Digitalization of Health and Wellness Centers in India Current Status and Way Forward

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Flow of Talk

- Context ABDM
- Digitalization of Health & Wellness Centres
- Experience sharing from Meghalaya
- Digitalization challenges
- Way forward



Digitalization of Health Care – Transforming India's Healthcare Landscape

India – Global Pathfinder in Digital Health

- As per World Economic Forum article¹ released in Jan, 2024 explored how India's digital healthcare initiatives position the country as a leader in health technology.
- The report emphasized the role of public private partnership, the importance of interoperability and the need for robust data governance frameworks.
- India's initiatives like Ayushman Bharat Digital Mission (ABDM) and Digital Health Incentive Scheme (DHIS) can potentially set a global benchmark for digital healthcare transformation.





¹ Available at: https://www.weforum.org/stories





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National Digital Health Blocks

Laid down under National Digital Health Blueprint





Data Hubs - Minimum and Transactional data blocks for successful implementation of other blocks



Unique Health ID Ayushman Bharat Health Account ID (ABHA ID)

Role of ABHA ID

- Launched in 2021 under the Ayushman Bharat Digital Mission (ABDM)
- Aim: It is a unique health ID that helps citizens by providing a seamless digital platform to store and access their health

Simplified Records Management

Connected Healthcare Ecosystem

Secure Data Management

Bridging the Healthcare Gap in Rural India

A Step Towards Universal Healthcare

Promoting Preventive Healthcare Through Digital Insights



ecords.

Applications: Building Blocks

Present Demand Ecosystem is designed for transformation from healthcare to wellness



E-Sanjeevani

Coverage indicators	As of April 2023	E-Sanjeevani		
Providers	2,25,000 Doctors			
Hubs for telemedicine	15000 Hubs	E-Sanjeevani – AB HWC <i>Doctor to Doctor</i> <i>Patient to Doctor</i>		
Health and Wellness Centre delivering services	11,500 Health and Wellness Centers	Coverage of e-sanjeevani e-Sanjeevani OPD 24%		
Daily Online OPD	11,00	e-Sanjeevani - AB HWC 76%		

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Health and Wellness Centre

- The National Health Policy, 2017 recommended strengthening the delivery of Primary Health Care, through establishment of "Health and Wellness Centers" as the platform to deliver Comprehensive Primary Health Care
- In February 2018, the Government of India announced that 1,50,000 Health & Wellness Centres (HWCs) would be created by transforming existing Sub Health Centres and Primary Health Centres to deliver Comprehensive Primary Health Care



HWCs (Ayushman Arogya Mandir-AAM) Present Scenario

S.no	<u>Facility</u>	<u>Numbers</u>
1	Functional Health and Wellness Centers	1,76,647
2	Sub Centers – Health and Wellness Centre	1,28,526
3	PHC – Health and Wellness Centers	24,103
4	Urban PHC – Health and Wellness Centers	5,180



Key Elements of Health and Wellness Centre





Health and Wellness Centre: Expanded Range of Services

- 1. Care in pregnancy and child-birth.
- 2. Neonatal and infant health care services.
- 3. Childhood and adolescent health care services.
- 4. Family planning, Contraceptive services and other Reproductive Health Care services.
- 5. Management of Communicable diseases
- 6. Screening, Prevention, Control and Management of Non-Communicable diseases,



Health and Wellness Centre: Expanded Range of Services

- 7. Care for Common Ophthalmic problems
- 8. Care for ENT problems.
- 9. Basic Oral health care.
- 10. Elderly and Palliative health care services.
- 11. Emergency Medical Services
- 12. Screening and Basic management of Mental health ailments.



Digitalization of Health and Wellness Centre

- **Principle for Digitization:** Facilitate the use of appropriate technology for improving access to health care advice and treatment initiation,
 - enable reporting and recording, eventually progressing to electronic
 - records for individuals and families.



IT Application – Applications Presently Functional at HWCs



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IT Application – Applications Presently Functional at HWCs





Applications in use across the facilities (East Khasi Hills, Meghalaya)

	Portal	Availability (n = 34)	Frequency of Data Entry				Responsibility				
S.no			Real time	Weekly	Fortnightl y	Monthly	No Entry	СНО	ANM	Both	No Responsibility
1	AB-HWC Portal	32	22	9	0	1	0	32	0	0	0
2	RCH Application	31	4	20	0	6	1	0	31	0	0
3	ANMOL	1	0	1	0	0	0	0	1	0	0
4	NCD App	33	1	15	2	14	1	14	2	17	0
5	E-Sanjeevani	32	22	8	0	1	1	30	2	0	0
6	DVDMS	0	0	0	0	0	0	0	0	0	0
7	Nikshay	29	7	5	0	9	8	24	0	0	5
8	HMIS	0	0	0	0	0	0	0	0	0	0

AB – HWC – Ayushman Bharat – Health and Wellness Centre Application, RCH – Reproductive and Child Health Application, ANMOL – ANM Online, NCD – Non Communicable Disease Application, DVDMS – Jan Aushadi Application, HMIS – Health Management Information System Application 30-04-2025



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Use of Applications (Experience from East Khasi Hills, Meghalaya)

Application

- Data of screened patients filled in application either weekly or fortnightly or monthly – not filled in real <u>time</u>
- CHO / ANM were not comfortable while entering data in the application – facing difficulty in updating the latest data entry and went on continuing with last year entry.
- CHO entered data in the NCD application without actually performing the physical examination for Breast, Cervical and oral cancer.

Communication

CHO / ANM / whoever is screening <u>do not provide</u> <u>clear instructions</u> to the patients about the importance of screening, process of screening, and about the next steps.



Current Challenges in Healthcare Wellness Centers (HWCs)

Fragmented Data Entry Systems

- CHOs/ANMs manage data across 9 10 disconnected apps
- No common identifier to track patient data.

Dependency on Manual Processes

- Paper registers are the primary record-keeping tool.
- Data is manually accumulated daily/weekly, increasing error rates and administrative overhead.

Barriers to ABHA ID Adoption

- Lack of a unified system to support ABHA ID creation and usage.
- Legacy systems not upgraded to accommodate ABHA ID.



Challenges in Implementation of Applications

Step while implementing IT Services	Challenges faced
Step 1 - Registration	 Unique ID: ABHA ID – not available for all cases Linkages with health records – Population Database, Provider Database and Facility Registries is Missing in majority of facilities
Step 2 – Service Delivery	 Multiple Applications for record maintenance Varying Records for the same person across applications Duplicate and multiple entries for same patient Lack of Tracking Mechanism Incomplete Prescription Lack of AI based / Technology Based Decision Making while managing cases
Step 3 - Management of Service Delivery	 No Capture of Service Delivery – Many applications running parallel to each other, no tracking service coverage and health outcomes No linkages of existing applications with National Registries – Birth and Death Registries Lack of IT based referrals
Step 4 - Logistics	1. Applications like DVDMS not often used in the facilities – lack of awareness training of the staff for such applications

Challenges in Implementation of applications

Step while implementing IT Services	Challenges faced				
Step 5 – Capacity Building	 Lack of job aids (IEC material) for awareness about the applications. Lack of training and awareness about different applications 				
Step 6 – Reporting and Monitoring	1. Lack of IT enabled mechanism for monthly reporting of key indicators.				
Step 7 - Teleconsultation	1. Lack of IT Infrastructure				
Others	 Independent Applications - Despite similar data, applications are not interlinked. Scan and Share – To be adopted to increase use of IT system and management of rush in the hospitals 				

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Key Functions of IT System in Health and Wellness Centers



Teleconsultation



Tele-consultation (Experience from East Khasi Hills, Meghalaya)

S.no	Average Teleconsultation / Month	Number of facilities (n = 34)	• <u>Tele</u> CHO
1	Not providing teleconsultation services	2	 State <u>telee</u> Majo
2	No Teleconsultation	2	<u>Ante</u> case
3	< 10	4	• Hub
4	10 – 19	7	• <u>E-Sa</u>
5	20 – 25	13	teleo
6	> 25	6	repo

- <u>Teleconsultation is Incentive based</u> part of CHO's performance based Salary
- State Government has given targets of <u>25</u> <u>teleconsultations / month</u>
- Majority of the teleconsultations were for <u>Antenatal women, Hypertension and Diabetes</u> <u>cases.</u>
- Hub for teleconsultation is usually <u>Community</u> <u>Health Centre</u>
- <u>E-Sanjeevani application</u> is used for teleconsultation
- Network was not an issue, <u>33/34 facilities</u> reported good network.



Telemedicine: Individual Level Challenges

- Limited digital literacy, particularly among older adults and those in rural areas, and health literacy issues.
 - Barriers such as limited smartphone access, unreliable internet connectivity, unfamiliarity with technology and socio-cultural preferences for in-person consultations.
 - Facilitators at this level include family involvement, training programs, and community outreach

Arora S, Huda R K, Verma S, et al. (August 21, 2024) Challenges, Barriers, and Facilitators in Telemedicine Implementation in India: A Scoping Review. Cureus 16(8): e67388. DOI 10.7759/cureus.67388

Oudbier SJ, Souget-Ruff SP, Chen BSJ, et al. Implementation barriers and facilitators of remote monitoring, remote consultation and digital care platforms through the eyes of healthcare professionals: a review of reviews. BMJ Open 2024;14:e075833. doi:10.1136/ bmjopen-2023-075833

Telemedicine: Provider & System Level Challenges

Provider-level challenges

- Lack of training and concerns about care quality,
- Barriers include insufficient infrastructure and medico-legal concerns, increased work load, unfamiliarity with technology, technology undermining aspects of professional identity, uncertainty about patients' aptitude with the technology
- Facilitators include ongoing training, clear guidelines, and user-friendly tele-health systems.

System-level challenges

- Standardizing telemedicine protocols
- Integrating telemedicine into existing infrastructure and ensuring data security and confidentiality, technical challenges/glitches
- Barriers include inadequate funding and resistance to change, realization about the need for dedicated manpower time for tele-consultation services

• Facilitators include policy support, investment in infrastructure, and collaborative efforts. Arora S, Huda R K, Verma S, et al. (August 21, 2024) Challenges, Barriers, and Facilitators in Telemedicine Implementation in India: A Scoping Review. Cureus 16(8): e67388. DOI 10.7759/cureus.67388

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Barriers and Strategies for Planning, Implementing & Sustaining Digitalization in HWCs

- 1. Leadership,
- 2. Buy-in,
- 3. Change management,
- 4. Engagement,
- 5. Workflow,
- 6. Finance and human resources, 1

- 7. Legal,
- 8. Training,
- 9. Data,
- 10. Evaluation and monitoring,
- 11. Maintenance.
- s, 12. Ethics

Nair M, Svedberg P, Larsson I, Nygren JM (2024) PLoS ONE 19(8): e0305949. https://doi.org/10.1371/journal. pone.0305949



Framework For Addressing Barriers During Different Phases of Digitalization of Healthcare

(Planning	Implementing		Sustaining	the use
	Leadership				
	Change management				
	Buy-in				
	Engagement				
	Workflow				
	Finance and human resources				
	Legal				
	Ethics				
	Data				
	Training				
	Evaluation and monitoring				
			八	Maintenance	
	PLOS ONE https://	/doi.org/10.1371/jou	urnal.por	ne.0305949	

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Way Forward -----

- More knowledge is needed and future research should focus on identifying
 - Contextual identification of challenges for full digitalization and their resolution in a systematic manner – Planning-Implementation- Sustainability
 - Impact on population health and costs
 - Value digitalization brings to patient care and impact
 - Satisfaction of health workforce
 - Monitoring & accountability at different levels

