gov.in/
2. Enter the parameters such as State, District, and Facility Name etc. Click on Search and find your facility if previously registered. **If not registered, proceed for fresh registration**

o **Step 2: Facility Manager Registration**

The next step is signing up for a Healthcare Professional ID with role as a Facility Manager which will be used to map the health facility in the system

o **Step 3: Completing the Registration formalities**

The Facility Manager will login to the HFR using the Healthcare Professional ID, and submit basic details such as facility name, address, geo-location, contact details, ownership, facility type, timings, photographs etc.

Step 4: Verifying the submitted details

This involves verification of the submitted application by the District Verifier. Once verified the facility can participate across the NDHE. The District Verifier essentially verifies the existence of a health facility

Note: Once registered in the HFR, the facility can also declare its healthcare personnel and link the hospital information management system used in the facility, if it is registered in ABDM

H. Facility Verification

After the application is submitted, facility is discoverable and seen as self-declared. As and when, attributes of the health facility are verified by other entities, respective attributes are declared as verified with names of verifiers. State Governments, UT administration, including district administration (CMOs, Civil Surgeons, etc.) can also verify the existence of facility on the address declared by the applicant. If any discrepancies are noted or changes require to be made, the user will be notified.

The facility's verification for existence is usually completed within 15 working days from the day of submission of application. However, the final timeline depends on successful verification by respective State/UT administration.
- If the verification is successful, a confirmation on the registered email id and registered mobile number is sent.
- If the verification is unsuccessful due to any reason, information about the problem and the corrective action needed to resubmit and continue process for successful registration is communicated.

While the respective councils do have a list of healthcare professionals, there is no such data with any authority by virtue of its legal right for healthcare facilities. Therefore, it is proposed that the

verification may be initiated by respective state governments through their district administration which may include offices of CMO, Civil Surgeon, District Health Officer, etc.

Going forward, verification may also be done by the respective body (such as Ministry of Railways etc.) under whose authority the health facility comes.

While doing such verification, these authorities will only verify the existence of such facilities and will not go into other legalities such as availability of permissions, as per various laws, etc. (Since this is typically done by other agencies as per the relevant law). Therefore, when verification in Health Facility Registry is done, it only means the fact that such facility exists. Whether it is compliant with respective provisions shall continue to be decided by, checked by and monitored by respective licensing/regulatory authority.

HP ID of Facility manager is created on basis of Aadhar or Driving License. Both the ID documents are government approved ID documents. The facility manager is accountable for the registration of the health facility in Health Facility Registry. In case of any suspicion with regards to the facility registered, the facility manager may be traced, and appropriate action may be taken. Further, since they belong to integrators Hence, a 'Self-declared' facility may be allowed to participate in the ABDM ecosystem.

For abundant precaution and as a first step, 'Self-declared' facilities can participate in a limited way in ABDM ecosystem. However, the ability to make ABHAs in an assisted manner may not be enabled for 'self-declared' facilities as any health facility (whether integrated or not integrated) can enroll on HFR.

This check will prevent potential fraudulent creation of ABHAs from enrollment numbers, if a fraudulent facility enrolls on HFR using a facility manager having non-aadhar based HPID.

I. Verification by multiple verifiers

If the feature of verification by multiple entities is enabled, it means one facility can avail services of more than one verifier, and also government authorities to verify its various attributes. It is possible going forward that various verifiers may develop a specialization in various fields such as blood bank, imaging, etc. and it is also possible that such verifiers will provide verification services for select set of attributes related to their area of specialization. It is also possible that more than one verifier will provide service to verify a particular attribute (say number of beds, specialties available, etc.) Therefore, it shall be possible for a facility to get its attribute verified from multiple verifiers. Please read details on HFR consultation paper at https://ndhm.gov.in/assets/uploads/consultation_papersDocs/Consultation-Paper-on-Health-Facility-Registry.pdf

J. Verification Fees

It is recommended that state governments should not charge any amount for verifying the existence of any facility. Therefore, it will be free of cost. However, for private entities, the market forces may decide the rates that they may charge. This is similar to certain verification features and services available in the market at present, which is provided by various entities such as NABH, JCI, etc. It is expected that market forces and the competition may bring down the cost of such verification. Please read details on HFR consultation paper at https://abdm.gov.in/assets/uploads/consultation_papersDocs/Consultation-Paper-on-Health-Facility-Registry.pdf

K. Intimation about verification of various features

The verification shall be integrated suitably on the portal once a profile of facility is displayed. The features which are verified and features which are not verified will also be seen by the user. For the features which have been verified, suitable features such as display of relevant information on movement of the cursor will be enabled which will show the name of the verifier, date of verification, and the data which was found to be correct by the verifier. It is for users to decide on which information to rely or which not to rely upon. Please read details on HFR consultation paper at https://abdm.gov.in/assets/uploads/consultation_papersDocs/Consultation-Paper-on-Health-Facility-Registry.pdf

L. Contemplated use for Verification

Currently, there is no centralized updated database for various healthcare facilities unlike in case of doctors for whom the list is maintained by the respective state councils of the respective system of medicine. Therefore, availability of such a list at one digital platform will improve the access of intended users to various healthcare facilities by providing them 'search functionality' in the digital world using various attributes such as facilities available, distance, etc. Since there is no authority maintaining such a list, the concept of verification by respective bodies using a common platform has been proposed. Please read details on HFR consultation paper at https://ndhm.gov.in/assets/uploads/consultation_papersDocs/Consultation-Paper-on-Health-Facility-Registry.pdf

M. Need of Healthcare Professional ID to register in HFR

The Healthcare Professional ID is an authentication mechanism that allows users to access Health Facility Registry and various services in the Ayushman Bharat Digital Mission, without having the need to enter user credentials at multiple places. It essentially ensures that no unauthorized person can access the health facility details.

N. Updating the facility details in the Health Facility registry

Once a facility has been approved for listing in the HFR, a facility manager can update basic details about the facility by logging in at https://facility.ndhm.gov.in using Healthcare Professional ID. However, any change in facility name, address and other essential information will be shown as self-declared until it is verified again by the appropriate authorities.

Information should be updated as and when it changes. For example, if number of beds are increased or new specialties are added, facilities should update the information.

O. Recommended Hospital Management Information System

ABDM does not recommend any specific Health (or Hospital) Management Information System (HMIS) or Health (or Hospital) Information Management System (HIMS) or Hospital Information System (HIS). However, ABDM recognizes that the process of digitization should not hamper the most important aspect of the healthcare institutions i.e. to provide healthcare. Digitization should not end up slowing the process to the extent that providing healthcare becomes difficult. Considering these points, the following principles are recommended before HMIS is selected by healthcare provider:

a) the solution should be user friendly with good user interface and user experience (UI/UX)
b) the solution should have all modules necessary for the operation of that particular healthcare institution.

   E.g.- a clinic with only OPD should have a module for registration of patients, OP examination and prescription. In addition to these modules, HMIS for large tertiary care centres should also have modules for laboratory, radiology, pharmacy, in-patient, discharge etc. In addition, other modules may be required as per the requirement of the hospital.

c) All these modules should be seamlessly and end to end integrated with each other so that repeated data entry is not required, and efforts of human resources are reduced. In addition to use of ABHA or PHR address, scanning facility should also facilitate such increased speed of processes.

   E.g.- Once the OPD registration is done, the same demographic details (name, age, gender, address etc.) may not require repeated entry again during the OPD consultation and they should be auto-populated and reflected on the screen of the treating doctor. Once the doctor writes prescription of certain medicines, the pharmacist in the pharmacy should be able to see the prescription and should not end up writing the same again. The diagnosis of the doctor should similarly be reflected (and if required changes as per the latest clinical decision) before the patient goes to ward in the in-patient module and later in discharge summary.

   Such integrations facilitate swift and seamless processes, especially for the healthcare provider.

ABDM recommends that digitization of health should not lead to unnecessary and undesirable efforts for additional data entry. As far as possible, the health data that is generated should be digitized during the process itself and not by way of an additional step or effort after the process.

For example, Doctors treating patients in the OPD should be encouraged to use OPD modules of HMIS to directly type relevant details on their laptops rather than writing on paper and scanning and uploading the paper later on or getting the data entry of same information done. Many hospitals have successfully migrated to this system and have totally done away with the use of pen and paper even in the heavy OPD settings.

Similarly, in all other modules such as OPD registration, laboratory, radiology, pharmacy; use of paper/register and manual data entry by pen should ideally be avoided and software solutions should directly be used. This may require some time behavior change, but this has been successfully achieved in several hospitals.

It has been noticed that the most challenging part of this behavior change was witnessed in in-patient setting where doctors and nurses move from bed to bed to create health records during their rounds. Few hospitals have started using mobile/tablet/apps for doing the data entry during this round, and few hospitals are using computer on wheels (COW) for the same purpose. ABDM recognizes the fact that this may not be feasible in all the hospitals due to lack of resources. In such case, the healthcare provider (hospital) may consider digitizing their health records in a step-by-step manner. e.g. -To start with digitization of OPD registration, laboratories, radiology, discharge summary, pharmacy may be initiated, and IP records may be initiated. IP records may be scanned and uploaded, entered separately by data entry operator or simply left in physical format to start with. ABDM does not insist that everything should be digitized from the day one and the hospitals should carefully transition in case they are not using digital health systems currently.

d) It is recommended that the HMIS used by hospitals should also be integrated at the backend with digital health standards such as SNOMED-CT, ICD, LOINC, etc. These standards help to bring in uniformity in the way medical/health records are created. They also provide unique code to different medical/health terminologies. This helps in analysis of data and efficient use of clinical decision support system (AI/ML) based technologies. It is not expected that the healthcare professionals (doctor, nurse, lab technician, etc.) should be aware of these terminologies. A good HMIS usually has NLP (Natural Language Processing) based integration which helps in real time conversion of the health records being generated by the healthcare professionals to the relevant codes and create standardized health records at the same time.

Even though ABDM does not recommend a particular HMIS for hospitals, it recommends that the features and steps mentioned above may be noted as guiding principles for smooth and easy transition to complete digitization. It is reiterated that providing healthcare efficiently is of paramount importance and the digitization must support rather than hinder this service.

P. Additional Features

The main aim is to enable the health facilities to be part of a national platform and provide updated information of health facilities across the country. Additional functionalities will be

released in subsequent stages and made available to all facilities equally. In case specific additional functionality is sought, please contact the technical team for support.

Q. Awareness about HFR

Information, Education and Communication (IEC) campaigns are being designed and rolled out by NHA in conjunction with the concerned authorities at the state and national level. Integrations with existing digital applications managed by various entities will be used to accelerate adoption.

R. Data Security and Access

Health Facility Registry is highly secure and makes use of several inbuilt industry leading security mechanisms. All the data is transmitted over Hypertext Transfer Protocol Secure (HTTPS) for secure communication and there is focus on data confidentiality, robustness, and data integrity. Other than certain important fields, only that much data is visible for third parties which the facility itself makes available.

Only publicly visible information can be accessed by third parties. The respective authorities/verifiers under which the health facility comes will also have access to the data for verification purposes.

S. Use of Data

Basic minimal data has been requested to ensure that the health facility which is applying on the ABDM platform can be verified and onboarded by respective authorities. This is essential because in healthcare, the element of trust is very important. The government must do its best so that the authentic healthcare facilities are onboarded, and fake facilities are not onboarded. It is also essential to ensure that even if healthcare facilities are authentic, the claims that they make regarding various attributes such as, facilities/services available are also cross verified.

Therefore, certain information is asked for during registration. This information shall only be used for analysis from a public health point of view. For example, if the government intends to do a broad analysis from public health purpose to identify number of beds with oxygen supply available in a pandemic situation, this data can be used.

Select data will also be provided to digital health solution providers who integrate with ABDM so they can display the list of healthcare facilities with suitable attributes for the prospective patients.

However, it may be noted that data that has been asked in some fields is mandatory and some is optional. The mandatory fields are essential for the purpose of verification and hence it is necessary for the applicants to fill this information.

T. Fraud Prevention

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Health facilities self-declare the information in registration form, which can be verified by government and third-party verifiers. It is advised that attributes of the facility should be checked (whether self-declared or verified) before taking any decision based on that.

In case you have feedback on fraudulent usage, please share your feedback on https://grievance.ndhm.gov.in or call toll free number 1800 11 4477/14477

U. Requirement to digitize health records

Joining ABDM is just first step to enter the digital health ecosystem of India. It is understood that digitization of health records is difficult and at times time-consuming, particularly for older records. Therefore, the ABDM does not insist that from the day of joining, you shall start digitization of every health record within your facility. However, ABDM does encourage you to shift to digital health systems in a gradual and phased manner. At this moment no such timeline for complete migration has been decided.

In the digital health world, currently following six types of health records are getting digitized in most of the healthcare facilities:

a) OPD registration
b) OPD consultation and prescription
c) Pharmacy records
d) Laboratory reports
e) Radiology reports
f) Discharge summary

(Out of these six records, in many facilities, OPD consultation and prescription are not digitized.) The extent of their digitization varies. In most of the healthcare facilities including high-end facilities, in-patient records are not digitized at the moment. While we encourage the facilities to move towards digitization particularly the six categories mentioned above, it is not mandatory that the digitization is done while joining or within a particular period of joining.

II.   Healthcare Professionals Registry

Healthcare Professionals Registry is a comprehensive repository of healthcare professionals involved in delivery of healthcare services across all the systems of medicine, both modern and traditional. These include doctors of all systems of medicines, nurses, paramedics, and other healthcare professionals.*

Currently, registration of doctors across Modern Medicine, Dentistry, Ayurveda, Unani, Siddha, Sowa-Rigpa and Homoeopathy has been initiated in the Healthcare Professionals Registry. Registration of other healthcare professionals is expected to start soon.

Enrolling in the Healthcare Professional Registry will enable healthcare professionals to get connected to India's digital health ecosystem.

There is no fee for registration in the Healthcare Professionals Registry or for generating a Healthcare Professional ID.

A. Importance of Health Professionals Registry

Enrolling in the Healthcare Professionals Registry will enable these healthcare professionals to get connected to India's digital health ecosystem and network.

B. Need to have a separate Healthcare Professionals Registry

The data of various Medical Councils (at state and national level) is preserved, updated, and maintained in various forms with the respective councils. While many of them have moved to a digital platform, many are still keeping their data in physical format. Even in digital formats, the types of digital systems used are of different natures.

Therefore, currently there is no centralized repository of all healthcare professionals in digital format. Further, there are different types of councils for various types of healthcare professionals. Therefore, it is not possible for any digital health care provider to have any reliable, verified, or trustworthy data set of healthcare professionals. Therefore, every digital health care provider ends up creating its own set of health care professionals. By providing such a unified digital registry, it shall be possible for the users of digital health systems to have access to a complete data set for seeking healthcare and allow healthcare professionals to leverage these systems to provide better access and care to their patients.

This is currently not possible with disparate registries available in different States for different healthcare professionals. Therefore, it is necessary to register in the HPR in case you want to provide your services in the national digital health ecosystem.

The Healthcare Professionals Registry will not replace existing registration issued by respective councils. It will, however, bring together data of those professionals from all States willing to be on ABDM on a digital platform. It will provide additional digital services to the enrolled professionals and will be their primary identifier under the Ayushman Bharat Digital Mission. If professionals wish to avail of these services, they may do so by enrolling in HPR. Further, the

processes for registration vary greatly by state, hence a separate enrolment in the Healthcare Professionals Registry is required to capture a standard set of attributes.

Currently, registration in both these entities - Medical Council and ABDM has to be done separately. Registration in concerned Medical Council is a mandatory legal requirement which must be done for practicing healthcare. Registration in the digital health through ABDM, however, is voluntary.

National Health Authority is in discussion with various medical councils to integrate these two processes. If the integration is done, it should be possible for the healthcare professional to register in both medical Council as well as healthcare professional registry at the same time with the same efforts.

The National Health Authority or Ayushman Bharat Digital Mission provides only a technology backbone for enabling all the digital health data getting integrated with each other.

The existing legal framework regulating healthcare shall continue to regulate the same. Thus, medical councils shall remain the competent authorities to regulate the healthcare provided by a respective healthcare professional. In case a doctor is suspended or removed from registry of Medical Council, he/she shall not be able to be a part of an ABDM.

C. Role of NHA in Healthcare Professionals Registry

National Health Authority (NHA) only provides the technology platform for HPR. The data is entered by healthcare professionals and verified by their respective councils. Registries generated in this way are used as building blocks for providing various services under ABDM. NHA allows digital health solution providers to integrate their solutions with HPR.

The existing legal framework regulating healthcare shall continue to regulate the same. Thus, medical councils shall remain the competent authorities to regulate the healthcare provided by a respective healthcare professional. In case a doctor is suspended or removed from registry of Medical Council, he/she shall not be able to be a part of an ABDM.

D. Role of Medical Council

Medical councils of various pathies and other councils of various healthcare professionals such as Nursing Council are Statutory bodies established for recognition and regulation of respective professions. It is necessary that only genuine healthcare professionals join the respective registry and quacks are kept out of the registry. Therefore, each and every name which will be onboarded in the professionals' registry will have to be verified by the respective council, suitable trainings have been imparted to the councils for this particular purpose. Going forward, it is proposed to automate the system so that registration in the medical council and onboarding in healthcare facility can streamlined and efforts to manage the registry are further reduced. It is emphasized that only IT platform for the healthcare professional registry has been created by the National Health Authority and regulatory powers remain with the respective council.

E. Key Benefits of Health Professionals Registry

a) Online presence and discoverability - Professionals, if they wish, can share details such as specialization, educational background, experience, etc. for patient view. Verified profiles on the national platform will instill trust in patients. Various digital health solutions shall be integrating with the Healthcare Professionals Registry to have this data available for their users. Thus, Digital Health app with 'search and connect' to a doctor functionality can show your profile to the intended patients. You also have an option of joining the platform while deciding not to make yourself available in the search functionality going forward.

b) Facility to access health records of patients from other healthcare providers will be available to such doctors who are part of ABDM. Thus, they will have access to longitudinal health record of the patient which will enable better clinical decision making.

c) Facility to provide teleconsultation to patients

d) Various government agencies/entities shall be integrated with the Healthcare Professionals Registry. This will enable faster registration, renewal and issuance of No Objection Certificate (NOC) by other governing bodies. Going forward Medical Councils can also use this feature for keeping track of Continuing Medical Education (CME) points.

F. Voluntary Enrollment

Enrolment in Healthcare Professionals Registry is voluntary. However, government health facilities would be required to enroll in the Health Facility Registry, where the respective State/UT government participating in the Ayushman Bharat Digital Mission requires them to do so.

In case private healthcare facility joins the ABDM, then healthcare professionals in that facility will also be required to get registered on the Healthcare Professionals Registry. However, it shall be the choice of healthcare professionals while practicing out of such ABDM facility not to use the Healthcare Professionals Registry or their HPR ID.

Please note that you cannot access patients records in ABDM if you are not enrolled.

G. Beneficiaries of HPR

All categories of healthcare professionals*

H. Steps to Register and get a Healthcare Professional ID?

Enrollment in the Healthcare Professionals Registry is a simple 3-step process and can be completed in a few minutes if the requisite documents (registration certificate, degree and in the case of government doctor's employment proof) are readily available

All starred fields are mandatory. They allow the respective councils to cross check the information provided. Other fields are not mandatory.

It is advisable to include all your academic qualifications. In case some higher qualifications are not conveyed to your registering council, it is advised that these may also be conveyed to them.

Step 1: Enrolling and Signing up for the Healthcare Professional ID

- Open the website https://hpr.abdm.gov.in/
- Click on Enroll and sign up for an e-KYC authenticated Healthcare Professional ID

Step 2: Filling the Registration Form

Fill in the following details:

- Personal details
- Registration and Academic details (Degree / Qualification),
- Specialization
- Work details

Step 3: Verifying the submitted details

Once the application is submitted, the following verification is conducted:

- Verification of registration and education details is done by respective councils / bodies where the healthcare professional is registered
- Verification of work details of government healthcare professionals is done by State/UT administration

Once verified, you will get your unique Healthcare Professional ID and become a part of the Healthcare Professional Registry

Inclusion of all the categories of healthcare professionals is envisaged in a phased manner.

Enrolling in Healthcare Professionals Registry takes 20 to 25 minutes. After the application is submitted online the application will be verified by the respective Council. For example, in case of a Doctor of Modern Medicine, his application will be verified by the concerned State Medical Council who shall verify the credentials and approve the application. If any discrepancies are noted or changes are to be made, the user will be notified. Once the application is approved, the Healthcare Professional ID is activated. Discrepancies are likely to delay account activation. Only after such approval, the concerned applicant can be a part of national digital health ecosystem in the capacity of a healthcare professional. This feature has been kept ensuring that quacks are not allowed to onboard on the system.

The applicants are advised to keep their Registration Certificate, Degree/Diploma and Proof of Employment (in case of government employees) ready before starting the enrolment process.

I. Issues with the application

Please register your grievance on https://grievance.ndhm.gov.in or call 1800 11 4477/14477

J. Password Change and Recovery

To reset your password, please select the 'Forgot your HP ID' option on https://hprid.abdm.gov.in/login and follow the instructions.

To change your password, please login at https://hprid.ndhm.gov.in/login and select the 'Change Password' option from your profile. Enter your new password, then choose a confirmation mechanism such as via mobile OTP, Aadhaar OTP, or old password.

K. Changing the Records

We suggest that the account be updated whenever there is any change in information. For example – additional qualification, change of address, change of name, etc. Any changes in records will need to be reverified and approved by the Council/ Registrar/ Board by submitting an application.

L. Overseeing Authority

The Councils/ Registrars/ Boards at both national and state level for different categories of healthcare professionals verify the enrolment. National Medical Commission (NMC), Dental Council of India (DCI), National Commission for Indian System of Medicine (NCISM), National Commission for Homoeopathy are some of the bodies overseeing enrolment along with the respective State Councils/ Registrars/ Boards.

M. Legal Framework

The data created by the healthcare professional continues to be governed by the same legal framework that as it exists today. This data shall be accessible only to you (generator of the data/provider of the healthcare), to the person to whom the data pertains to (patient, citizen etc.). This is the case even now. The same will continue in the future. The health records created by you will not be used by government for analysis and research.

However, if the data is explicitly collected for specific purpose (say research) then it can be used for such additional purpose as per the consent available. Again, this is similar to the existing scenario, the only difference after the implementation of ABDM is use of digital data rather than physical data. However, government can use 'aggregated data' from Healthcare Professionals Registry and Health Facility Registry to analyse distribution/availability of resources across India. It may be noted that these registries do not contain any medical record of the patient. The said analysis can be done only about availability of doctors, bed, hospitals, ICUs, etc across various geographies.

N. Rules to Follow

The Healthcare Professionals Registry shall act as a single source of truth for digital health and all healthcare professionals in the ABDM ecosystem. Processes have been designed to ensure that only professionals duly approved by authorized bodies are onboarded. Further, these

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healthcare professionals will also need to abide by the rules of conduct placed by various services they are utilizing through the registry.

O. Specialty procedures

Councils only verify doctors as per their systems of medicines such as modern medicine (allopathy), Ayurveda, etc. They don't register as per specialties such as Physicians, Surgeons, Diabetologist, etc. Practice of medicine is governed by respective councils and legal provisions. Healthcare professionals can provide all healthcare services within such framework as per the competence. Therefore, they are advised to go with the law and professional competence to decide which healthcare intervention they should provide, and which they should not. NHA is not competent to give opinion on professional decisions of doctors and healthcare professionals. It will be done by respective councils and the courts, as is the case now.

P. Listing of linked hospitals

Healthcare Professionals Registry allows healthcare professionals to declare one or more health facilities they work in. Applicants are encouraged to list all the facilities they work in. Healthcare professionals who are registered with their respective councils but are not practicing can enroll as well.

Q. Access and visibility

Healthcare professionals can choose if they want their profile to be public. In such case, certain information such as name, registration number, educational qualification and experience will be made visible. Rest of the information including photo, address and phone number will be made visible as per the settings chosen by the healthcare professional.

If the healthcare professional chooses not to make their profile public, then it won't be displayed in search results. However, they still can access health records of the patient with their consent. Professionals can change their settings from time to time.

R. Data collection and security

The Healthcare Professionals Registry follows a minimalistic approach to data collection and only seeks information which is necessary to verify the identity and credentials of a healthcare professional. This includes demographic, contact, registration, academic, and place of work details.

Only publicly visible information can be accessed by third parties. However, administration and verifiers of the respective council have access to all the data entered by the healthcare professional.

Healthcare Professionals Registry is highly secure and makes use of several inbuilt industry leading security mechanisms.

S. Fraud Prevention

Processes have been designed to ensure that only verified healthcare professionals are onboarded after approval from respective authorized bodies. Healthcare professionals will also need to abide by the rules of conduct placed by various services they are utilizing through the Healthcare Professionals Registry.

Information about health facilities can also be verified through local administration and third-party verifiers. Verified attributes are marked in Health Facilities Registries after verification.

In case you have feedback on fraudulent usage of the Healthcare Professionals Registry please share your feedback on https://grievance.ndhm.gov.in or call toll free number 1800 11 4477/14477

T. Awareness about Healthcare Professional Registry

Information, Education and Communication (IEC) campaigns are being designed and rolled out by NHA in conjunction with the concerned authorities at the state and national level. Integrations with existing digital applications managed by various entities are being used to accelerate adoption.

U. Requirement to digitize the health records

Joining ABDM is just first step to enter the digital health ecosystem of India. It is understood that digitization of health records is difficult and at times time-consuming, particularly for older records. Therefore, the ABDM does not insist that from the day of joining, you shall start digitization of every health record within your facility. However, ABDM does encourage you to shift to digital health systems in a gradual, phased and speedy manner. At this moment no such timeline for complete migration has been decided.

In the digital health world, currently following six types of health records are getting digitized in most of the healthcare facilities:
   a) OPD registration
   b) OPD consultation and prescription
   c) Pharmacy records
   d) Laboratory reports
   e) Radiology reports
   f) Discharge summary
(Adoption of digitization in OPD consultation and prescription is less compared to other five fields.)

Again, the extent of the digitization varies. In most of the healthcare facilities including high-end facilities, in-patient records are not digitized at the moment. While we encourage the facilities to move towards digitization particularly the six categories mentioned above and even for in-patient records if possible, it is not mandatory that the digitization is done while joining or within a particular period of joining.

Chapter 6: Health Information Exchange and Consent Manager (HIE-CM)

I. Role of HIE-CM

Consent Manager in ABDM performs the role of managing consents related to personal health data and supports exchange of inter-operable health data across ecosystem players.

The consent manager will manage consent and data requests between Health Information Providers (HIP, any healthcare provider who creates health information in the context of providing healthcare related service to a patient) and Health Information Users (HIU, any entity that would like to access health records of an individual)

II. Why is it Important?

HIE-CMs are envisaged to act as a conduit for an end to end encrypted & consented data exchange. This will ensure that no individual data is shared without user consent. To do this the individual needs to authorize the access to relevant Health Information. This authorization is achieved with the consent manager framework.

III. Key Benefits of HIE-CM

- Citizens will be able to sign up independently with a consent manager of their choice to participate in consent-based data sharing.
- The proposed architecture will not only safeguard privacy but will also spur innovation by unlocking the financial value of health data locked up in institutional fragmented systems thereby offering multiple health product including insurance and other health related services.
- These entities will be able to innovate different consent experiences for smartphones/feature phones users while targeting different segments including illiterate and minors.
- By being the bridge between data principal at one end and data user at the other end, it will play a pivotal role in processing & approval of consents.
- Handling data access transactions that require a comprehensive and longitudinal perspective.

IV. Beneficiaries

All the citizens of India who wish privacy and security for their data while sharing their health records with healthcare professionals

V. Working of HIE-CM

- The HIE-CM signs-up for creating a PHR Address.

- Individual will be able to choose an easy to remember PHR Address.

- Each HIE-CM will have associated PHR application to enable CM flow for data sharing by the individual.

The Individual and the associated HIE-CM can be identified by the full PHR address which would look like name@domain (e.g.: manu@abc), each HIE-CM will be assigned a "domain" which looks like name@abdm or name@abc.

VI.   Way Forward

- ABDM HIE-CM registry will be maintaining all relevant details of the ABDM compliant HIE-CMs. The same will be leveraged for Health Data Exchange.
- Development of the solution and all the enhanced functionalities will be done as per the Open Specifications provided by the ABDM.
- ABDM would publish the technical specifications (API's etc.) and policies for establishing multiple HIE-CMs in the ecosystem.
- The process of HIE-CM onboarding and associated roles & responsibilities will be published by ABDM. The same will be rolled out for consultation in the HIE-CM Consultation Paper further

Chapter 7: Unified Health Interface (UHI)

UHI is envisioned as an open protocol for various digital health services. The UHI Network will be an open network of End User Applications (EUAs) and participating Health Service Provider (HSP) applications.

I.   Importance of UHI

UHI will enable a wide variety of digital health services between patients and health service providers (HSPs) including, but not limited to:

- Booking OPD appointments at hospitals / clinics
- Booking Tele-Consultation
- Discovering availability of critical care beds
- Discovery of lab and diagnostic services
- Booking of home visits for lab sample collections

- The UHI Network will also establish

- A well-defined UHI Policy that all network participants abide by for secure data exchange and use
- Verification mechanism of all entities as a prerequisite for participation
- A rating / reputation system for entities and services
- Support grievance redressal mechanisms

II.   Key Benefits of UHI

For Patients

- Contact the doctor of their choice via any application that is UHI compatible.
- Enable a large segment of Indian users with currently no physical access to doctors to be able to connect with them digitally - regardless of location.
- Share health information with their health service providers and receive prescriptions, lab reports and doctor notes digitally on their devices.
- Discovery of a wide choice of health services in an unbiased manner, with full transparency on the price.

For Health Service Providers (e.g. Doctor, Healthcare Facility)

- Get immediate access to health service demand being generated across the UHI ecosystem - irrespective of the app / site that the Health Service Provider decides to use, they will be able to list and make their service available to the User.
- Connect with their existing customers services like appointment, teleconsultations etc. using any End User Application
- Access health records of patients with their digital consent.

III.   Beneficiaries of UHI

- End-Users/ Patients
- Health Service Providers (HSPs)
- Technology Service Providers (TSPs)

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Chapter 8: Grievance Redressal System

It is a mechanism to engage with Citizens, Healthcare Professionals, Healthcare Facilities, ABDM Sandbox Integrators who wish to raise their concerns, challenges, grievances while using ABDM Ecosystem services. This is a system to register complaint / grievances/ IT Complaint etc. by aggrieved party and effectively redress/respond to them in a time bound manner by ABDM.

A 24 x 7 call center is functional. The number is 1800-11-4477 / 14477. It is operational in Hindi, English, Kannada, Telugu, Tamil and Malayalam languages

I.   Key Features

- Grievance can be lodged by any stakeholder of ABDM and Others.
- Web based portal for registering grievances i.e. https://grievance.abdm.gov.in
- OTP based verification.
- Online lodging and tracking of grievance/complaint.
- Grievance tracking through a unique "grievance tracking number".

II.   Key Benefits of Grievance Redressal System

- Encourages users to raise grievances without fear
- Provides a fair and speedy means of grievance handling
- Greater confidentiality and transparency in grievance dealing procedure
- Automates entire complaint process right from registration to closure
- Advantage over paper-based systems as grievance redressal portal can alert users immediately on the grievance, action taken etc.
- Round the clock availability of system
- Streamlined and systematic grievance reporting

III.   Key Stakeholders

- Individuals/Citizen
- Healthcare Professional
- Health Facility
- ABDM Integrator
- Others
- Call Center Team
- Grievance help desk team
- ABDM Technical Team
- Grievance Redressal Officer
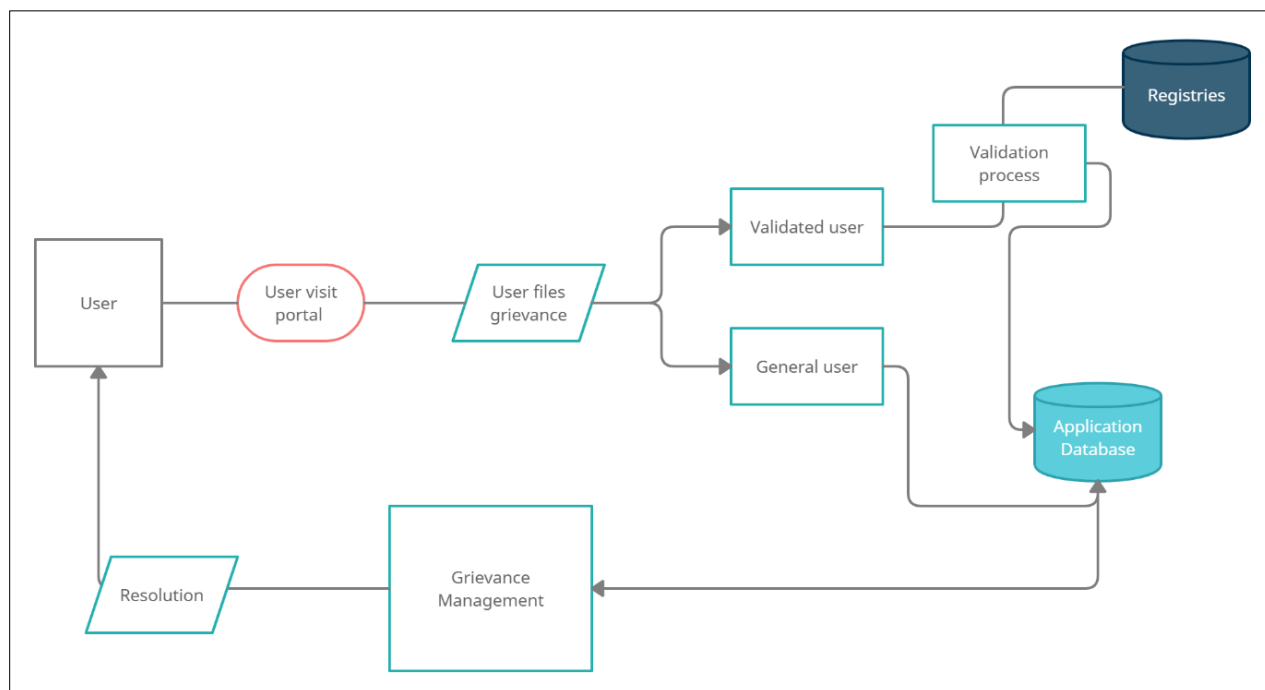
IV.   Workflow

Figure 1: Grievance Redressal Workflow

- Any citizen can register a grievance/complaint to the ABDM via online grievance portal/Inland Post/Call Centre
- When a user registers a grievance on the Grievance/IT Incident portal by providing relevant information, e.g., name, contact number, type of query etc., a grievance id will be generated on the portal against the query.
- After the registration of the query on Grievance portal, that query will be looked into by ABDM Grievance Help-desk Team.
- The grievance help-desk team will resolve the grievance however, depending upon the nature of the query it may be further escalated to the functional team for resolution.
- Grievance can be tracked on the ABDM Grievance redressal portal, using your Unique application number. Once the resolution is done, it is published on the grievance portal and the user can view his/her resolution by providing the grievance ID.
- As per the Health Data Management policy, the TAT to resolve a grievance is 30 days.

Chapter 9: ABDM Sandbox

ABDM Sandbox is a digital space which is detached or separated from the actual digital health ecosystem. It is a space for experiment of integration before the digital health product is made live for the actual use.

The integration for any health solution which intends to work in the ABDM ecosystem is first done in the sandbox environment. This is necessary to test the robustness, security function, etc. of the integrating ecosystem for various parameters before they are formally integrated into the ecosystem. Once these tests are done, the production key is provided in Sandbox environment and they can start their operations.

This step has been introduced to ensure that the systems are first tested before they are made available to participants in the ABDM.

I.   About APIs

Various software solution or digital solutions developed by various players are developed by using various software languages, standards etc. Therefore, while integrating the two software solutions it is necessary to have an interface which can connect different software for effective integration. This is similar to having a universal adapter for connecting electric appliances compatible with different types of electric sockets. These software solutions or digital solutions are known as Application Programming Interface (API). The ABDM/NHA has published such APIs on its website sandbox.ndhm.gov.in. Developers of various digital health solutions can integrate with ABDM's APIs on their side to get their system integrated with the ABDM platform.

II.   Importance of Sandbox

- It fosters integration of current systems and IT platforms in healthcare to be integrated with NDHMABDM building blocks, and also enable responsible innovation in health tech services, promote efficiency and bring benefit to consumers.
- It encourages market participants to come forward to partner and integrate their current and new products, services, or business models with customers in a near-live environment, subject to certain safeguards and oversight.
- It provides a risk-free platform to test the health tech services to be launched. It also ensures that the services comply to the specifications of the NDHMABDM building blocks mandatorily to bring benefits to consumers.

III.   Key Benefits of a Sandbox

- Improved understanding among Health Information Providers, Health Information Users & Health Repository Providers, thus expediting faster integration helps them to appropriately integrate such new technologies with their implementation / business plans.
- Testing of product's viability before a larger and more expensive roll-out, to assess the success potential. If any concerns arise, during the sandbox period, appropriate modifications can be made before the product is launched in the broader market.
- Further inclusion and utilization of the NDHMABDM in a significant way by not only improving the pace of innovation and technology absorption but also in healthcare and health tech inclusion and in improving healthcare outreach.
- Increased range of products and services, reduced costs, and improved access to healthcare services.
- Get a first-hand feel of specifications, tools, technologies and building blocks of NDHMABDM. It will provide an opportunity to the community to test their ideas and concepts and allow experimentation.
- Data sharing to be allowed based on approved Health Data Management Policy, Data Protection Bill, and Information Security Policy and any other policies as notified and applicable.

IV.   Who are the Beneficiaries?

Digital health solution providers or developers of any type can participate in the ABDM Sandbox and integrate its system with ABDM**, and benefit from it**. There are certain criteria:

a) It should either be a company/ proprietorship firm/ LLP/ firm/ institution/ organization incorporated and registered in India or licensed to operate in India. Further, healthcare / health tech institutions constituted under a statute in India would also be eligible.

b) The entity must demonstrate arrangements to ensure compliance with the existing regulations/laws on consumer data protection and privacy as well as PDP 2019.

c) There should be adequate safeguards built in its IT systems to ensure that it is protected against unauthorized access, alteration, destruction, disclosure or dissemination of records and data.

d) The test scenarios and expected outcomes of the ABDM Sandbox experimentation should be clearly defined, and the sandbox entity should report to the Mission on the test progress, based on proposed schedule.

ABDM Sandbox has been set up for companies or entities working in the health space and wanting to integrate to become a part of the ABDM ecosystem. For example, health tech companies, vendors of Health Management Information Systems, etc. In case the digital solution used by healthcare professional or healthcare facility is not integrated with ABDM, they can request for their digital health solution provider to initiate the integration with ABDM.

For more details, please refer to ABDM Sandbox Guidelines at
https://abdm.gov.in/publications/sandbox_guidelines.

V.   Working of the Sandbox

Applications are required to undergo functional testing and security assessment before entering the production environment. You can integrate your digital health solution in the Sandbox by

making an online application at sandbox.ndhm.gov.in. It takes around 10 minutes to apply for this. The applications are processed in 2-3 working days.

- **For registering into the sandbox:**

  Each participant will have the following five stages:

  1. **Preliminary Screening**: The application submission shall be always open and all applications shall be processed on FIFO basis. The applications shall be received by the The Health Tech Committee (HTC) and evaluated to shortlist applicants meeting the eligibility criteria.
  2. **Test Design**: This phase may last for 4 weeks. The HTC shall finalize the test design through an iterative engagement with the applicants and identify quantitative and/or qualitative outcome metrics for evaluating evidence of benefits and risks.
  3. **Application Assessment:** This phase may last for 3 weeks. The HTC shall vet the test design and propose modifications, if any.
  4. **Testing:** This phase may last for a maximum of 12 weeks. The HTC shall assess by close monitoring.
  5. **Evaluation:** This phase may last for 4 weeks. The outcome of the testing of products/services/technology as per the expected parameters including viability/ acceptability under the NS shall be confirmed by the NDHMABDM. The HTC shall assess the outcome reports on the test and decide on whether the product/service is compliant with various NDHMABDM guidelines.

- **For extending or exiting the sandbox**

  1. At the end of the sandbox period, the sandbox entity must exit the sandbox
  2. In the event, that the sandbox entity requires an extension of the sandbox period, it should apply to the NDHMABDM at least one month before the expiration thereof and with valid reasons to support the application for extension. The NDHMABDM shall take an informed decision on the same.
  3. The sandbox testing will be discontinued any time at the discretion of the NDHMABDM.

The sandbox entity may also exit at its own discretion by informing the Mission one month in advance.

VI.   Checking the Integration
The access to the HIU reference app can be requested on the email address-
abdm.support@nha.gov.in

VII.   Next steps after successful integration
There is an exit form available on the Sandbox portal, you need to fill the form. After evaluation, our integration team will reach out to you.

VIII. Terms and Conditions for ABDM Sandbox

There are certain terms and conditions for joining the sandbox. These have been drafted to ensure privacy, security and confidentiality of the data and also create a level playing field. The details are available in ABDM Sandbox Guidelines at https://abdm.gov.in/publications/sandbox_guidelines

As per the compliance set for Ecosystem partners all partners need to get the flow tested by our Functional audit team. All ecosystem partners need to be compliant to the NHA Information Security Policy for External Ecosystem.

IX.   Reference Documentation in languages other than Java

We have currently done the implementation in Java only. You can connect with other integrators who have completed integration in Python and PHP over the community. Re-direct such questions to the dev forum.

X.   Guidance and Query Resolution

All the integrators or applicants are provided with general guidance about various steps of integration. The handholding is done from time to time. APIs have been published by ADBM. Further development required from integrators side has to be done by the integrator.

For queries, please raise your concern on dev forum (https://devforum.abdm.gov.in/) and clearly mention your client id on the website. Alternatively, an email may be sent to integration.support@nha.gov.in

We also suggest posting queries on the forum as the community can come forward and help. Also, your query may also help others in the different stages of integration. However, if your query is not resolved, you can call on the call center number, 1800-11-4477 / 14477 or file an online grievance at grievance.abdm.gov.in

Chapter 10: Challenges Faced and Way Forward

ABDM is developing policies and **digital building blocks** required for healthcare and making them accessible as digital public goods for all. This will help boost access to healthcare for citizens through technologies such as telemedicine and enable continuity of care by helping citizens have access to their digital health records from various health facilities and health programs. Searching for health services, doctors etc. will become seamless across the ecosystem, as all integrated partners will operate on the same rules and technology principles (such as open Application Programming Interface - APIs).

I. Challenges Faced

While ABDM is in the process of integrating the healthcare ecosystem and making it interoperable, there are certain challenges like lack of adequate hardware & software infrastructure in health facilities, resistance to change and lack of incentives to adopt to ABDM.
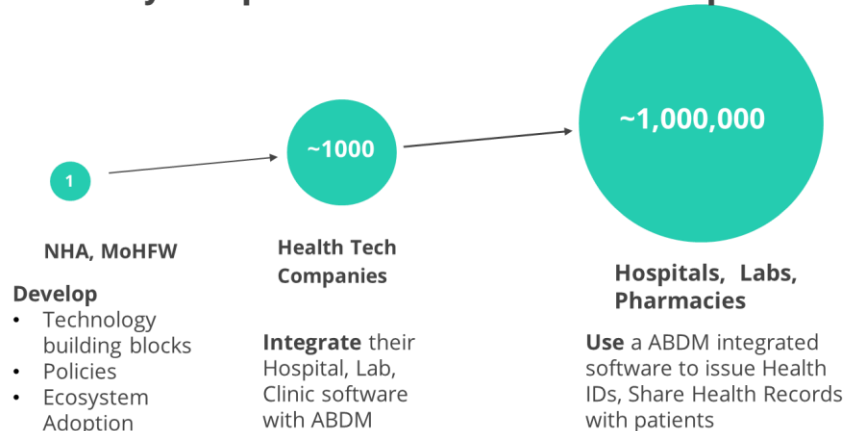
In many hospitals, particularly small hospitals, there is lack of investment in computer hardware and digital storage space, which are pre-requisites for ABDM. At some remote places, internet connectivity issues also exist. The main challenge towards creating an interoperable ecosystem is the lack of adoption of HMIS (Hospital Management Information Software) in hospitals. According to the FICCI 2020 report titled 'Leapfrogging to a Digital Healthcare System', it is estimated that there are over 500 software providers who provide HMIS software to hospitals and the adoption of EHR in India is less than 10% and is characterized by fragmentation and low digital penetration.

Adopting ABDM would require doctors to write prescriptions on their laptops/computers/tablets, which is a huge behavioural change. Given the workload on them, incentivising them to use computers and laptops is a big challenge. The same is true for other healthcare professionals like nurses, pharmacy etc. Efforts are being made to show the doctors and healthcare staff the advantages of ABDM: time saved due to prefilled prescriptions, ability to quickly look at records chronologically rather than searching illegible and often soiled/torn/messy paper records. Various awareness campaigns are also being planned.

II. Way Forward

The national launch of ABDM has enabled new avenues for expansion of ABDM based public and private services. NHA is focusing on driving adoption by public and private healthcare providers to ensure a wider range of digital health services are available for citizens, thereby fuelling the creation of a self-sustaining ecosystem.

ABDM technology: use by all Health providers in India as 'ecosystem partners' is essential for scale up

NHA, MoHFW

Develop
- Technology building blocks
- Policies
- Ecosystem Adoption

~1000

Health Tech Companies

Integrate their Hospital, Lab, Clinic software with ABDM

~1,000,000

Hospitals, Labs, Pharmacies

Use a ABDM integrated software to issue Health IDs, Share Health Records with patients

"Digital India" initiative is one of the best examples of transformative reforms in India. It provides strong foundation for digitization of the health sector. Ayushman Bharat Digital Mission is partnering with public and private health facilities and all other stakeholders. According to the FICCI 2020 report titled 'Leapfrogging to a Digital Healthcare System', it is estimated that there are over 500 software providers who provide HMIS software to hospitals and the adoption of EHR in India is less than 10% and is characterized by fragmentation and low digital penetration. Incentives may be designed to promote integration by private players to accelerate availability of services for citizens enabled by the ABDM platform while providing a level playing field for all.