Role of NDHM In Ayushman Bharat Digital Mission for Achieving Healthcare Access and Security in India

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Abstract

The National Digital Health Mission (NDHM) within the Ayushman Bharat Digital Mission in fortifying public health security in India. Through an analysis of the mission's implementation and impact, it investigates how NDHM facilitates enhanced healthcare access and security. Leveraging digital technologies, NDHM transforms healthcare delivery, enabling efficient data management, interoperability, and patient-centric services. By ensuring secure and accessible health information exchange, it strengthens the foundation for comprehensive healthcare coverage under Ayushman Bharat. In this background, the present paper emphasizes the critical significance of NDHM in advancing public health security and fostering inclusive healthcare systems in India.

Key words: Health care, digitalization, Ayushman Bharat,

1.Introduction:

In recent years, India has witnessed significant strides in healthcare accessibility and digitalization, propelled by initiatives such as the National Digital Health Mission and Ayushman Bharat Digital Mission. These endeavors represent ambitious attempts to revolutionize the healthcare landscape, aiming to ensure equitable access to quality healthcare services while leveraging digital technologies to enhance efficiency and security. Central to these efforts is the imperative to bolster public health security, safeguarding the health and well-being of the nation's populace.

The National Digital Health Mission stands as a cornerstone of India's healthcare transformation, envisioning a comprehensive digital ecosystem that integrates health records, facilitates telemedicine services, and empowers individuals with greater control over their health data. Launched in 2020, NDHM embodies the government's commitment to harnessing technology for the betterment of public health, fostering interoperability among diverse healthcare stakeholders and promoting data-driven decision-making.

Concurrently, Ayushman Bharat Digital Mission endeavors to augment the reach and effectiveness of Ayushman Bharat, the

world's largest government-funded healthcare scheme. By leveraging digital infrastructure and innovative solutions, the mission seeks to streamline processes, minimize administrative burden, and enhance transparency within the healthcare system. At its core, Ayushman Bharat Digital Mission aims to bridge gaps in healthcare access, particularly among vulnerable and underserved populations, while fortifying the resilience of India's healthcare infrastructure against emerging challenges.

2. Process Flow for Transaction Management System
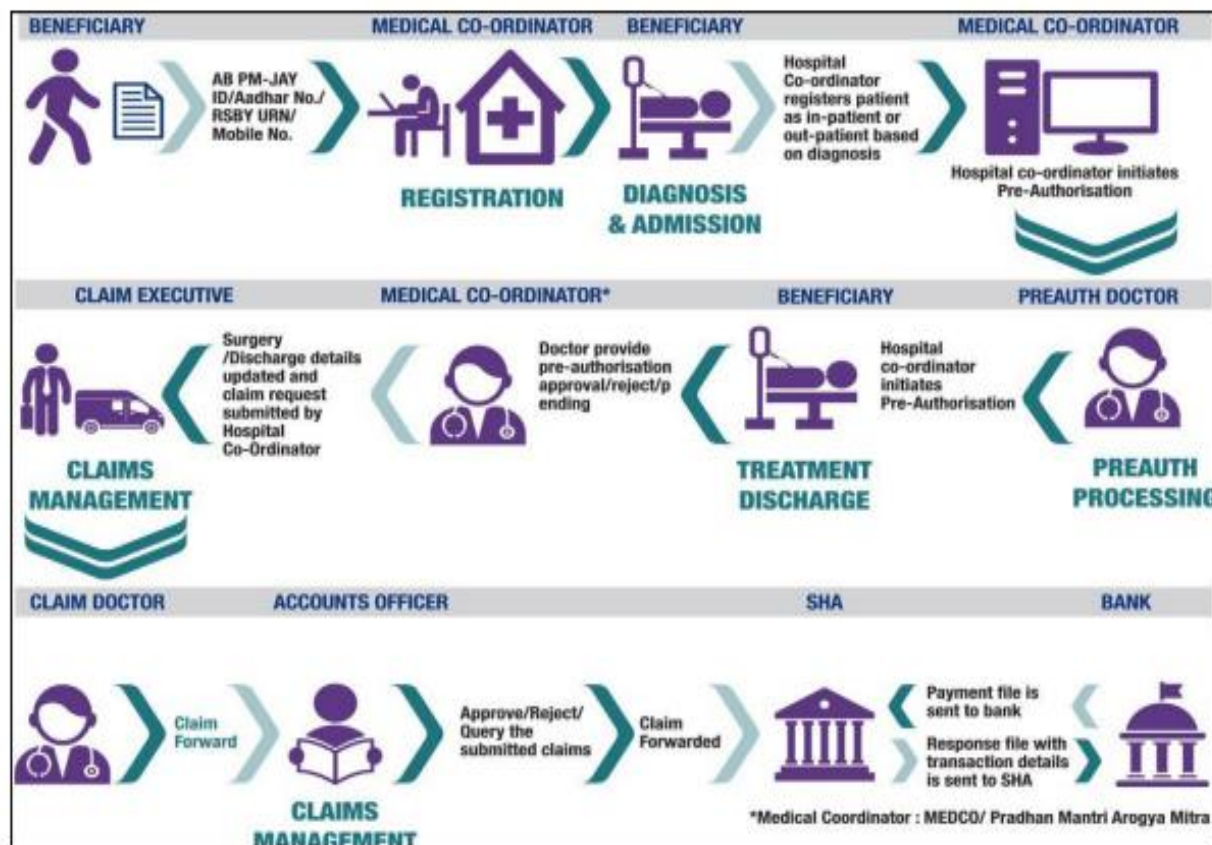
Source:https://cag.gov.in/uploads/download_audit_report/

The Transaction Management System (TMS) is a digital tool allowing registered hospitals to handle transactions for PMJAY beneficiaries seamlessly. However, in six states referred to as Brownfield States, like Andhra Pradesh, Arunachal Pradesh, Rajasthan, Karnataka, Maharashtra, and Tamil Nadu, which manage their own schemes, they use their own IT systems. These states later integrate their claims data into TMS through an API. According to NHA, as of November 2022, 3.57 crore claims worth Rs. 42,433.57 crore were settled, with Rs. 22,619.88 crore (53.30%) coming from Brownfield States. However, in these cases, PMJAY IDs of beneficiaries weren't always captured, raising concerns about possible overlaps with state-specific schemes.

Table – 1: State/UT-wise Electronic Health Card Program availability Ratios

State/UT	Public	Private	GOI	Total	SECCEligible Beneficiary	Hospital availability Per 1lakh
Andaman&Nicobar Islands	7	0	0	7	80,127	8.7
AndhraPradesh	1239	1225	11	2475	1,99,75,159	12.4
ArunachalPradesh	44	2	16	62	4,26,966	14.5
Assam	162	214	53	429	1,25,08,674	3.4
Bihar	574	381	34	989	5,55,62,406	1.8
Chandigarh	5	26	2	33	3,08,005	10.7
Chhattisgarh	1000	561	49	1610	1,52,74,556	10.5
Dadra & Nagar HaveliandDaman & Diu	7	0	0	7	1,94,505	3.6
Delhi	4	75	30	109	26,04,160	-NA-
Goa	21	15	1	37	1,39,207	26.6
Gujarat	1962	884	18	2864	2,12,84,770	13.5
Haryana	164	524	12	700	73,49,722	9.5
HimachalPradesh	138	122	10	270	11,37,946	23.7
JammuandKashmir	121	96	78	295	31,50,959	9.4
Jharkhand	224	574	54	852	1,39,94,648	6
Karnataka	2916	811	12	3739	1,74,04,802	21.5
Kerala	195	549	5	749	72,88,329	10.3
Lakshadweep	6	0	0	6	6,607	90.8
MadhyaPradesh	449	527	30	1006	3,73,05,019	2.7
Maharashtra	306	787	6	1099	3,60,84,776	3
Manipur	33	22	37	92	14,08,348	6.5
Meghalaya	157	18	8	183	17,75,299	10.3
Mizoram	79	7	10	96	4,57,118	21
Nagaland	103	24	19	146	9,96,085	14.7
Odisha	0	2	26	28	2,44,40,661	-NA-
Puducherry	11	20	1	32	4,13,597	7.7
Punjab	217	685	33	935	70,55,971	13.3
Rajasthan	846	202	46	1094	2,86,95,425	3.8
Sikkim	11	1	5	17	1,71,398	10
TamilNadu	834	956	0	1790	2,88,44,541	6.2

Telangana	385	337	13	735	1,01,32,938	7.3
Tripura	127	3	15	145	20,70,365	7
Uttar Pradesh	1048	2149	66	3263	6,47,03,155	5
Uttarakhand	102	121	21	244	24,63,043	10
WestBengal	1	10	60	71	4,76,77,708	-NA-

Source:NHA'replyinDecember2022

It is obviousfrom the above table that the EHCP (Electronic Health Card Program) availability ratios across different states and union territories in India. EHCP availability is categorized into public, private, and government of India (GOI) sectors, along with the total availability per 1 lakh population. Notably, the availability varies widely across regions, with some areas showing higher ratios compared to others. For instance, Lakshadweep demonstrates the highest availability at 90.8 EHCPs per 1 lakh population, while Bihar has the lowest at 1.8. The data also highlights variations in EHCP distribution between public, private, and GOI sectors, indicating different healthcare infrastructure and resource allocations across regions. This analysis underscores the importance of targeted interventions to improve EHCP availability, particularly in regions with lower ratios, to ensure equitable access to healthcare services across the country

Table – 2: Details of claims settled and claims under process for settlement - as of November 2022   **(Rs.incrore)**

State/UT	ClaimsSettled		UnderprocessforSettlement	
	No.of cases	Amount	No.of cases	Amount
AndamanandNicobar Islands	1,369	3.54	101	0.41
ArunachalPradesh	2,343	3.43	66	0.52
Assam	4,57,895	596.81	37,930	98.96
Bihar	4,16,721	419.66	23,961	39.03
Chandigarh	18,356	10.74	3,372	3.60
Chhattisgarh	24,02,630	2,247.45	5,12,318	609.32
Dadra&NagarHaveliand Daman & Diu	88,972	52.22	497	0.68
Goa	569	1.15	16	0.02
Gujarat	14,12,311	3,507.72	1,18,673	533.79
Haryana	4,99,210	589.24	54,979	79.54
HimachalPradesh	1,16,747	139.41	40,106	52.71
JammuandKashmir	5,19,733	728.89	55,762	118.89
Jharkhand	12,32,790	1,178.03	71,969	226.72
Kerala	35,34,798	2,682.43	8,43,790	985.28
Ladakh	2,795	3.18	892	1.91
Lakshadweep	217	0.66	39	0.06

MadhyaPradesh	16,49,758	2,455.51	3,52,049	638.57
Manipur	68,829	82.79	7,562	9.95
Meghalaya	5,02,692	359.93	13,796	25.68
Mizoram	67,347	67.15	10,658	14.69
Nagaland	29,532	44.70	633	1.44
Puducherry	21,868	10.08	6,517	7.68
Punjab	11,56,514	1,267.20	1,20,901	184.92
Sikkim	7,092	5.33	1,152	1.53
Tripura	1,53,571	106.13	14,399	17.53
UttarPradesh	13,70,739	1,422.56	1,54,143	293.31
Uttarakhand	5,38,121	884.28	10,206	22.59
AndhraPradesh	16,94,533	3,755.83	1,63,473	370.01
Karnataka	27,69,335	4,324.58	8,35,447	652.69
TamilNadu	80,86,471	4,445.42	1,47,696	108.46
Telangana	4,87,487	946.92	75,893	308.63
Maharashtra	26,45,888	5,954.86	1,74,902	454.28
Rajasthan	38,16,961	4,135.74	1,69,024	189.03
GrandTotal	**3,57,74,194**	**42,433.57**	**40,22,922**	**6,052.43**

A close observation of the above table that the claims settled and those under process for settlement across various states and union territories in India. As of the recorded period, a total of 3,57,74,194 claims were settled, amounting to Rs.42,433.57 crore. Additionally, there were 40,22,922 cases under process for settlement, totaling Rs.6,052.43 crore. The data indicates significant healthcare utilization, with states like Tamil Nadu, Maharashtra, and Karnataka reporting high numbers of claims settled. However, some states like Goa and Ladakh show comparatively lower numbers, possibly due to smaller populations or other factors. The figures highlight the importance of efficient claims processing systems to ensure timely reimbursement for healthcare services rendered, ultimately contributing to improved healthcare access and outcomes nationwide.

Table – 3: State/UT-wise and Mode-wiserelease of Grants to States/UTs

(Rs.incrore)

State/UT	Modeof Implementation	2018-19		2019-20		2020-21	
		Imp	Admin	Imp	Admin	Imp	Admin
Andaman &Nicobar Islands	Trust	0.10	0.05	0.00	0.41	0.14	0.13
AndhraPradesh	Trust	174.55	8.30	357.47	16.59	248.99	12.24
Arunachal Pradesh	Trust	2.10	0.20	0.00	0.00	0.00	0.67
Assam	Trust	15.00	6.08	126.03	7.21	11.36	0.75

Bihar	Trust	71.93	16.34	78.07	4.42	0.00	0.00
Chandigarh	Trust	0.50	0.18	3.28	0.53	1.84	0.00
Chhattisgarh	Trust	211.84	5.59	274.78	5.59	112.62	0.00
Dadra and Nagar Haveli	Insurance	3.09	0.16	1.69	0.34	3.17	0.00
DamanandDiu	Insurance	0.96	0.05	0.00	0.00	1.07	0.00
Goa	Trust	0.58	0.06	0.00	0.06	0.00	0.49
Gujarat	Mixed	70.78	6.73	212.33	0.00	90.53	9.31
Haryana	Trust	24.49	2.33	53.51	5.17	68.89	3.04
Himachal Pradesh	Trust	16.56	0.62	19.12	0.00	30.44	2.48
Jammu&Kashmir	Insurance	19.26	1.38	28.88	4.56	22.70	0.00
Jharkhand	Mixed	165.96	4.21	126.50	0.00	100.32	0.00
Karnataka	Trust	150.00	9.31	241.48	12.65	145.72	15.13
Kerala	Trust	25.00	0.00	97.56	0.00	138.11	7.50
Ladakh	Insurance	0.00	0.00	0.00	0.00	1.12	0.50
Lakshadweep	Trust	0.00	0.004	0.00	0.00	0.00	0.00
Madhya Pradesh	Trust	60.00	12.57	118.46	0.00	150.37	14.43
Maharashtra	Mixed	253.77	12.55	241.88	0.00	376.65	0.00
Manipur	Trust	6.56	0.62	14.24	2.87	11.45	0.00
Meghalaya	Insurance	14.78	0.78	18.07	0.00	47.64	1.88
Mizoram	Trust	16.60	0.88	10.36	2.06	14.44	0.54
Nagaland	Insurance	4.20	0.52	9.32	1.57	12.27	0.00
Puducherry	Trust	1.21	0.31	0.00	0.00	1.23	0.00
Punjab	Insurance	0.00	2.24	47.90	7.65	46.85	0.00
Rajasthan	Insurance	0.00	0.00	200.07	0.00	251.71	6.60
Sikkim	Trust	0.94	0.09	0.00	0.09	1.51	0.34

(Note: Imp = Implementation, Admin = Administrative)

The table presents the release of grants to different states and union territories (UTs) categorized by the mode of implementation, namely Trust and Insurance, for the fiscal years 2018-19, 2019-20, and 2020-21. The grants are further divided into implementation and administrative expenses. Across the years and regions, there are variations in the amounts allocated and the modes of implementation chosen.

For instance, some states like Andhra Pradesh and Chhattisgarh predominantly use the Trust mode, while others like Punjab and Rajasthan opt for the Insurance mode. These grants are crucial for the execution of various developmental projects and initiatives within each state or UT, contributing to their socio-economic progress.

Role of National Digital Health Mission in improving the performance of Ayushman Bharat Digital Mission

The National Digital Health Mission (NDHM) and the Ayushman Bharat Digital Mission (ABDM) are both significant initiatives aimed at transforming healthcare delivery in India through digital interventions.

- **Interoperability**: NDHM emphasizes the development of a robust digital health infrastructure, including health registries, electronic health records (EHRs), and telemedicine platforms. By promoting interoperability standards, it enables seamless exchange of health data among various healthcare providers, which can enhance the effectiveness of ABDM by ensuring continuity of care across different healthcare facilities.

- **Unified Health ID**: NDHM introduces the concept of a unique health ID for each individual, which serves as a digital repository of their health records. Integrating this health ID with ABDM can streamline the identification and verification process of beneficiaries, making it easier to enroll eligible individuals under the Ayushman Bharat scheme and facilitate their access to healthcare services.

- **Digital Health Infrastructure**: NDHM's emphasis on building a comprehensive digital health infrastructure, including health information exchanges (HIEs) and telemedicine platforms, can complement ABDM by providing the necessary technological backbone for delivering teleconsultation services, remote monitoring, and e-prescriptions, thereby expanding the reach of Ayushman Bharat's healthcare services to remote and underserved areas.

- **Data Analytics**: NDHM lays the foundation for leveraging health data analytics to derive insights for policy-making, resource allocation, and improving healthcare outcomes. Integrating data analytics capabilities with ABDM can enable better monitoring and evaluation of the program's performance, identification of areas for improvement, and targeted interventions to address healthcare disparities and inefficiencies.

- **Patient Empowerment**: NDHM's focus on empowering individuals to actively manage their health through access to their digital health records and participation in decision-making processes can complement ABDM's objective of enhancing patient-centered care. By promoting health literacy, patient engagement, and shared decision-making, NDHM can contribute to better health outcomes and increased satisfaction among beneficiaries of Ayushman Bharat.

- **Public-Private Partnership**: Both NDHM and ABDM recognize the importance of public-private partnerships (PPPs) in driving innovation and scalability in healthcare delivery. Collaborative efforts between government agencies, healthcare providers, technology companies, and other stakeholders under the umbrella of NDHM can foster synergies with ABDM, leading to more efficient implementation, greater uptake of digital health solutions, and improved outcomes for beneficiaries.

- **Streamlined Service Delivery**: By digitizing healthcare processes and reducing paperwork, NDHM can help streamline service delivery under ABDM, minimizing administrative burden, reducing errors, and accelerating claim processing and reimbursement cycles. This can improve the overall efficiency of Ayushman Bharat's operations and enhance the user experience for both beneficiaries and healthcare providers.

2.Conclusion and A Way Forward: To sum up, the National Digital Health Mission (NDHM) plays a pivotal role in bolstering public health security within India, particularly through its integration with the Ayushman Bharat Digital Mission. By facilitating streamlined access to healthcare services and ensuring the security of health-related data, NDHM significantly contributes to improving healthcare accessibility and safeguarding individuals' medical information. Through these concerted efforts, the nation moves closer to achieving its goals of inclusive and efficient healthcare delivery systems, ultimately enhancing the overall well-being of its citizens

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