Factors Affecting Acceptability of Ayushman Bharat Health Account (ABHA) Digital Health ID: A Multicentre Study

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Abstract

Problem: Causes of refusal from the community for the Government of India to create unique health IDs, Ayushman Bharat Health Account Numbers (ABHA) ID of every citizen using digital tools needs attention to improve acceptability in the community. Approach: The Government of India has created an ABHA identity number. It will ensure intersectoral coordination among the health ecosystem of the country. Since we all avail the facility, services and interact with the health infrastructure throughout our lives, the government has envisaged that every citizen should have an ABHA ID for that. However, there seems to be reluctance/lethargy among the population. This study surveyed 6898 families across six states of India to increase the penetration of ABHA registration and the problems the population is facing in getting ABHA ID. Ground situations: Among 6898 family heads interviewed from November 2022 to January 2023, 812 (11.7%) households (HH) had accepted ABHA ID, and 6086 (88.3%) HH did not accept citing various reasons. Reasons recorded in layman/local language as narrated in open text format are categorized into 12 types for quantitative analysis. Among the most common reason (34.9%) for non-acceptability were the Aadhaar available yet not connected to the mobile number which is mandatory for ABHA ID. 36.7% were not aware or interested to know for perceived benefits, some other reasons are the non-availability of mobile phones (8.2%) and non-availability of internet/electricity/lack of Aadhaar, technical knowledge to use mobile/non-availability of Android features in phone/indifference/no felt need of ABHA ID. Relevant changes: We dropped the idea of using ABHA ID, and study-specific IDs made online/offline both ways were used for baseline situation survey in our ongoing study. Lessons learned: Considering the refusal, the need for midcourse correction in ABHA scheme was identified. In place of a 100% digital, both offline-online (hybrid) provisions may increase the number of ABHA ID holders.

Keyword: ABHA ID, digital health, ICMR, universal health coverage, communicated responses

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INTRODUCTION

Phenomenon reported in this study is about the ground situation of recently launched (September 2021) the Ayushaman Bharat Digital Health Mission (ABDM) and subsequent Ayushan Bharat Health Account (ABHA identification number), where Government of India is providing 14 digits unique health ID to increase outreach of health services like Universal Health Coverage (UHC), health status updation and health services exchange using this digital tools. Government initiative is meant to get real time health data from community/community generated health records and envisages it be used for better health services to each citizen [1, 2]. The aim is to provide unified platform of health professional/infrastructure and community for health records/services/education/health information sharing in a hassle-free manner from users to service providers in bidirectional manner. ABHA ID platform provides consultation with verified healthcare professionals and service provider and establish simple exchange between health service providers and users so that universal health coverage (UHC) is possible. At Indian Council of Medical Research (ICMR) this concept in the form of Health Account Scheme was started in the year 2008 and field situation testing for acceptability and logistics requirement was done during 2012–19 so that government may initiate the implementation and formulate required policy [3].

Hence its field acceptability, uses, feasibility of community generated health data, data sharing platform for monthly health status through community participation is being done in our ongoing study. Though government has done various reforms in the form of National Health Policy-2017 and ABDM-2021, however reforms always go hand in hand with inputs from research and evidence-based policy implementation [4]. Recent reforms of Health and wellness centres, field staff equipped with digital tools are providing quality healthcare with accessible and affordable technologies [3], however reforming is the ever-ongoing process with constant update as per changing situations and prevailing ground conditions. Despite ABHA number's rising subscribers (38,05,78,430) [5], sharing of health records by 26,36,70,690 ABHA holders (shown at dashboard) [5], this needs ground reality check. It has still reached one fifth of population after 2 years of launch. It is still far from UHC goal of reaching out to 1.2 billion. Though people's self-reported health data through unique health IDs was well accepted in field testing done by ICMR [6], however logistic issues in that study too found hybrid solutions working well [6]. Our team is constantly working on tracking feedback from community about acceptance, outreach of benefits by health care reforms and action required on expressed health needs of the community. This required mid-course corrections for ABHA ID for its improved acceptability/health data keeping/self-health data sharing have come up incidentally during our ongoing baseline survey in community to explore door-step delivery of primary health care services with better community participation and utilization of health services using unique health IDs. To best of our knowledge this is the first ground situation reporting from field, evaluating ABHA ID, public views and feedback on acceptability issues as well as awareness of ABHA ID. Implementation of very useful ABHA ID scheme which has provision to ensure community participation in health data generation and universal health coverage may get good acceptance adopting mid-course corrections if it becomes more user-friendly and considers ground situation shared herein this report [7, 8].

Six big metro cities across India participated to represent north (Guwahati and Kashmir) south (Chennai) central (Bhopal), east (Varanasi and Muzaffarpur), covered about a1000 Households (HH) from each city to cover target population size 30000 considering five persons per HH. Incidentally, to our surprise no person having ABHA ID found at any of the study sites. Hence a change in the strategy was done by offering help to generate ABHA ID using government's existing portal so the same may be used as their unique ID for further study of this cohort [9]. ABHA ID requires Aadhaar ID (unique identity for Indian citizens) or driving license number which should be linked to Android or smart phone platform with internet connectivity [7]. Despite technical help offered, non-acceptability was continuing and hence phenomenology and narrative/responses given by community for not getting ABHA ID were recorded in open ended text format. With such efforts only a small percentage agreed to get ABHA ID. The revealed responses from people in our study are coded/categorized in to 12 categories on the basis of commonality of expression and are reported in this study [10].

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METHOD

Ours is a mixed method study exploring acceptability of intervention package for connecting government health facilities to deliver primary health care at door-step of people, ensuring simultaneous regular health data flow and health service utilization by participating community. However, this data is reported from cross-section survey done for baseline situation profiling.

Government of India's ongoing policy to give unique health IDs (ABHA ID) to all citizens, ABHA ID number is used as unique identifier of participants to maintain confidentiality for participant's demographic/personal identification during data analysis and research publication. Study sites were selected on the basis to represent population in probability proportion manner and logistic feasibility. The cross-section survey was done for baseline situation analysis in the beginning in the study blocks of 500 houses chosen after multistage stratified randomized sampling for representation of rural and urban area, covering middle and low middle income families. Data collection tool of study comprised of open and closed end questionnaire required to be changed when the closed end variable to fill ABHA ID needed to modify to add open text responses after 100 responses collected showed non availability of ABHA ID and refusal to get it. So, provision was done to get open ended responses from community on the cause of non-availability/acceptability of ABHA ID.

In the beginning of baseline survey, our study staff started generating ABHA ID for those were not having it as majority participants were found not having ABHA ID. It is an easy two-step process to create ABHA ID online with use of Android phone with internet and Aadhaar ID linked to phone. Despite easy process, our study staff came across technical and social gaps and despite efforts and help offered to get ABHA ID, majority denied getting it. The reason/responses cited were categorized/coded on the basis of similarity in content so that qualitative inputs are analyzed quantitatively. A total of 6898 HH heads covering target 30000 population as their family members provided response from Varanasi (n=897), Muzaffarpur (n=1006), Guwahati (n=1194), Chennai (n=1489), Srinagar (n=1035), Bhopal (n=1277) during in depth interview after informed written consent (Table 1). Participants were described questions in local language (Hindi, Kashmiri, Tamil Assamese, Urdu, and English) by locally hired scientific staff under the study. The staff documented responses in open text form in English in study specific online tool developed at ICMR. Responses were coded for quantitative expression, validated and analyzed using SPSS version 19 applying appropriate statistical tools.

Researcher's characteristics and reflexivity that may influence the response including personal attributes/qualification/experience relationship with participants was considered and ensured not affecting while eliciting/coding responses. Interview conducted in local language using local dialect by locally hired persons following local traditions. Interaction was kept informal, and all kinds of responses were recorded in open text format without any limit of words and coded for its transferability/analysis to report these responses. The purpose of reporting is contextual factors playing important role in implementation of ongoing National Policy. Such documentation of field situation is part of any implementation research and is approved by Instructional ethical committees of respective sites. Data collection period is from November 2022 to February 2023 which is mostly winter time when people are available for talk during day time.

Validated guidelines are followed for member checking, audit trail, triangulation of data, analysis, and reporting [11]. The 12 categories (codes details in Tables 2 and 3) made to code responses are found to fit in to all type responses given by family heads. Two independent study team members coded the responses and the 3rd member checked and validated the agreement between two coding. It was observed that 12 categories fitting well (90% agreement among all three validators) to cover all the responses.

RESULTS

Heads of 6898 families from six cities communicated responses in local language for better understanding and local bilingual study staff translated them in English. Enrollment status from study sites and demographic profile of participating 6898 heads of the family are given in Table 1.

Table 1. Demographic profile of the 6898 household heads responding for ABHA ID.

Demographic details and ABHA ID-related responses from study participants	N	%
Name of study site		
Srinagar	1035	15.0
Guwahati	1194	17.3
Bhopal	1277	18.5
Varanasi	897	13.0
Muzaffarpur	1006	14.6
Chennai	1489	21.6
Total	6898	100.0
Language of interview		
Assamese	1101	16.0
English	125	1.8
Gujrati	1	.0
Hindi	3151	45.7
Kashmiri	588	8.5
Other/local	2	.0
Tamil	1487	21.6
Urdu	443	6.4
Total	6898	100.0
Age category (years)		
18–25	770	11.2
26–60	5441	78.9
61–90	687	10.0
Total	6898	100.0
Education		
10th pass	834	12.1
12th pass	622	9.0
8th pass	999	14.5
Graduate	400	5.8
Illiterate	2471	35.8
Less than 8th Pass	1478	21.4
Postgraduate/Professional degree	94	1.4
Total	6898	100.0
Aware of government scheme of ABHA-creating unique health ID		
No	5875	85.2
Yes	1023	14.8
Total	6898	100.0
Have any unique health ID number		
No	6148	89.1
Yes	750	10.9
Total	6898	100.0
Ready having ABHA number		
No	6059	87.8
Yes	839	12.2
Total	6898	100.0
Aware of any of health scheme of government		
No	2909	42.2
Yes	3989	57.8
Total	6898	100.0
Interviewer's opinion on responders' attitude		
Adequate knowledge of health ID	14	.2
Low knowledge about health ID	152	2.2
Ready to listen about ABHA ID	6686	96.9
Non-cooperative, not ready to listen	46	.7
Total	6898	100.0

Codes/categories made on the basis of common inputs in qualitative form for reason not accepting ABHA ID: (1) mobile phone not available, (2) mobile available but internet is not available, (3) internet available yet not able to use; do not know how to use, (4) Aadhaar is not available which is must for ABHA number, (5) Aadhaar is available yet not connected to mobile number, (6) do not find any use of getting ABHA number, (7) not willing to get ABHA number; no specific cause, (8) lack of help who can help generate ABHA number, (9) electricity/internet is issue, (10) may get ABHA number in future if any use is there, (11) will opt for ABHA if any service facility is assured, (12) not aware of ABHA number- not interested to get it.

ABHA ID could not be made for 6086 out of 6898 family heads interviewed. Only 812 HH became ABHA ID holder in this survey. Majority population (48.5%) was not aware of ABHA ID scheme. Next common reason was their Aadhaar cards/license were not linked to phone (34.9%) and could not get ABHA ID due to this technical issue. Despite study staff available, willing to help them generating ABHA ID, it could not be generated as technical knowledge to use it, perceived benefits and apathy was there.

First reason is the major reason at Chennai site for refusal of ABHA, while reason 12 predominates at north Indian sites (Muzaffarpur, Varanasi). In Bhopal and Assam sites, first and 12th reason was predominating. At Kashmir site, lack of willingness was the major reason in rural sites while technical problems at urban sites.

Table 2. Reasons for not opting for ABHA ID -6898 responders from 6 sites in India.

Numeric codes given for reasons of not having ABHA ID	Reason for not having ABHA number	n	%
1.	Mobile phone not available	566	8.2
2.	Mobile available but internet is not available	342	5.0
3.	Internet available yet not able to use; do not know how to use	16	.2
4.	Aadhaar is not available which is must for ABHA number	119	1.7
5.	Aadhaar is available, not connected to mobile number	2410	34.9
6.	Do not find any use of getting ABHA number	10	.1
7.	Not willing to get ABHA number; no specific cause	75	1.1
8.	Lack of help who can help generate ABHA number	4	.1
9.	Electricity/internet is issue	3	.0
10 and 11.	May consider getting ABHA ID in the future if any use is observed	10	.2
12.	Not aware of ABHA number; not interested to get it	3343	48.5
	Total	6898	100.0

Table 3. Reason for not having ABHA ID number: 6 Sites combined.

Code 1 to 12	Srinagar, Kashmir	Guwahati, Assam	Bhopal, MP	Varanasi, UP	Muzaffarpur, Bihar	Chennai, TN	Total
1	35, 6.2%	178, 31%	191, 33%	1, 0.2%	161, 28.4%	0	566
2	0	45, 13.2%	23, 6.7%	0	273, 79.8%	1, 0.3%	342
3	0	8, 50.0%	4, 25.0%	0	0	4, 25.0%	16
4	21, 17.6%	78, 65.5%	16, 13.4%	0	0	4, 3.4%	119
5	179, 7.4%	217, 9.0%	639, 26.5%	5, 0.2%	13, 0.5%	1357, 56.3%	2410
6	0	2, 20.0%	8, 80.0%	0	0	0	10
7	0	25, 33.3%	1, 1.3%	0	0	49, 65.3%	75
8	0	0	2, 50.0%	2, 50.0%	0	0	4
9	0	3, 100.0%	0	0	0	0	3
10	0	0	8, 100.0%	0	0	0	8
11	1, 50.0%	0	0	1, 50.0%	0	0	2
12	703, 27.8%	53, 2.1%	305, 12.1%	879, 34.7%	548, 21.7%	43, 1.7%	2531
Total	939	609	1197	888	995	1458	6086
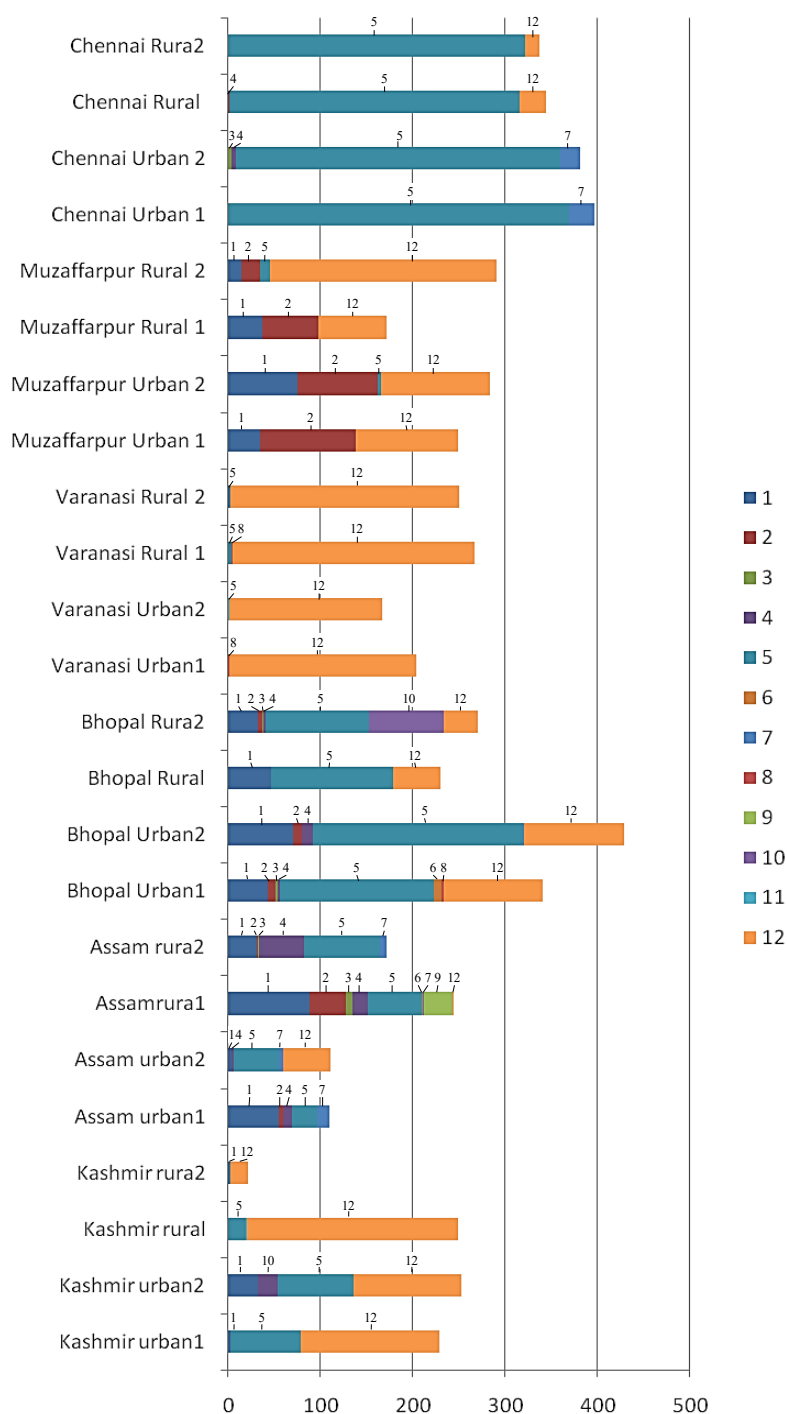
Codes for reason (1 to 12) mentioned in Table 3.
Figure 1. Rural-urban differences for responses related to ABHA ID acceptability.

Highest number of non-availabilities of mobile phones was reported in Assam and Bhopal sites (31.33%). Internet availability was issue at Bihar site, Aadhaar number not available (65.5%) and if available, not linked to mobile number (was major technical glitch at Assam (9%), Bhopal (26.5%) and Chennai (56.3%) sites. Not willing to get ABHA ID without assigning any reason was major response. Reluctance observed among the community at all sites: Srinagar: 27.8%, Guwahati: 2.1%, Bhopal: 12.1%, Varanasi: 34.7%, Muzaffarpur: 21.7%, and Chennai: 1.7% (Figure 1).

Figure 1 shows rural-urban differences of responses/reasons for not accepting ABHA ID.

Regional, rural-urban disparity among the reasons cited for refusal to get ABHA number is evident as south (Chennai) rural site had maximum reason in category of 5, where Aadhaar was not found linked to mobile, while in rural North India region, people were not aware of scheme and were not willing to get even after information given to them.

DISCUSSION

In the year 1990, 0% population had Mobile connectivity and access to internet in India and 2.4% had access in the year 2005, it has reached to 43% in 2022, now India is at rank of 63 out of 120 countries for internet availability to its population [12]. After COVID-19 digital tools of health care became household necessity in India in the form online consulting with doctor, ordering medicines, health education, online keeping and sharing health records. Even research data generation became common online tools [13]. With increasing number of internet users, the number of households is estimated to reach 244.08 million households in India and therefore expecting a new peak by 2028 [14, 15].

Despite revolutionary increase in availability of internet, Android, and iPhones, it is still far away from reaching 100% population which have logistics/knowledge/availability of digital tools and literacy to use these tools. Hence digital tools require complimenting with offline tools (hybrid solutions) for implementing UHC [16]. Pai *et al.* demonstrated that lack of awareness and accessibility, unwillingness to use the technology, complex healthcare needs, application infrastructure/policies and a dearth of training and support were barriers to successful implementation of the useful digital health tools for community participation [16].

Mobile phone availability was 88% in our study done during the year 2015 [17]. This fresh data collected in ongoing study during November 2022–February 2023 shows about 90% HH having mobile phones. Still, gaps emerged when phone was required having features like internet connection, Android, Aadhaar number linked to phone [18]. Overall response in our survey showed that the community was reluctant/not open to the idea of getting one more identification number that too requires Android phone, internet, skill to use, Aadhaar number linked to phone. Apart from this technical gap, knowledge, and perception about the utility of ABHA ID came up as barrier.

Though government has increased availability of health and wellness centers equipped with online digital health tools, internet and computers are available for online consultations. Digitally equipped manpower is available to help, still it seems far away fulfilling requirements of community. Hybrid solutions are required in this scenario. Both online and offline modes may be provided to community to increase outreach of ABHA ID. Only online ABHA ID for interaction and health care use seems far away from UHC in current situation at ground level. Feasibility and high acceptability of hybrid solutions are already field tested under ICMR study [19]. Integration/hybrid solutions/reforms were found essential and applied for UHC [19]. Government of India is now empowering National Health Authority by implementing incentive-based approach to increase ABHA ID holders. Rs. 10 incentives are being granted to field worker/ASHA (Accredited Social Health Activist) for adding one ABHA holder. The acceptability and ABHA holders may increase by such incentive-based approach. However technical gaps may still make it one time activity for just increasing ABHA holders. The need is there to ensure that it does not become one time activity, but becomes useful for seeking regular health services, communications, and sharing health data. If that is ensured, ABHA ID can become game changer for door-step delivery of primary health care and UHC.

Government is promoting ABHA ID linked services and benefits in the form of online appointment and consultation in hospitals, shortening time in treatment, users can share their health records online. Such incentives and promotional advocacy linking services and incentives are envisaged to yield increased number of ABHA holder [20]. However, among 26 crores of current ABHA holders only 10 lakhs are shown availing services using ABHA, so it has scope of further improvement especially for elders and remotely situated populations.

Though trustworthiness of our findings is absolute as it is coming directly from the consumer's mouth, yet limitation of this data analysis is also there as comparison in terms of education occupation, socioeconomic status has not been attempted in this analysis. However, such details could not have added to main cause to report findings.

This ground situation report may pave ways for mid-course corrections. Some of the solutions like mandatory clause of linking Aadhaar with phone number may be softened by allowing hybrid solutions, providing hand holding of community by skilled/trained manpower delivering primary health care at the door step of ABHA holders to improve acceptability.

CONCLUSION

Major factors affecting acceptability that emerged in this paper are mandatory Adhaar, mobile with Android technology, awareness, felt need perceived benefits of getting ABHA ID. There are genuine reasons why people are hesitant to accept ABHA ID. A few reasons can be addressed by counseling and adding services for their health needs. Reasons related to infrastructure and technical needs can be corrected by adding the infrastructure required for ABHA ID. Adopting locally/ culturally appropriate measures with considerable mid-course corrections can reduce implementation gaps. Hybrid solutions by opening ABHA ID online as well as offline may increase outreach. However, such strategies suggested for midcourse correction will require further field validation studies. Improved compliance of people to accept ABHA ID and using it regularly to update their health status as well to avail benefits of various health schemes/ services will yield better health of people. Despite the limitations of the study design, this report provides an understanding of people's perceptions and factors affecting the implementation of a very useful government scheme.

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