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POLICY BRIEF

DIGITAL IDENTIFICATION SYSTEMS IN INDIA

Exclusionary Concerns and Way Forward

Digital Identification Systems in India - Exclusionary Concerns and Way Forward

Policy Brief

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Suggested Citation
K, Shekar. (2023). Digital Identification Systems in India - Exclusionary Concerns and Way Forward. The Dialogue™

Catalog No.
TD/PDG/PB/0623/01

Publication Date
June 26, 2023

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Acknowledgements

We would like to thank Mr. Kazim Rizvi, Founding Director, The Dialogue for his valuable comments and continued guidance and support towards the completion of this brief. We take this opportunity to thank Eshani Vaidya and Sreyan Chatterjee for the research support in previous version of the brief.

We also extend our gratitude to Ms. Akriti Jayant for providing copyediting support and Ms. Diksha Kumari for her design support to this publication.

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Abstract

Digital technological development has transformed the concept of nation-state where there has been a seamless blend of the internet and citizens forming netizens - where individuals actively involve and participate in online communities like in the physical public sphere. Therefore, to keep up with time, governments across the globe, including India, are testing various technological innovations to transform governance to suit the needs and wants of individuals in the digital realm.

India's journey toward pioneering and transforming governance using technological innovations like Digital Public Infrastructure, has evolved significantly. India has also transformed from being an adopter of technology to creating scalable technology that complements the ecosystem. The two main consortia of Digital Public Infrastructures (DPIs) built using Digital Public Goods (DPGs) are India Stack and Ayushman Bharat Digital Mission (ABDM¹), which have various layers and components. One of the key layers/components of both the consortia is the digital identity element to recognise individuals within the digital realm (similar to the physical public sphere) such that online transactions, interactions, identifications etc., are smooth and consistent with the time.

Within the paperless layer of the India stack, Aadhaar is formed as a foundational biometric digital identity for enabling various products and innovations, utilising it as proof of an individual's legal identity. Various functional digital identities have been formed using Aadhaar as a foundational identification system or other KYC systems, including the Ayushman Bharat Health Account (ABHA) Number, for recognising individuals within the digital health realm under ABDM. As these two digital identity systems within India form the bedrock for utilising various digital public infrastructures, through this brief, we will discuss how foundational and functional digital identification systems work in tandem and what are the key concerns within the Indian digital identification system and what could be the optimal way forward.

¹ Centre for Internet and Digital Economy, Aadhaar: Platform or Infrastructure? Developing a taxonomy for India's Digital Public Ecosystem, Policy Brief 3, February 2023

1. Introduction

Digital identification, when studied from a design perspective, has been dubbed as ‘the reimagination of the citizen-state relationship that is centred on a technology platform’.² Over the past five years, several countries, including Cameroon, India, Kenya, Ecuador, Jordan, Kyrgyzstan, Iran, Senegal, Thailand, Pakistan, Turkey, the Philippines, and Jamaica, have implemented new electronic identity (eID) programs, which utilise cards, mobile phones, biometric data such as iris and fingerprints as means of identification.³ Digital IDs serve a dual purpose, i.e., enhancing convenience for individuals and reducing administrative costs and efficiency in public service delivery for the government. The Digital identification system requires deeper analysis as they try to redefine various forms of citizen-state relationships, especially in terms of (a) how the government creates a social contract⁴ with the citizens in terms of providing them proof of identity through verification (b) how foundational digital IDs help de-duplicate functional ID systems⁵ (c) how databases created through these digital identities are used for targeting the welfare and social protection (d) how these digital IDs are used for authenticating and delivering welfare to the targeted population.

While redefining some key citizen-state relationships is to solve the last-mile socio-economic challenges and induce social and economic prosperity. However, there are gaps and concerns within how the digital identification system works in India at different layers - (a) technical layer, (b) governance layer and (c) community layer. At the technical layer, typical issues with basic infrastructure crop in where the availability of essential and quality infrastructure for maximum utilisation of the digital identification system is a concern.⁶ While Aadhaar is framed using some key principles dictated through legislation, however, at the governance level, there is less clarity in terms of how other functional digital IDs are constituted in the absence of a legal framework.⁷ At the community level, there is a lack of clarity in terms of understanding the utility of these digital identification systems and their appropriate use cases.⁸

Such gaps and concerns at different layers of the digital identification system bring out consequences like exclusion errors, information asymmetry, privacy and data security concerns, implementation concerns, trust issues etc. While all these consequences require attention, however, through this policy brief, we analyse two key digital identification systems of India, i.e., (a) Foundational ID - Aadhaar and (b) Functional ID - ABHA numbers to map the gaps and concerns at different layers to discuss the optimal way forward to tackle one of the key consequences, i.e., exclusion error.

²Jean Dreze, Dissent on Aadhaar

³<https://www.theengineroom.org/wp-content/uploads/2022/01/Engine-Room-Digital-ID-2022.pdf>

⁴Markus Loewe, Tina Zintl, Annabelle Houdret, The social contract as a tool of analysis: Introduction to the special issue on “Framing the evolution of new social contracts in Middle Eastern and North African countries”, World Development, Volume 145, 2021, 104982, ISSN 0305-750X, <https://doi.org/10.1016/j.worlddev.2020.104982>.

⁵Types of ID systems | Identification for Development. (n.d.). ID4D. Retrieved May 15, 2023, from <https://id4d.worldbank.org/guide/types-id-systems>

⁶Singh, J. (2022, April 12). Aadhaar Infrastructure Flaws Detailed in CAG Report on UIDAI Functioning. Gadgets 360. Retrieved May 15, 2023, from <https://www.gadgets360.com/internet/news/aadhaar-card-number-inefficiencies-flaws-security-issues-uidai-cag-report-2882575>

⁷S. Chatterjee, K. Venkatesh, E. Vaidya (2022) India’s Digital Health Dreams: Getting it Right, The Dialogue

⁸Jain, E. (2021, December 16). India’s digital health mission: The growing need to introduce electronic health records. ORF. Retrieved May 15, 2023, from <https://www.orfonline.org/expert-speak/indias-digital-health-mission/>

Section 2 of this brief discusses the research methodology followed for curating this policy brief. Section 3 discusses the differences and correlations between foundational and functional digital identity. Section 4 of the brief discusses the concerns and gaps within India's centralised foundational ID - Aadhaar, at different stages of its deployment across different layers. Similarly, Section 5 will discuss the concerns and gaps within India's functional ID - ADHA number at different stages of its deployment across different layers. Finally, section 6 provides a way forward in terms of principle-based key recommendations for enhancing both foundational and functional data identity systems.

2. Research Methodology

Digital Identification, like Aadhaar, has increasingly become a ubiquitous ID, with about 90% of individuals using it frequently; however, various research studies show that sizable populations still don't have digital ID and digital identification systems cause exclusion. Therefore, to understand the exclusionary concerns with digital identification systems, our study had undertaken a detailed meta-analytic literature review for mapping pain points and attributions which leads to exclusion at different stages within digital identification systems.

3. Foundational and Functional Digital Identity (IDs)

Government issues various IDs to individuals to simplify the process of accessing their rights, services, protections etc. Fundamentally government extends two forms of IDs to individuals, i.e., foundational and functional IDs, which differ based on the target population, size, functions, use cases, technicalities etc., as follows:

- **Foundational Identity:** The foundational ID as a proof of legal identity is issued to a wide population for the identification purpose (answering the question of “Who are we?”) and for carrying out a variety of transactions. Traditionally, the foundational ID comprises your national IDs, population registries etc., like a birth certificate extended to everyone. The issuance of foundational ID as proof of identity defines the basic characteristics of an individual’s identity, such as their name, mobile number, sex, date of birth, religion, income group etc. As basic identification information of the individuals is verified through a foundational ID, it is generally used as a basis for identity verification, like the KYC process and authentication process by both government and private entities for extending services and transactions. However, the trust quotient and the value of the foundational ID as a legitimate identification verification and authentication tool increased in India with its endeavour towards issuing one of its pioneering Digital IDs - Aadhaar to individuals as a unique⁹, verified and duplication-free proof of legal identity.

Aadhaar, as a foundational identifier, has had a generational impact across India’s development cycle while also being a source of inspiration for several other countries in the Global South to undertake identification projects.¹⁰ The Aadhaar follows a centralised model, where we have The Unique Identification Authority of India (UIDAI) as a single authoritative and trusted source which dispatches digital ID. Studies have noted that UIDAI sought to ‘create a platform first to collect identity details of residents, and subsequently perform identity authentication services that the government and commercial service providers can use.’¹¹ The role of Aadhaar in being a government-backed, digital proof of residency is paramount in winning public trust and accountability and, finally, forming the backbone of all identity-based interfaces.

- **Functional Identity:** While foundational identity acts as universal proof of identification of individuals, governments traditionally provide a variety of functional IDs to serve some sector-specific needs and use cases. This involves, for instance, your voter ID cards, ration cards, driving licenses etc. These proof of identities serves the purpose of targeting a specific group of individuals to dispatch welfare, benefits and access to service; however, technically, functional IDs are not considered legal IDs until they are specifically recognised to serve such purpose. While Functional IDs could serve only a small target population, sometimes they can also have broad coverage as their intended service delivery, like social protection, health etc., caters to universal populations etc. One such universal functional ID in India is the ABHA number introduced under ABDM.

⁹Umar Bashir Mir, Arpan K. Kar, Yogesh K. Dwivedi, M.P. Gupta, R.S. Sharma, Realizing digital identity in government: Prioritizing design and implementation objectives for Aadhaar in India, Government Information Quarterly, Volume 37, Issue 2, 2020, 101442, ISSN 0740-624X, <https://doi.org/10.1016/j.giq.2019.101442>

¹⁰Chakravorti, B. (2018, January 23). India’s Aadhaar: A Unique Opportunity for Innovating in Digital Trust, But an Opportunity Easy to Squander. The OECD Forum Network. Retrieved May 15, 2023, from <https://www.oecd-forum.org/posts/29531-india-s-aadhaar-a-unique-opportunity-for-innovating-in-digital-trust-but-an-opportunity-easy-to-squander>

¹¹Aadhaar-from welfare to profit; citing report of Biometrics Standards Committee, Dec 2009

While the SDGs discuss the need for digital identification, technology-driven interventions occupy centre stage in the upcoming years. The COVID-19 pandemic only increased the strain on healthcare services nationwide, which paved the way for the rapid introduction and scaling of Digital Health Initiatives. One such key initiative in India is the ABDM which aims to improve the accessibility to healthcare across the country through digital means. The initiative dates back to the National Health Policy, 2017, which backs one of the key Sustainable Development Goals (SDGs), .i.e, the goal for universal healthcare and digital healthcare interventions. The ABHA number has been introduced as a component of ABDM to ensure continuity of care within healthcare in India. Complementing the creation of longitudinal healthcare records, the ABHA number is meant to provide seamless access to healthcare services nationwide.

In the digital landscape, the foundational and functional ID complement each other. Firstly, the uniqueness of a foundational ID like Aadhaar, which acts as a single source of truth and can't be claimed by individuals multiple times, complements the process of issuing functional IDs and the functional process by reducing deduplication rates, fraud etc. However, there are also studies¹² which show that using Aadhaar as a single source of truth causes exclusionary concerns. Secondly, the coexistence of sector-specific functional IDs and foundational IDs, like Aadhaar, weeds out jurisdictional overlap and creates an environment for complementarianism.

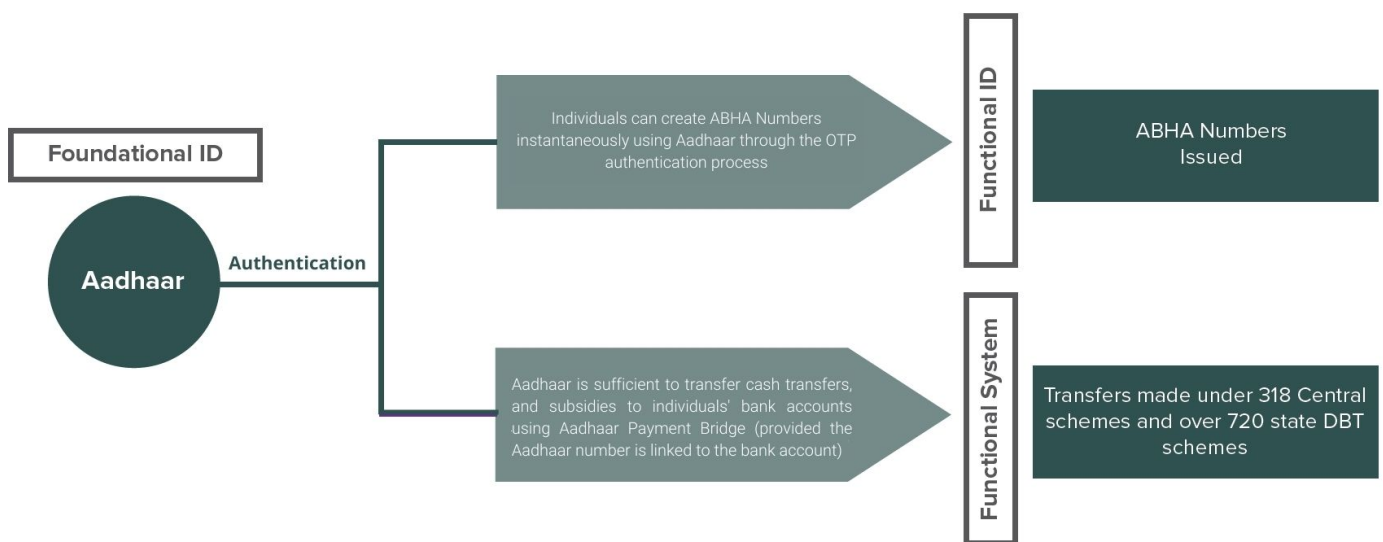


Figure 1: Symbiosis between Identification Systems

¹²Falling through the Cracks: Case Studies in Exclusion from Social Protection - Dvara Research. (n.d.). Dvara Research. Retrieved May 15, 2023, from <https://www.dvara.com/research/social-protection-initiative/falling-through-the-cracks-case-studies-in-exclusion-from-social-protection/>

4. Concerns and Gaps Within India’s Centralised Digital Foundational ID: Aadhaar

The Aadhaar enrollment process involves various stages, which include data capture, validation of data, data storage and transfer, credential management, identification verification and authentication. While various forms of concerns and gaps emerge at different stages of Aadhaar enrollment, however, for tackling the consequence of exclusion, it is important to analyse some of the key stages such as data capture, validation of data, identity verification and authentication. Therefore, in the table below, we map various attributions which led to gaps and concerns across the identified stages of Aadhaar enrollment at the different layers, including technical, governance and community.

At the technical layer, typical issues with basic infrastructure crop in where the availability of essential and quality infrastructure for maximum utilisation of the digital identification system is a concern.¹³ Also, various issues with the quality of data crop in at the technical layer which attributes to exclusions. While Aadhaar is framed using some key principles dictated through legislation, at the governance level, there is less clarity regarding how UIDAI coordinates with other line ministries and state governments. Also, there is less clarity in terms of the approach taken by the UIDAI towards policy making etc. At the community level, there is a lack of clarity in terms of understanding the utility of these digital identification systems and their appropriate use cases.¹⁴ There are also difficulties faced by individuals in navigating and using the system, which attributes towards exclusion at the community.

Table 1: Attributions to Exclusion: Aadhaar

	Stages	Data Capture	Validation of Data	Identity Verification and Authentication
LAYER	Technical Layer	In addition to demographic information, Aadhaar enrollment also captures biometric information such as fingerprints and Iris scan. However, there have been high rates of failures in capturing the finger	The demographic details of Aadhaar, especially the date of birth, which is not concretely verified/validated during enrolment, could cause fault entries into the system. ¹⁵ As data of birth is one of the key elements for targeting	During the COVID-19 pandemic, it was observed that the transaction failure rates, i.e., inability to authenticate the beneficiaries’ biometric details via their Aadhaar number

¹³Singh, J. (2022, April 12). Aadhaar Infrastructure Flaws Detailed in CAG Report on UIDAI Functioning. Gadgets 360. Retrieved May 15, 2023, from <https://www.gadgets360.com/internet/news/aadhaar-card-number-inefficiencies-flaws-security-issues-uidai-cag-report-2882575>

¹⁴Jain, E. (2021, December 16). India’s digital health mission: The growing need to introduce electronic health records. ORF. Retrieved May 15, 2023, from <https://www.orfonline.org/expert-speak/indias-digital-health-mission/>

¹⁵Shekar, K. (2022, September 24). Implications of seeding Aadhaar numbers with electoral rolls. Bar and Bench. Retrieved May 15, 2023, from <https://www.barandbench.com/columns/policy-columns/implications-of-seeding-aadhaar-numbers-with-electoral-roll>

Stages	Data Capture	Validation of Data	Identity Verification and Authentication
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">LAYER</p> <p>Technical Layer</p>	<p>prints of certain groups of individuals like senior citizens above 70 years.¹⁶</p>	<p>old age pensions and children welfare benefits, using Aadhaar details for authentication could cause a fall through the cracks in terms of false negatives and positives.</p>	<p>and bank account¹⁷ increased exponentially due to traffic.¹⁸</p> <p>Digital penetration has picked up pace in India. Still, it has not covered considerable mass, especially the low-income and rural population. Therefore, using the Aadhaar authentication process for dispatching welfare delivery could cause exclusions in places where the internet is still patchy and unavailable. For instance, it was reported that many beneficiaries had to wait for 2 years to claim their maternity benefits because the data entry officer did not process the application of women at the taluk level due to repairs in their computers for months.¹⁹</p>
	<p>Instances have been reported that Aadhaar-based payments have been transferred to the wrong bank accounts instead of those provided by the beneficiaries. For example, Niti Aayog’s report highlighted that 28% of transfers done under the Pradhan Mantri Matru Vandana Yojana using the Aadhaar-based payments system end up in the wrong bank accounts.²⁰</p>		

¹⁶Fatah, T. (2017, December 1). Senior citizens with fading fingerprints get UIDAI relief | Pune News. Times of India. Retrieved May 15, 2023, from <https://timesofindia.indiatimes.com/city/pune/senior-citizens-with-fading-fingerprints-get-uidai-relief/article-show/61877572.cms>

¹⁷Palepu, A. R., Palepu, R., & Punj, V. (2020, May 6). Glitches In Aadhaar Enabled Payment System Amplified As Transactions Surge. BQ Prime. Retrieved May 15, 2023, from <https://www.bqprime.com/business/glitches-in-aadhaar-enabled-payment-system-amplified-as-transactions-surge>; Raghavan, M., & Shah, S. (2020, May 8). Fix the problems in Aadhaar-based cash transactions. Mint. Retrieved May 15, 2023, from <https://www.livemint.com/opinion/columns/fix-the-problems-in-aadhaar-based-cash-transactions-11588930862806.html>

¹⁸Ibid

¹⁹Chandra, J. (2020, February 23). One in three payments for maternity benefit scheme credited to wrong account. The Hindu. Retrieved May 15, 2023, from <https://www.thehindu.com/news/national/one-in-three-payments-for-maternity-benefit-scheme-credited-to-wrong-account/article30891111.ece>

²⁰Ibid

Stages	Data Capture	Validation of Data	Identity Verification and Authentication
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">LAYER</p> <p>Governance Layer</p>	<p>UIDAI is notified as an authority to govern the Aadhaar enrollment and authentication process through constituting policies and directions. However, there needs to be more clarity in terms of how these policies are made, who are the policy actors involved, and how lived experiences of individuals are taken into consideration when drafting these policies.</p>	<p>There is less clarity in terms of course correction, and the lack of cross-checking mechanism to evaluate the integrity and cleanliness of the data increases the chances of false negatives and false positives in identifying individuals.</p>	<p>The involvement of intermediary agencies like Common Service Centres (CSC) and middle-man-like agents within the ecosystem at the authentication level increase the chances of agent fraud, snooping, identity theft, misuse etc., due to poor monitoring systems.</p> <p>There is a lack of coordination between UIDAI and other line authorities and ministries which issue functional IDs using Aadhaar authentication to exchange notes on exclusion concerns.</p> <p>While UIDAI governs the Aadhaar ecosystem, however, state governments increasingly use Aadhaar as a foundational ID for the authentication of state-based welfare schemes. Therefore, there is less clarity in terms of (a) how UIDAI interacts with state governments while policy-making (b) does state governments have institutional and governance capacity to tackle issues related to exclusion.</p> <p>One of the key feedback from communities hints at the misconception with respect to enrollment which implied the threat of benefits being</p>

	Stages	Data Capture	Validation of Data	Identity Verification and Authentication
LAYER	Governance Layer			withheld. Although there is a specific legal framework to mitigate this in the legislation, case law and regulatory practices - the perception of 'mandatory enrolment' remains a significant hurdle to widespread use.
	Community Layer	There is information asymmetry in terms of exemptions, and alternate data capturing mechanisms etc. For instance, biometrics is exempted for very senior citizens; however, such information does not reach the target population.	The system to change demographic data, like the date of birth, on Aadhaar is not straightforward without supporting documents such as a birth certificate, making it difficult for low-income and rural populations.	While both false negatives and positives during Aadhaar authentication could cause an impact, false negatives include excluding eligible individuals from benefits and hurting their social protection and livelihood. Also, the burden of claiming entitlements is placed on the citizens instead of the state. ²¹

²¹Delivery of Social Protection Entitlements in India: Unpacking Exclusion, Grievance Redress, and the Relevance of Citizen-Assist. (2021, April 14). Dvara Research. Retrieved May 15, 2023, from <https://www.dvara.com/research/wp-content/uploads/2021/04/Delivery-of-Social-Protection-Entitlements-in-India-Unpacking-Exclusion-Grievance-Redress-and-the-Relevance-of-Citizen-Assistance-Mechanisms.pdf>.

5. Concerns and Gaps Within India’s Digital Functional ID: ABHA Number

The ABDM aims to improve the accessibility to healthcare across the country. The initiative dates back to the National Health Policy, 2017, where the nexus between the Sustainable Development Goals, the goal for universal healthcare and digital healthcare interventions. While the SDGs discuss the need for digital identification, however, the need for technology-driven interventions occupies centre stage in the upcoming years. The COVID-19 pandemic only increased the strain on healthcare services nationwide, which paved the way for the rapid introduction and scaling of Digital Health Initiatives. The ABHA ID has been introduced to ensure continuity of care within healthcare in India. Complementing the creation of longitudinal healthcare records, the ID is meant to provide seamless access to healthcare services across the country. However, various forms of exclusions may happen at the different stages of ABHA ID enrollment, which keep individuals from accessing some of the novel innovations and components provided by the ABDM ecosystem.

At the technical layer, the lack of utilising many more alternative IDs other than Aadhaar (foundational digital ID) and driving licenses may cause exclusions. At the governance level, while National Health Policy sets the contour for a principle-based approach to be followed across the ecosystem, however lack of legislation brings less accountability and participation of the stakeholders in tackling issues like exclusion. At the community level, there is still a lack of awareness regarding understanding the utility of the ABHA number and how to connect it with the ABHA address subsequently.

Table 2: Attributions to Exclusion: ABHA

	Stages	Data Capture	Validation of Data	Identity Verification and Authentication
LAYER	Technical Layer	<p>Lack of the alternatives in terms of using other proof identities like birth certificate, 10th-grade marks card attested by a panchayat, PAN card, voter ID etc. could cause exclusion.</p> <p>Firstly, the failure of Aadhaar validation for various technical reasons would cause delays and exclude individuals from getting the ABHA number.</p> <p>Secondly, using a driving license as an alternative might also cause exclusion as coverage of a driving license is not universal and targets only a niche population who knows how to drive.</p>		<p>While authentication through foundational ID for issuance of the functional ID, like the ABHA number does weed out the de-duplication. However, associating a universal foundational ID like Aadhaar with fewer alternatives may cause systemic effects.²² For instance, incorrect mobile number entry within the Aadhaar roll will hinder individuals</p>

²²S. Chatterjee, K. Venkatesh, E. Vaidya (2022) India’s Digital Health Dreams: Getting it Right, The Dialogue

Stages	Data Capture	Validation of Data	Identity Verification and Authentication
LAYER			from getting ABHA numbers as individuals might not be receiving OTP for authentication.
	<p>Using subordinate legislation, National Health Authority and ABDM were formed. While the government had expressed interest towards passing legislation to buttress these systems however they never saw the light. As a non-statutory body performing a crucial public function, it is important to understand the scope of its mandate and accountability towards tackling issues like exclusion tackled appropriately.</p> <p>In the absence of an overarching regulatory framework, implementation details and infrastructure act as regulation, substituting for or displacing law.²³ Implementation details, then, can 'create dependencies, engender cooperation, or structure conflict.'²⁴</p>		
	<p>There is a lack of awareness among individuals on the existence of the ABHA ID and its utility.</p>	<p>The 2-step data validation process, when individuals use a driving license to request an ABHA number, may disincentivise them and cause exclusion. Because to get their identity verified, the individuals must carry their driving license to the ABDM participating facility.</p>	<p>ABHA number as a digital foundation ID would be used by the health facilities for retrieving electronic health records of individuals; however, it is important to take cognisance that many hospitals in remote locations are not digitalised or digitally savvy. Therefore this may cause exclusion at the application level.</p>

²³See Benedict Kingsbury, Infrastructure and InfraReg: on rousing the international law 'Wizards of Is', 8 Cambridge International Law Journal 171-186 (2019).

²⁴Ibid

6. Way Forward

Collectively, there is a need to shift from metrics such as the number of ID cards issued to other metrics which revolutionise the way the success of the digital identity ecosystem is measured using various dependent and independent factors. In addition to this, as we move forward, we must have an ecosystem-level intervention where we approach some of the concerns discussed above systematically by adopting some of the key recommendations discussed below.

Table 3: Mapping Recommendation Across Layers

Stages	Digital Centralised ID Foundational ID: Aadhaar	Digital Functional ID: ABHA Number
<div style="writing-mode: vertical-rl; transform: rotate(180deg);">LAYER</div> <p>Technical Layer</p>	<ul style="list-style-type: none"> ■ The demographic data captured by the Aadhaar has to be flexible, reflecting lived experience of the individuals. For instance, if a senior citizen cannot provide biometric data, it is essential to have an alternative for them. ■ A concrete data validation mechanism which accurately captures and validates the demographic details of the individuals must be constituted. Inference from individual feedback and period audits must feed into designing validation mechanisms to reduce exclusion caused due to data validation errors. ■ Technical and infrastructural capacity to handle the surge in the authentication request must be appropriately handled by taking proactive measures like having buffer capacity. Besides, the increase in use cases for Aadhaar must be directly proportional to its technical and infrastructural capacity to handle the same. To operationalise, traffic estimation has to be done for every use case. For instance, if Aadhaar is used for transferring cash under Pradhan Mantri Garib Kalyan Yojana, the estimated 	<ul style="list-style-type: none"> ■ Application for an ABHA must also accept a wide-ranging set of documents, such as birth certificate, 10th-grade marks card attested by a panchayat, PAN card, voter ID etc., in order to be more inclusive.²⁵ ■ It is important to have civil society participation in the design and rollout of the system at different stages using various participatory approaches like consultations, Focus-group discussions etc.

²⁵S. Chatterjee, K. Venkatesh, E. Vaidya (2022) India’s Digital Health Dreams: Getting it Right, The Dialogue

Stages	Digital Centralised ID Foundational ID: Aadhaar	Digital Functional ID: ABHA Number
LAYER	<p>traffic must be anticipated to enhance technical capacity proactively.</p> <ul style="list-style-type: none"> ■ While Aadhaar can act as a single source of truth, it is also essential to have a mechanism to cross-check and evaluate the integrity, and cleanliness of the data, as state and non-state actors would use this for real-life interventions. For instance, mechanising periodic audits for both data collection methods and data could help cross-check. Besides, comparing the data with an alternative database can also help determine gaps and mistakes in data points within the Aadhaar ecosystem. ■ Catering to the status quo of digital penetration in India, it is essential to have innovations which enhance non-digital authentication capabilities. 	
	<p>Governance Layer</p> <ul style="list-style-type: none"> ■ There must be an administrative guideline that would provide overarching accountability and oversight, streamlining UIDAI’s policymaking procedures. ■ Some critical principles like simplicity²⁶, transparency²⁷, accountability²⁸, non-exclusion²⁹, coordination³⁰, optimality³¹, and concurrence with human rights³² is encoded in administrative guidelines so that they are binding upon UIDAI while making policy. 	<ul style="list-style-type: none"> ■ There is a need for a regulatory framework promoting some of the best practices governing technological interventions to gain individuals’ trust. ■ ADHM must establish a dispute resolution mechanism for individuals and stakeholders to raise their issues with the ecosystem and architecture. Besides, this mechanism must culminate into a feedback loop for the framework to evolve.³³

²⁶To make the laws accessible to the layman and enhance the ease of using Aadhaar for authentication.

²⁷The rule-making process has to be transparent, and information on the process must be made public.

²⁸The rule-making process has to be made accountable to external oversight such that the process is followed diligently

²⁹This principle should guide the rule-making process such that rules don’t create any exclusion as one of the unintended consequences.

³⁰Amongst government, regulatory bodies and policymakers, and between the different ministries which use Aadhaar.

³¹The policy has to be proportional following purpose limitation, and calibrated optimally to the nature of the issue to be tackled.

³²This principle should guide the rulemaking process such that the provision of the rules doesn’t violate universal human rights and values like privacy etc

³³Shekar, K. (2022, April). Building Effective and Harmonised Data Protection Authority: Strategies for Structural Design and Implementation. The Dialogue. <https://thediologue.co/wp-content/uploads/2022/04/Building-Effective-and-Harmonised-Data-Protection-Authority-Strategies-for-Structural-Design-and-Implementation.pdf>

Stages	Digital Centralised ID Foundational ID: Aadhaar	Digital Functional ID: ABHA Number
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">LAYER</p>	<ul style="list-style-type: none"> ■ Inter-regulatory coordination must be established through MoUs between UIDAI and other line authorities and ministries who use Aadhaar to issue functional IDs for exchanging notes on exclusion. ■ The role of State Governments must be discussed explicitly in terms of using Aadhaar as a foundational ID for state welfare schemes. ■ Misconceptions about Aadhaar being a mandatory foundational ID must be clarified through periodic notifications such that individuals can appropriately exercise their right to choose. 	<ul style="list-style-type: none"> ■ In many cases, navigating the grievance management system for both individuals and entities is arduous, making it difficult to reach the designated portal. Therefore, we suggest incorporating an Interactive Voice Response (IVR) wing as part of the ABDM system. This automated voice response system (through call) should navigate individuals (or entities) to reach the appropriate grievance portal, i.e., service providers' grievance redressal mechanism or dispute resolution wing of ABDM.
	<p>Impact assessments that assess social justice repercussions (e.g. human rights impact surveys) must be incorporated within the implementation framework of both Aadhaar and ABHA Numbers.</p>	
<p>Community Layer</p>	<ul style="list-style-type: none"> ■ There must be provisions for the self-identification of excluded communities through a number of interoperable features on Aadhaar - it may mean including details of their specific biometric needs or overrides or for others it may mean recognition for authorised caregivers to operate their identity on their behalf for a limited set of purposes. ■ Local feedback loops on the process of both authentication and enrollment could prove to be helpful. While it can be argued that there is little utility in human feedback loops in authentication (increasing human touch points increases the probability of corruption, amongst other things), feedback loops that are rooted in the community/social workers/ local bodies/ caregivers can be helpful in terms of understanding challenges, providing nudges through community networks, and equipping communities to advocate for the adoption of 	<ul style="list-style-type: none"> ■ In cases of no digital access, use generated QR Codes on physical slips/ identity cards as a paper trail for the use of data systems at health facilities must be allowed. ■ Allow citizens to use physical copies of the ABHA number anytime. Moving from digital-first to digital-physical interoperability with QR Codes, Reference IDs, and other means of linking is crucial. ■ The Information Education and Communication department under the NHA must work with local communities, NGOs and civil society to innovate IEC campaigns and reach a wider audience. ■ When individuals use identities other than Aadhaar, the data validation process must be straightforward so that individuals are not indirectly nudged towards using Aadhaar to request. ABHA Number.

	Stages	Digital Centralised ID Foundational ID: Aadhaar	Digital Functional ID: ABHA Number
LAYER		<p>Aadhaar for disabled communities.</p> <ul style="list-style-type: none"> ■ The system of the changing information on the Aadhaar database must be straightforward so individuals can seamlessly mend their details. ■ The burden of proof to claim welfare entitlement is placed on the state and less on the individuals. 	

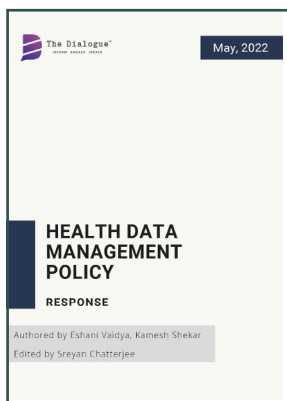
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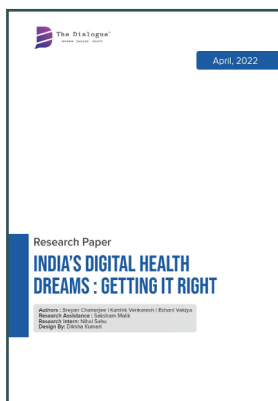
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Kamesh Shekar leads the Privacy and Data Governance vertical at the Dialogue. He was fellow at Internet Society. His area of research covers informational privacy, surveillance technology, intermediary liability, safe harbour, issue of mis/disinformation on social media, AI governance etc. Prior to this, Kamesh has worked as a communication associate at Dvara Research. Kamesh holds a PGP in Public Policy from Takshashila Institution and holds an MA in media and cultural studies and a BA in social sciences from the Tata Institute of Social Sciences.

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