



सत्यमेव जयते

Ministry of Health & Family Welfare  
Government of India



# AYUSHMAN BHARAT HEALTH AND WELLNESS CENTRES

ASSESSMENT IN 18 STATES



## CONSOLIDATED REPORT

MARCH 2022



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HEALTH AND  
WELLNESS CENTRES  
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## **ASSESSMENT PARTNERS**

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## **TECHNICAL SUPPORT**

**National Health Systems Resource Centre**

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# ABBREVIATIONS

<b>AB-HWC</b>	Ayushman Bharat- Health & Wellness Centre
<b>ANM</b>	Auxiliary Nurse Midwife
<b>ASHA</b>	Accredited Social Health Activist
<b>AYUSH</b>	Ayurveda Unani Siddha and Homeopathy
<b>BAMS</b>	Bachelor of Ayurvedic Medicine and Surgery
<b>CHO</b>	Community Health Officer
<b>COVID</b>	Corona Virus Disease
<b>CPHC</b>	Comprehensive Primary Health Care
<b>CSR</b>	Corporate Social Responsibility
<b>DVDMS</b>	Drugs and Vaccine Distribution Management System
<b>DOTS</b>	Directly Observed Treatment, Short-course
<b>ECHO</b>	Extension for Community Health Care Outcomes
<b>EML</b>	Essential Medicine List
<b>FGD</b>	Focused Group Discussion
<b>GBD</b>	Global Burden of Disease
<b>GoI</b>	Government of India
<b>GRAAM</b>	Grassroots Research And Advocacy Movement
<b>HMIS</b>	Health Management Information System
<b>HWC</b>	Health & Wellness Centre
<b>HR</b>	Human Resources
<b>ICT</b>	Information Communication Technology
<b>IGNOU</b>	Indira Gandhi National Open University
<b>IT</b>	Information Technology
<b>IDI</b>	In-Depth Interview
<b>IPHS</b>	Indian Public Health Standards
<b>JAS</b>	Jan Arogya Samitis
<b>MAS</b>	Mahila Aarogya Samiti
<b>MCH</b>	Maternal and Child Health
<b>MLHP</b>	Mid-level health care provider
<b>MO</b>	Medical Officer
<b>MoHFW</b>	Ministry of Health and Family Welfare
<b>MOOC</b>	Massive open online courses
<b>MPW</b>	Multi-Purpose Worker
<b>NCD</b>	Non-Communicable diseases
<b>OOPE</b>	Out-of-pocket expenditure
<b>OPD</b>	Outpatient Department
<b>OSCE</b>	Objective Structured Clinical Examination
<b>PHC</b>	Primary Health Centre
<b>PBI</b>	Performance Based Incentives
<b>PPE</b>	Personal Protective Equipment
<b>PRI</b>	Panchayati Raj Institutions
<b>PSG</b>	Patient Support Group
<b>RCH</b>	Reproductive and Child Health
<b>SHC</b>	Sub Health Centre
<b>UHC</b>	Universal Health Coverage
<b>UPHC</b>	Urban Primary Health Centre
<b>VHSNC</b>	Village Health Nutrition and Sanitation Committee

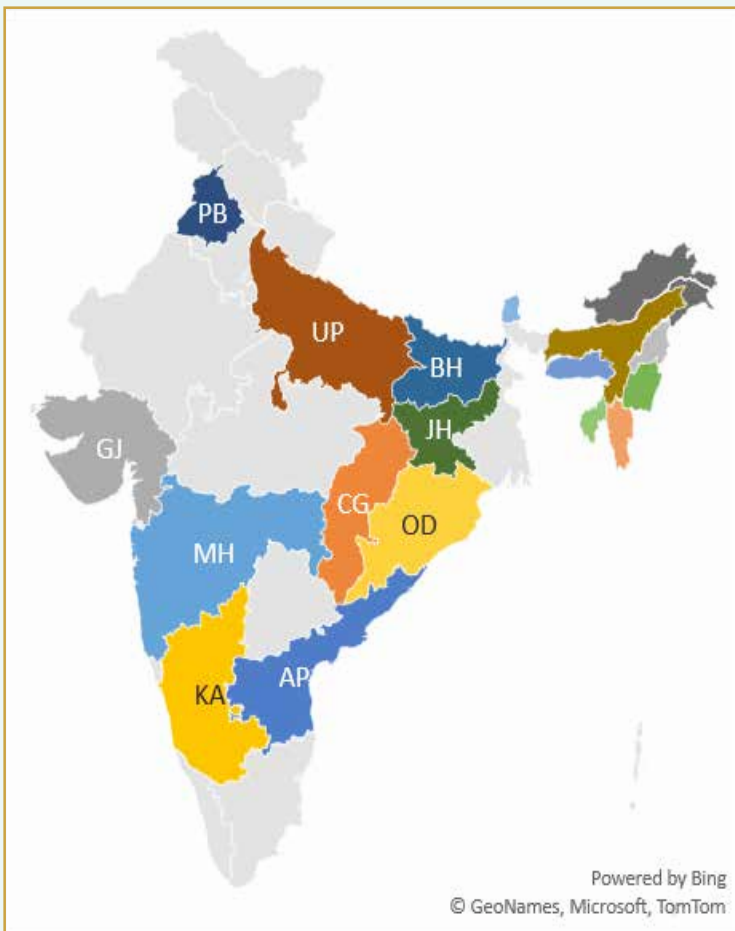
# EXECUTIVE SUMMARY

## Background and Scope of Assessment

In keeping with the direction signalled in the National Health Policy 2017 of a shift from selective to comprehensive primary health care, the Government of India launched Ayushman Bharat-Health & Wellness Centre (AB-HWC) in April 2018. The implementation of AB-HWC entailed a set of multiple reforms, spanning all aspects of the health systems such as service delivery, human resources, financing, access to medicines and diagnostics, community participation and ownership, accountability and governance to ensure that all the three dimensions of universal health coverage (UHC) are addressed. In May 2018, the Operational Guidelines for the states were released. By December 2022, 1,50,000 Health & Wellness Centres (HWCs) are to be made functional, by transforming existing SHCs and PHCs. As on 28 Feb 2022, 90,808 HWCs had been established in the country.

This ambitious initiative involving multiple paradigm shifts requires a formative assessment at this stage to enable better understanding of challenges in the ground-level implementation and so as to suggest design adaptations for subsequent scale-up. Given the early nature of the assessment, this assessment focused primarily on the inputs and processes that contribute to the functionality of HWCs and early changes in outputs. It also looked at the experience with the roll-out of the first of the expanded package of services on Non-Communicable Diseases (NCDs) care and preparedness to implement the remaining service packages. Given the ongoing pandemic, the assessment also included the bi-directional impact of COVID-19 and the roll-out.

## Methodology



A cross-sectional study design using a mixed-methods approach of both quantitative and qualitative methods was used. A total of eighteen states were covered in two phases, eight in Phase I and ten in Phase-II. The states were selected to cover the spectrum of epidemiological transition levels as defined by the Global Burden of Disease India study with a higher focus on North-Eastern states (See map below). In each state, one district was selected based on the maximum number of functional HWCs, and with minimum of two functional HWC-PHCs. Within the district, facility selection was undertaken by a mix of random and probability proportion to size sampling. A total of ten HWCs (6 SHC-HWC, 2PHC-HWC, and 2 UPHC-HWC), and an equal number of control facilities were selected in the same district. Ten users of the selected facility were surveyed based on OPD records within last 14 days of the facility visit.

Quantitative data were collected from selected health facilities using a Facility Assessment Checklist (as per IPHS/HWC norms); from users about information on awareness of services at HWCs, choice of provider, utilization experience and satisfaction with the services using a structured tool; from Community Health Officers (CHOs) using a Video-Based Objective Structured Clinical Examination to assess knowledge of clinical skills. Secondary data from intervention facilities were retrieved to assess the trend in the footfalls after conversion (with and without COVID). The qualitative data collection included in-depth interview of a wide range of stakeholders from state level officials to community level stakeholders to total 54 interviews in a state. These interviews were read by the assessment team (AIIMS, New Delhi, GRAAM and Jhpiego) as per themes and sub-themes identified. Both quantitative and qualitative results were read together to summarize the findings of the report.

## Key Findings

<b>Overall</b>	
<ul style="list-style-type: none"> <li>The launch of AB-HWC has enabled translation of the vision of moving from selective to comprehensive primary health care package enunciated in the National Health Policy 2017.</li> <li>The implementation of AB-HWC scheme is on track in most states with a clear roadmap for achieving targets set for December 2022.</li> <li>Overall, there has been an improvement in equity in access, despite existing constraints such as infrastructure availability and status of peripheral health facilities.</li> <li>Effective communication was noted from district to PHC-HWC and SHC-HWC resulting in translation of policy decisions into action, faster and better.</li> <li>Client satisfaction with the services provided was much higher among those who received services from HWCs as compared to those who received services from non-HWCs across all the four parameters measured – treatment, medicines, diagnostics and cleanliness.</li> </ul>	
Gains/Achievements	Concerns / Challenges
<b>Infrastructure development</b>	
<ul style="list-style-type: none"> <li>All states have prepared a definite plan and roadmap for conversions. Most state level officials were confident of reaching the targets by December 2022 as they have streamlined the upgradation processes enabling rapid scale up</li> </ul>	<ul style="list-style-type: none"> <li>Some states notably Bihar identified current status of infrastructure as a key bottleneck in achieving the target.</li> </ul>
<b>Financing</b>	
<ul style="list-style-type: none"> <li>While most states have relied largely on funds provided through the National Health Mission, some states have mobilized funds from other sources like: Panchayati Raj Institutions (Manipur), tribal affairs, District Mineral Funds (Maharashtra, Chhattisgarh, etc); State funds– Andhra Pradesh, Corporate Social Responsibility (CSR) – Maharashtra, Meghalaya, Mizoram.</li> <li>The flow of funds from the centre to states was generally reported to be timely.</li> <li>The use of performance-based payments for CHOs was appreciated by all stakeholders as an important motivator.</li> </ul>	<ul style="list-style-type: none"> <li>Some state level stakeholders, especially from North-east, voiced concerns about the smaller resource envelope and the lack of financial flexibility for infrastructure work.</li> <li>The allocation of funds from the states to district was quite often delayed.</li> <li>Delay in payment and complexity in calculation of performance parameters for team based incentives was reported as a barrier for its effective implementation by all states.</li> </ul>



<ul style="list-style-type: none"> <li>Few states had rolled out the team-based incentives</li> </ul>	<ul style="list-style-type: none"> <li>Most of the ANMs had not received any incentives, resulting in dissatisfaction.</li> </ul>
<b>Robust IT system</b>	
<ul style="list-style-type: none"> <li>All states were laying a strong emphasis on the roll-out of Information Communication Technology (ICT) based solutions for various purposes from inventory management, reporting, service delivery etc.</li> </ul>	<ul style="list-style-type: none"> <li>There continues to be significant challenges in the implementation of ICT initiatives related to hardware, software (multiple applications and lack of inter-operability) and most importantly, internet connectivity often resulting in duplication of work.</li> <li>State specific IT applications reported in few states, which may need to be integrated with national application, thus flagging interoperability related concerns.</li> </ul>
<b>Partnership for knowledge and implementation</b>	
<ul style="list-style-type: none"> <li>Many state governments were involving technical agencies to provide support for the AB-HWC roll-out.</li> </ul>	<ul style="list-style-type: none"> <li>Lack of dedicated nodal officers for CPHC implementation at the district level in most of the states; and at the state level in few states. Many states and district level nodal officers were holding multiple responsibilities, resulting in not being able to devote sufficient time to the scheme.</li> </ul>
<b>Continuum of care</b>	
<ul style="list-style-type: none"> <li>The continuum of care (referral and tracking of patients) has improved between SC-HWC and PHC-HWC.</li> </ul>	<ul style="list-style-type: none"> <li>Referral management is still suboptimal at levels above PHC. Its documentation continues to be paper-based; through registers and referral slips with little use of technology.</li> </ul>
<ul style="list-style-type: none"> <li>All the states have started implementing teleconsultation as a part of the packages of services at HWCs using e-Sanjeevani software and reported to be very useful.</li> </ul>	<ul style="list-style-type: none"> <li>The optimal implementation of the teleconsultation services was hindered by poor internet infrastructure, poor quality video in handheld computers and non-availability of consultants in hubs.</li> </ul>
<b>Expanded Service Delivery</b>	
<ul style="list-style-type: none"> <li>The preparedness of the primary level facilities to deliver care of NCDs including population-based screening for common conditions, management of diabetes and hypertension has been strengthened.</li> </ul>	<ul style="list-style-type: none"> <li>Due to the COVID-pandemic, it was not possible to properly assess the impact of conversion to HWCs in terms of increased footfalls in HWCs.</li> </ul>
<ul style="list-style-type: none"> <li>Many states (Karnataka, Chhattisgarh) have successfully initiated provision of services beyond NCDs (Eye/ENT/oral / elderly /palliative/mental health services) in collaboration with academic institutions and non-governmental organizations.</li> </ul>	<ul style="list-style-type: none"> <li>The rapid-scale up of services is resulting in the system being overloaded and therefore posing the risk of not being able to respond effectively to them.</li> </ul>
<b>Human Resources for Health</b>	
<ul style="list-style-type: none"> <li>There are early indications of a “team approach” evolving in the primary care workforce.</li> </ul>	<ul style="list-style-type: none"> <li>Most states failed to ensure full complement of staff at the HWCs. Key deficiencies were related to second health workers at SHCs and, nurses and pharmacists at PHCs.</li> </ul>

<ul style="list-style-type: none"> <li>The addition of the CHO (or the MLHPs) has been a “game-changer” and has resulted in the ability of the HWCs to deliver expanded range of services. This has been widely appreciated by health staff as well as the community.</li> </ul>	<ul style="list-style-type: none"> <li>Many issues related to the training, recruitment and deployment of CHOs were identified. These include suboptimal competencies, friction between CHOs with AYUSH and nursing cadre background, transfers/ attritions and concerns among ANMs/MPWs with the contractual CHOs being made the HWC in-charge.</li> </ul>
<ul style="list-style-type: none"> <li>The expanded primary health care team was seen as an asset during COVID-19 to manage the increased workload related to pandemic control and relief operations.</li> </ul>	<ul style="list-style-type: none"> <li>COVID-19 impacted the roll-out of AB-HWCs due to delay in the completion of training of CHOs, deputation of CHOs for COVID related duties.</li> </ul>
<b>Medicines and Diagnostics</b>	
<ul style="list-style-type: none"> <li>There was a clear trend of shifting to digital method of indenting and inventory management. Use of e-aushadhi system for inventory management was very much appreciated by the staff as the process was easy and it enabled keeping track of expiry dates.</li> </ul>	<ul style="list-style-type: none"> <li>The indenting and pick up of medicines and supplies at SHC level continued to be manual, though some states like Andhra Pradesh and Bihar were using e-aushadi at subcentre level through the handhelds.</li> </ul>
<ul style="list-style-type: none"> <li>There has been an improved availability of diagnostics and medicines at HWCs, especially for NCDs.</li> </ul>	<ul style="list-style-type: none"> <li>Stockouts were still being reported, though these were limited to high-use medicines like that for NCDs.</li> </ul>
<ul style="list-style-type: none"> <li>Establishment of hub-and-spoke models for diagnostics were being set up in some states.</li> </ul>	<ul style="list-style-type: none"> <li>Major barriers to strengthen laboratory services and diagnostics were lack of electricity to power refrigerators and inadequate storage space at HWCs.</li> </ul>
<b>Community mobilization and community health</b>	
<ul style="list-style-type: none"> <li>Health promotion activities with a strong focus on yoga and physical activity were becoming an integral part of HWC functioning and regular use of health promotion calendar was noted.</li> </ul>	<ul style="list-style-type: none"> <li>Key challenges in the implementation of health promotion activities were related to lack of space and trained human resources like yoga instructors.</li> <li>Implementation of JAS needs to be expedited.</li> </ul>
<ul style="list-style-type: none"> <li>Jan Arogya Samitis (JAS), a multi-stakeholder facility-based committee for improved community ownership and provider accountability at SHC and PHC are in the process of being established.</li> </ul>	

## Recommendations

### State Governments

- States to follow the mapping and planning of HWCs in line with the National targets. State may support districts to focus on HWCs/non HWCs operational in a rented building. NHM supports the infrastructure for SHC/PHC/UPHC buildings which may be utilized to plan for establishing HWCs. Optimizing the resources, identification of existing government owned buildings in different departments is to be prioritized for HWCs. Districts may be oriented to consider old and dilapidated constructions for renovation only after reviewing the required resources. For dilapidated SHC buildings, it may be more cost effective for states to plan for new buildings.

2. Revise the road map to develop a more ambitious timeline in light of the availability of additional financial resources under FC-XV grants and PM-ABHIM. Both the resources are providing infrastructural support for establishing HWCs. The states may plan district level exercises on gap identification and closure in coordination with rural and urban local bodies to prioritize the infrastructural strengthening for HWCs.
3. States to explore and undertake activities in order to plan and generate more funds by pooling from different resources, i.e. MoTA, MoMA, MPLAD funds, DMF, Corporate Social Responsibility (CSR) and philanthropic organizations.
4. States to undertake mapping across HWCs to identify gaps pertaining to availability of basic amenities like electricity, water and internet connectivity. District wise planning can be undertaken in coordination with relevant departments for closing the identified gaps and smoothen the HWC operationalization.
5. HWCs where infrastructural work is ongoing, may prioritize to also ensure availability of adequate spaces for laboratory services and medicine storage and dispensation. For HWCs established already, Block level teams to ensure that adequate storage space is available, and if not, then appropriate measures can be planned and undertaken to close such gaps on priority
6. Enable higher flexibility in use of funds at district level and decentralised procurements, hiring etc. including pooling of funds as per the State context and capacity.
7. States to simplify the performance measurement frameworks and prioritize the orientation of district level and block level CPHC teams on process of performance measurements, PLP indicators and its calculations and timely disbursement to HWC team members. PLPs approach has been designed with a concept of streamlining a collective performance of HWC teams in improving health outcomes for their catchment population. This also would instil team spirit and influence collective motivation amongst HWC team members, and thus enabling them to identify areas of performance improvement and undertaking suitable actions at their end.
8. States to ensure a robust monitoring mechanism for regular review of services and coverage under CPHC through a dedicated team of nodal officers at district and state level. Strong programme management teams and wide network of partners drawn from academic institutions would be a key to build such processes. States to also orient district level teams to enable them for undertaking the independent monitoring of HWCs through Medical Colleges to support the components of capacity building, monitoring and supervision.
9. States to expedite selection and recruitment of CHOs and to ensure that the state targets for operationalizing HWCs are achieved within given timelines.
10. States to plan for integrating CHO as part of the regular primary care team at HWCs by establishing regular positions for them, with clear career progression pathways.
11. States to expedite the capacity building exercise for HWC team members to undertake counselling for rational use of medicines and appropriate consumptions based on treatment plan.
12. Ensure availability of full contingent of trained human resources at primary care facilities. This would include recruitment of additional human resources as well as completion of multi-skill training of team members
13. States to undertake periodic prescription audits as a routine practice, districts may be strengthened to undertake this activity across HWC, along with robust quality checks on quality of medicines, use of IT systems for ensuring rational use of medicines and diagnostics.

14. States may define context specific protocols for peripheral collection of samples from HWC, where needed.
15. Ensuring the availability of efficient inventory management systems to prevent stock outs for medicines and consumables, states to expedite the implementation of IT enabled supply chain management systems i.e. DVDMS or similar state specific models, extending up to HWC-SHC level. This would also support CHOs in forecasting for the medicines and the consumables at the HWC level.
16. States to implement Biomedical Equipment Maintenance programme, and maintain database for equipment at HWCs.
17. States to ensure establishing mechanism at the block/district level for HWC teams to troubleshoot concerning IT applications and related issues.
18. States/districts to plan and undertake activities at the level of community for generating awareness on HWCs and the range of services being provided at these facilities.
19. States to ensure that ASHAs are undertaking CBAC and follow up visits in their catchment areas, and are also being incentivized as per the national guidelines. States/districts need to expedite the establishment of a strong referral and follow up mechanism across the HWCs.
20. At the facility level, it is suggested to ensure that the loop between the primary care service provider and the specialist is closed. This can be achieved by establishing a strong communication channel between medical officers and the specialist at higher facilities on adequacy of treatment and further actions.
21. States to identify innovations and best practices pertaining to wellness and health promotion related activities; and to scale up and promote, as appropriate.
22. States to expedite the implementation of JAS across HWCs, including completion of orientation and training of identified members as the first step. Additionally, monitoring mechanism at district level needs to be developed and streamlined for supporting ongoing activities and progress under community-based platforms.
23. Promotive and preventive care activities at the HWCs to be emphasized and active engagement and capacity building of community platforms can be planned across the catchment areas of HWCs, including existing local groups and individual volunteers.

#### **Both at State and Centre Level**

1. Improve co-ordination with other Ministries and their initiatives (Digital India Mission, Bharat net, Swachh Bharat Mission, Solar energy, etc.) to identify opportunities for closing the infrastructure gaps in state specific contexts.
2. To explore and identify mechanism for improved intersectoral convergence between health and other relevant departments at the HWC level, state and the national level.
3. To actively engage relevant stakeholders at national, state, district and below levels for integration of existing approaches under different National programmes and initiatives towards CPHC.
4. At the national and state level, there should be a support team deployed to command over the functioning and technical details of the IT application being used under CPHC. The support team should not only provide routine training to the end users including programme management units at district and block level, and HWC team members, but would also support

in troubleshooting field level implementations from time to time; and also support the state and districts in analysing the reports to prepare monthly progress reports.

5. Share best practices between the states and encourage their adoption. Many State level initiatives to address human resource challenges are being made. These include an online entrance examination and declaration of the results on the same day and use of a low bandwidth online training module in Karnataka, “team huddle” to foster team work at HWCs in Gujarat, Mentoring and Quality Assurance (MQA) Model in Chhattisgarh, partnering with academic institution and State Institute for Health and Family Welfare (SIHFW) using virtual classroom technology to enhance the capacities of around 880 CHOs on an annual basis.

### Central Government

1. Review meetings with States /UTs may be called more frequently to understand the current gaps in reaching the targets; and identify the states/UTs where more focus is required in terms of providing technical support and hand holding. States may be oriented to revise the road maps for HWCs in view of additional resources being provided to CPHC through FC-XV grants and PM-ABHIM.
2. Strengthen the performance-based incentives scheme for CHOs by simplification of its calculation in a transparent manner and timely payment. Digitalization of the PLP indicators and its calculation may be prioritized and rolled out across districts for a smooth implementation of PLPs and facility reporting mechanism across HWCs.
3. Conduct an in-depth study of the implementation of team-based incentive for the HWC team to assess its specific benefits and challenges.
4. To explore digital mode of in-service training for regular staff and link it to career progression or other non-monetary incentives for ongoing training and mentoring of the HWC team including CHOs.
5. Adopt available good practices existing within the country including the use of ICT tools to develop locally adaptable models to streamline purchase, inventory management and distribution procedures to ensure seamless availability of medicines, diagnostics and consumables.
6. Integrate the various ICT initiatives across a common inter-operable digital platform with provision of handholding support for a smoother digital transition. The Integrated Software solutions, which have already been planned, should be prioritized urgently to create a comprehensive solution.
7. Promote and strengthen the use of teleconsultation as it enables patients to jump traditional care pathway – primary-secondary- tertiary especially those from hard-to-reach areas. Define teleconsultation pathways in the Standard Treatment Guidelines so as to encourage its inclusion in routine clinical management practice. In order to fully realize its potential, there is a need to integrate “call-centre” approach and fixed day consultancy as a part of the system.
8. Implement a cohort-based patient digital tracking and monitoring system using a unique identification number especially for chronic disease patients.
9. Initiate a process of clinical audit at all levels of healthcare to instil a culture of accountability into the system.
10. Strengthen training of primary care staff in management of public health emergencies and disasters and avenues for incorporating these concepts and practices into the existing packages should be explored.

## BACKGROUND OF THE ASSESSMENT

The National Health Policy 2017 signalled a decisive change from selective to comprehensive primary health care package including geriatric, palliative care and rehabilitative care services through upgraded facilities called “ Health and Wellness Centers. It also talked about a family health card that will enable access to a defined package of services anywhere in the country. To provide comprehensive care, the policy recommends a matching human resources development strategy, effective logistics support system and referral backup. This would also necessitate upgradation of the existing sub-centres and reorienting PHCs to provide comprehensive set of preventive, promotive, curative and rehabilitative services. Leveraging the potential of digital health for two-way systemic linkages between the various levels of care viz., primary, secondary and tertiary, would ensure continuity of care. The policy advocates that the public health system would put in place a gatekeeping mechanism at primary level in a phased manner, accompanied by an effective feedback and follow-up mechanism.

In keeping with this policy direction, in April 2018, the Government of India launched the Ayushman Bharat- Health & Wellness Centre (AB-HWC), signalling the shift from selective to comprehensive primary health care. The implementation of AB-HWC entailed a set of multiple reforms, spanning all aspects of the health systems such as service delivery, human resources, financing, access to medicines and diagnostics, community participation and ownership, accountability and governance to ensure that all the three dimensions of universal health coverage (UHC) are addressed.

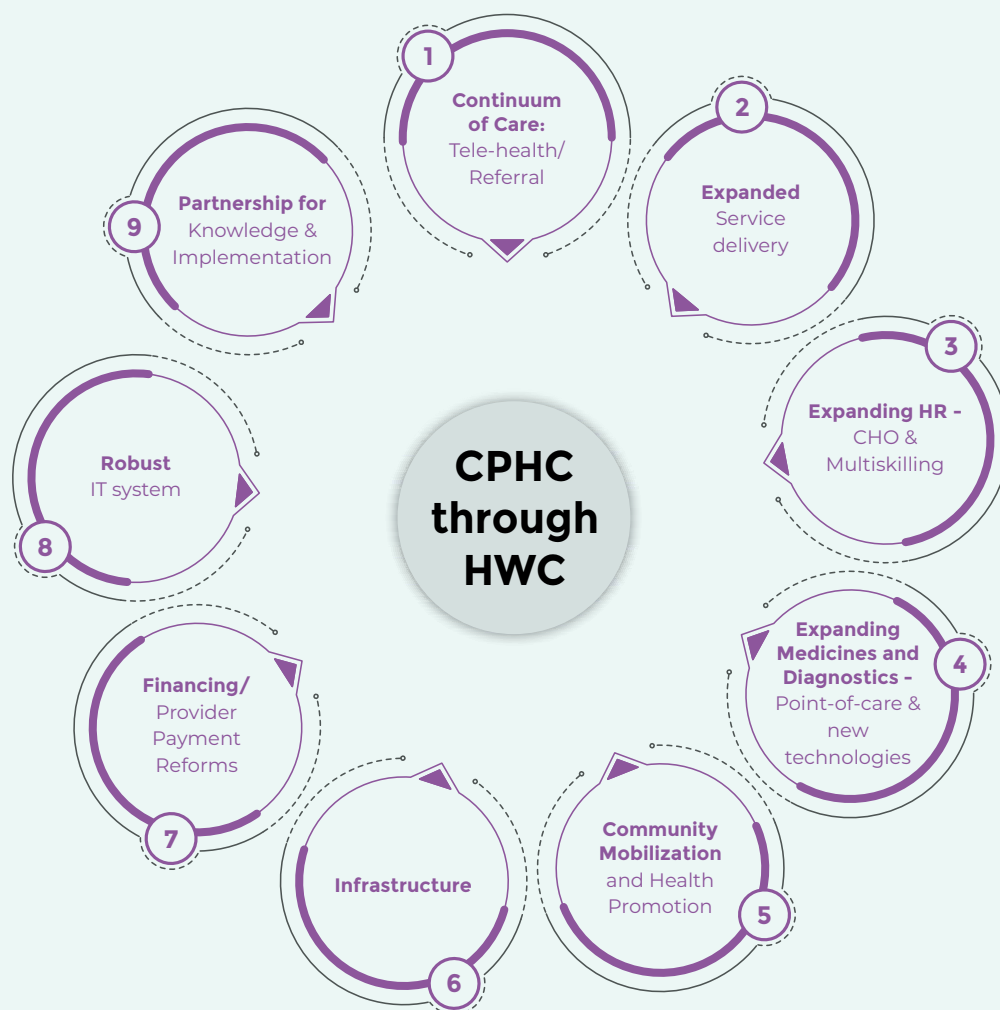
The range of services to be provided at the Health and Wellness Centres expanded from the existing packages Reproductive, Maternal, Newborn & Child Health & Adolescents, and Communicable Diseases, with the incremental addition of services for Non-Communicable diseases, Oral health, ENT, Ophthalmology, Mental health, elderly and palliative care and management of emergency and trauma cases (See Box 1). The first AB-HWC was launched on April 14, 2018 at Jangla, in Chhattisgarh. In May 2018, the Operational Guidelines to support states in implementing the multiple component interventions of AB-HWC were launched. The operational guidelines for each of the services have been incrementally released by MoHFW. By December 2022, about 1,50,000 Health & Wellness Centres (HWCs) are to be functional, by transforming existing SHCs and PHCs. As on 28 Feb 2022, 90,808 HWCs had been established in the country. The health centres are also strengthened to provide an expanded range of free essential drugs, diagnostic services and teleconsultation services. Health promotion activities through initiatives like yoga, Fit India and Eat Right campaigns by following an annual calendar of activities are also being undertaken.

### Box 1: 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: National Health Programmes
6. Management of Common Communicable Diseases and General Out-patient care for acute simple illnesses and minor ailments
7. Screening, Prevention, Control and Management of Non-Communicable diseases
8. Screening and Basic management of Mental health ailments
9. Care for Common Ophthalmic and ENT problems
10. Basic Oral health care
11. Elderly and Palliative health care services
12. Emergency Medical Services



The scheme also, introduced non-physician health worker (generically referred to as Mid-level health care providers (MLHP), a graduate in nursing/community health/Ayurveda to be designated as Community Health Officer (CHO) with clinical, public health and managerial responsibilities. Jan Arogya Samitis (JAS), a multi-stakeholder facility-based committee at SHC and PHC are being established for improved community ownership and provider accountability. An Information and Communication Technology (ICT) based backbone is being set up from the level of ASHA to upwards, which not only supports service delivery, but also to improve managerial functions including monitoring and supervision, and assist in the provision of performance and team linked financial incentives. The nine key elements of the CPHC are shown in Figure 1.



**Figure 1.** Key elements of the Health and Wellness Centres (HWCs)

Expanded Service delivery: Expansion of the package of services that go beyond maternal and child health to include care for non-communicable diseases, palliative and rehabilitative care, Oral, Eye and ENT care, mental health and first level care for emergencies and trauma.

Continuum of Care- Tele-health and referral envisages a gatekeeping function, and a two-way referral system- that links to secondary and tertiary care and also follow up care. At all levels, teleconsultation is done to improve referral advice, seek clarifications, and undertake virtual training including case management support.

Expanding HR – CHO and multiskilling: A new cadre of worker Community Health Officer, trained in competencies of public health and primary health care leads the team of Multipurpose Workers, and ASHAs. All the service providers at AB-HWCs are being trained appropriately to deliver the expanded package of services to the community.

Medicines and Expanding diagnostics: A total of 105 free and essential medicines at HWC-SHC and 172 medicines at HWC-PHC; and 14 diagnostic tests at HWC-SHC and 63 at HWC-PHCs are to be made available.

Community Mobilization and Health Promotion: Engagement of community level collectives such as – Village Health Sanitation and Nutrition Committee (VHSNCs), Mahila Arogya Samitis (MAS) and Self-help groups (SHGs).

Robust IT System- HWC team are equipped with IT equipment- Tablets at SCs and Laptop/ Desktop at PHC level to create electronic health record of the population covered by HWCs. A robust IT system will support AB-HWC team to track patients for treatment adherence and follow up.

Infrastructure – AB-HWCs are to be upgraded and branded to provide sufficient space for expanded service delivery, for medicine dispensation, diagnostics organized, space for wellness related activities including the practice of yoga etc.

Partnerships for knowledge and implementation- Partnerships with development partners and technical support agencies is done to integrate AB-HWC in their domain. These partnerships provide implementation support to the states, research and advocacy of AB-HWC Program.

Financing- provider payment reforms- Performance linked payment for AB-HWC team have been introduced at AB-HWCs to foster team spirit.

All these ambitious initiatives involve multiple paradigm shifts, spanning several aspects of the health system. A formative assessment at the end of the third year of its implementation can help suggest modifications in design and implementation strategies to improve pace and quality of scale-up. This assessment will serve as a starting point to initiate dialogue with states on streamlining inputs, modifying processes, and improving coverage and quality of services.

## SCOPE AND OBJECTIVE OF ASSESSMENT

The primary aim of this exercise was to assess the pace of rollout of HWC in different states and to identify specific challenges in their rollout. Given the early stage of implementation, the assessment focused primarily on the inputs and processes that contribute to the functionality of HWC, and, reviewed any gains in short-term outputs including community use of the expanded range of services with a focus on chronic noncommunicable diseases care. In keeping with the priorities for AB-HWC, the assessment specifically focussed on free essential drugs, diagnostic services, teleconsultation services and health promotion activities. The key assessment questions and objectives are given in Fig 2 below. Given that the current COVID-19 pandemic occurred during the process of the implementation, this assessment also allowed an evaluation of the bidirectional impact of HWC roll-out and COVID pandemic.

Is the program being implemented as per the plan?	How are the inputs contributing to the program functioning?	Are short-term outputs promising?	What is preventing the realization of full potential of the program?
<ul style="list-style-type: none"> <li>Compare the <b>pace of implementation</b> of AB-HWC scheme among the selected states to meet targets set for December 2022.</li> </ul>	<ul style="list-style-type: none"> <li>Review the success of key initiatives and readiness to rollout next phase of CPHC                             <ul style="list-style-type: none"> <li>Human Resource (HR),</li> <li>Medicines and diagnostics (M &amp; D),</li> <li>Information Technology (IT).</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Measure early gains of strengthened primary health care services including patient satisfaction.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the key challenges in the implementation of the AB-HWC program and practices adopted by states to overcome them.</li> </ul>

Fig 2. Key questions and objectives for the formative Assessment of AB-HWC, 2020-21.



## STUDY METHODOLOGY

### STUDY DESIGN AND SAMPLING

A cross-sectional study design with a mixed-methods approach of both quantitative and qualitative methods was used. Secondary data were used to compare the performance of HWCs with non-HWC SHCs and PHCs, and, wherever possible, between pre-conversion and post-conversion period.

A total of eighteen states were covered in two phases, Phase-I covered eight states followed by ten additional states being covered in Phase-II. The states were selected to cover the entire spectrum of epidemiological transition levels as defined by the Global Burden of Disease (GBD) India study with a higher focus on north-eastern states. (Figure 3) In each state, one district was selected based on the maximum number of functional HWCs (SHC) and with a minimum of two functional HWC-PHCs. In situations where the required number of control (non-HWC) facilities were not available within the sample district, the selection was extended to another district in the state. Within the district, facility selection was undertaken by a mix of random and probability proportion to size sampling. Facilities were selected with an aim of proportional representation of 60% SHC, 20% PHCs and 20% urban PHCs (UPHCs) in the overall sample. A total of ten HWCs (6 SHC-HWC, 2PHC-HWC, and 2 UPHC-HWC), and an equal number of control facilities were selected in the same district. For the control arm, if the number of PHCs or UPHCs was not adequate, an SHC was substituted for the assessment. The first phase of the survey was implemented by Grassroots Research And Advocacy Movement (GRAAM), Mysore while the second phase was implemented through Jhpiego, New Delhi.

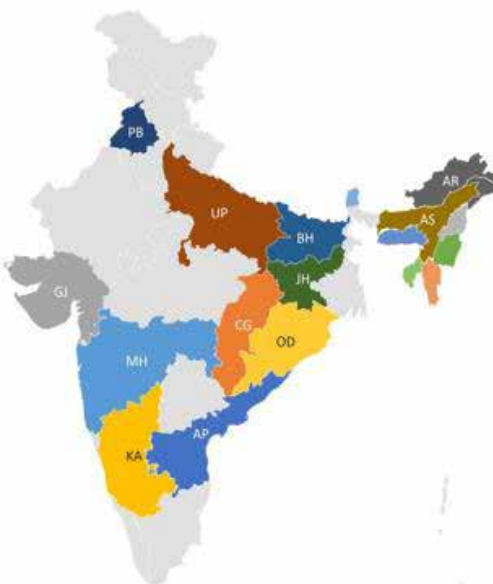
Phase I (GRAAM)			Phase II (Jhpiego)	
State	District		State	District
Andhra Pradesh (AP)	Guntur	Arunachal Pradesh (AR)	Papum Pare	
Chhattisgarh (CG)	Dhamtari*	Assam (AS)	Nagaon	
Gujarat (GJ)	Dahod*	Bihar (BH)	Bhagalpur	
Karnataka (KA)	Mysuru	Jharkhand (JH)	Ranchi	
Maharashtra (MH)	Pune	Meghalaya	East Khasi Hills	
Manipur	Thoubal*	Mizoram	Mamit	
Punjab (PB)	Ludhiana	Nagaland	Kiphire	
Uttar Pradesh (UP)	Meerut	Odisha (OD)	Mayurbhanj	
		Sikkim	South Sikkim	
		Tripura	South Tripura	
*plus capital city				

Fig 3. States and Districts covered during the assessment.

## DATA COLLECTION

The methods and sources utilized to collect data are described below in table 1.

Table 1. Data Sources for the AB-HWC assessment 2020-21

Quantitative data		Qualitative data	
Primary data	Secondary data	Primary data	Secondary data
<ul style="list-style-type: none"> <li>• User Survey</li> <li>• Video OSCE of Community Health Officers</li> <li>• Facility assessments</li> </ul>	<ul style="list-style-type: none"> <li>• HMIS and AB-HWC databases</li> <li>- Data on service availability and footfalls/utilization from the</li> </ul>	<ul style="list-style-type: none"> <li>• In-depth interviews of Policy Makers, district/ state level managers and service providers</li> <li>• Facility video observation</li> <li>• Field note based insights from the facility visits</li> </ul>	<ul style="list-style-type: none"> <li>• Relevant government documents / records</li> <li>• Facility records</li> </ul>

### QUANTITATIVE DATA COLLECTION

A **Facility Assessment Checklist** was administered at all the selected facilities. The checklist for HWCs used selected parameters from the IPHS-based proforma for facility survey of SHCs and PHCs as well as some additional/changed parameters as per HWC requirement.

The **User survey** obtained information on awareness of services provided at HWCs, choice of provider, utilization experience and satisfaction with the services, usage of wellness activities and usage during COVID-19 and lockdown. Ten users per facility (equal apportioning between nearest and farthest village/habitation) were surveyed for this purpose. The facility based OPD records within 14 days of the facility visit were used to select the users for the survey, to cover different health conditions like pregnancy, tuberculosis, NCDs etc.

**Video-Based Objective Structured Clinical Examination (OSCE)** was used for assessing knowledge of clinical skills for CHOs: vis-a-vis their stated training objectives and functionalities in HWCs. The CHOs were shown videos of seven simulated clinical situations covering different types of patients and then asked questions to assess their knowledge of skills essential to perform their roles as CHO. The field investigators carried the set of videos on a smartphone, along with a pre-designed questionnaire, which included multiple-choice questions, fill in the blanks, short answer and listing the steps of a given procedure, etc for each clinical skill video. The correct responses to these questions were prepared by a set of experts with knowledge of the National Health Programmes, using an objective assessment scale (using a scale from 0 to 2 - 0 being incorrect or no answer, 1 being the score for the partially correct answer and 2 being the score for the fully correct answer). These were summed up to get a total score for each CHO. A 50% score was considered acceptable.

**Secondary Data:** Data from the reporting facilities were retrieved from the AB-HWC portal through NHSRC for the period July 2019 to March 2021 to look at the trend in attendance of these facilities. While initially contemplated, the use of pre-conversion data from HMIS was dropped due to differences in the two datasets made it difficult for an appropriate comparison.

### QUALITATIVE DATA COLLECTION

The qualitative data collection included in-depth interviews of a wide-range of stakeholders from community to state level as shown in the table 2 below. The data collection team underwent three-day training before going into the field which covered both the technical aspects of AB-HWC as well as methodological issues including the conduction of in-depth interviews (IDIs) and focus group discussions (FGDs). Due to COVID 19, two FGDs of users were replaced with 6 IDIs. A total of 54 IDIs were planned in each state totalling to 972 across 18 states.

**Table 2 Details of Qualitative data collection for the AB-HWC assessment**

Respondent Category	Method	Sample Size
State, district, and block-level health officials	In-Depth Interviews (IDIs)	2 State level, 2 district level and one block-level official in each state – 90 in all
PHC- Medical Officer, Staff Nurse/ Pharmacist/Lab Technician; SHC-HWC - MLHP/CHO, ANM/Multi-Purpose Health Worker Male	In-Depth Interviews (IDIs)	2 per facility for 360 facilities to total 720 in for eighteen states.
Users/ Beneficiaries/Community	Focused Group Discussions (FGDs) / IDIs	2 FGDs per state OR 6 User IDIs per state
ASHAs	IDIs	3 per state

## DATA ANALYSIS & REPORT WRITING

The study covered a sample of 317 facilities across eighteen states with 117 PHCs/UPHCs and 220 SHCs. 1002 users from converted and 1015 users from non-converted facilities were interviewed. For the quantitative component, to gauge improvements in outputs and outcomes, two types of comparisons were made – pre and post conversion of the HWCs and between converted and not converted SHCs and PHCs within the same district. Indicators were developed, the proportion of health facilities with and without the parameters was calculated and compared between HWC and Non-HWC facilities. Interviews and FGD transcripts were analysed by the assessment team (AIIMS, New Delhi, GRAAM and Jhpiego) and themes and sub-themes identified.

## LIMITATIONS

Some key limitations of this assessment must be kept in mind before interpreting the findings. The study covers 18 states but has the limitation of purposive and limited sample of facilities and stakeholders. It should be noted that the selection of the SHCs and PHCs to be converted into HWCs were purposive. The occurrence of COVID pandemic impacted the data collection due to restriction in field visit and also assessment of trend in utilization of health facilities was affected.

## KEY FINDINGS

### Early impact of HWCs on service utilization and patient satisfaction

#### SERVICE UTILIZATION AT THE FACILITIES

- The number of reporting facilities and mean attendance per reporting facility from July 2019 to March 2021 by state are shown in annexe. (tables A1- A6)
- The occurrence of COVID-19 and its impact on facility reporting and facility attendance complicated the planned comparison.
- There was minimal impact on monthly reporting by facilities during the period April-June 2020.
- The reported quarterly attendance between July 2019-March 2020 did not indicate a clear trend of increase. It is possible that local and contextual factors, which affect facility attendance, have been hidden by the average.
- Among the facilities that continued to report during the COVID-19 and lockdown period, the impact of COVID on outpatient attendance showed variation in temporality (Q2/Q3/Q4 of 2020) as well as direction— decline, no change, increase.
- The impact of COVID was seen more in the urban PHCs and less in SHCs. Some states were more adversely impacted (Uttar Pradesh, Bihar, Jharkhand) than other states (Odisha, Andhra Pradesh and Karnataka).

## COMMUNITY SATISFACTION

- A high level of satisfaction of services at both HWCs and Non-HWCs was noted during the assessment.
- Across the facilities, HWCs reported higher proportion of users satisfied with health care services as compared to non-HWC facilities. The user satisfaction was recorded across all the four parameters – treatment, medicine, diagnostics and cleanliness (Figure 7). Also, people on the other end of the spectrum (unhappy or very unhappy) were fewer in the HWCs as compared to non-HWCs.

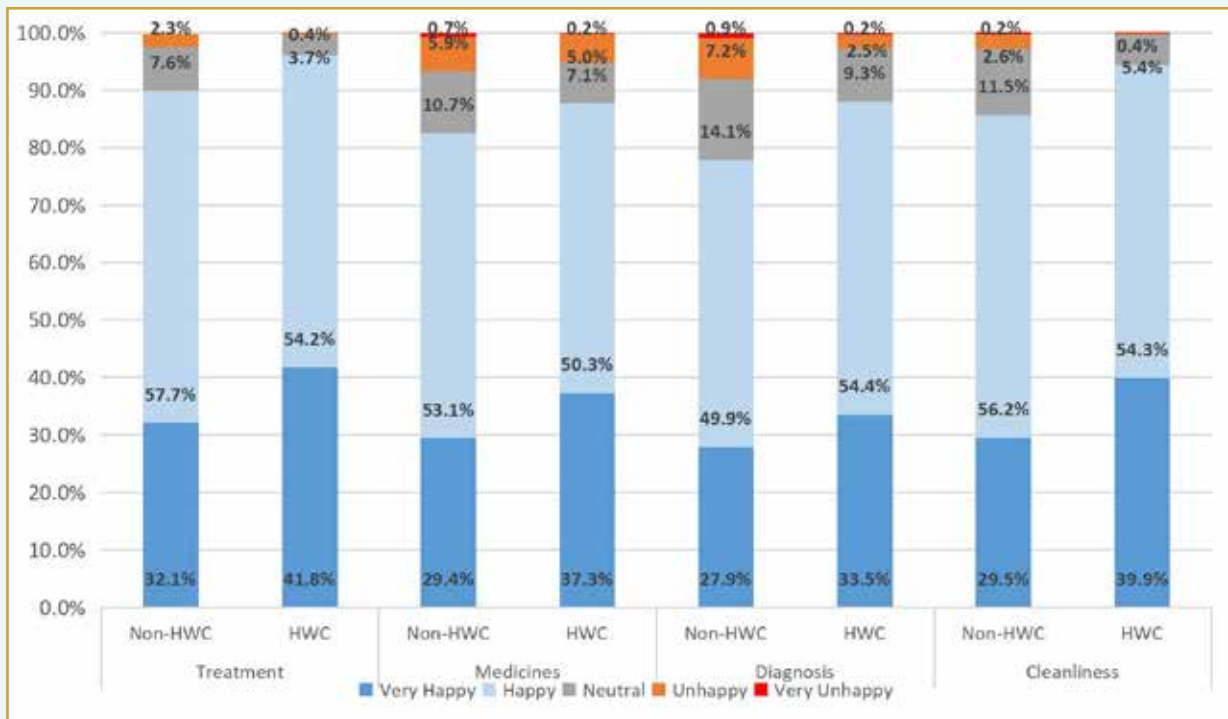


Figure 7. Satisfaction level with services by type of facility among its users (source: User survey)

- While the assessment did not aim to estimate the change in the out-of-pocket expenditure (OOPE) on health, anecdotal evidence from interviews with workers and patients revealed that decreased need for travel for care and increased availability of medicines and diagnostics was probably leading to a reduction in OOPE. It was also perceived by the health care providers that the HWCs are now attracting patients from private sector and unqualified healers.

## INFRASTRUCTURE UPGRADATION

Each state was expected to develop a short to medium term road map with number of HWCs targeted for operationalization by December 2022. As specified in the national guidelines, the plan developed should define target of the number of facilities (PHCs/Urban PHCs/ Sub Health Centres) that can be upgraded to effectively deliver expanded range of services on a year-on-year basis. Addressing the concerns of equity, the districts which align with the 'Transformation of Aspirational Districts' Programme of Government of India were to be prioritized. States could plan an intermix and also select other districts with adequate availability of human resources, infrastructure and services at primary and secondary level to enable continuity of care for referrals from HWCs or with districts selected for Universal Screening of NCDs. Primary Health Centres and Sub Health Centres that require minimum inputs to effectively deliver the comprehensive primary health care services at their designated levels of service were to be prioritized. While relatively well performing

PHCs with MBBS MO were to be prioritized for transforming as HWC, the SHCs linked to these PHCs were expected to be upgraded to HWCs to maintain continuum of care. Upgrading Sub Health Centres as HWCs were to be prioritized based on three factors a) where higher facilities from PHC and above are not within the reach of SHCs within thirty minutes, b) where travel time to reach the Sub-Centre from the most remote place in the coverage area is more than half an hour, and c) where health indicators progress is significantly lower than the block/district average due to social and cultural barriers to access. Infrastructure upgrade was to be done jointly by the concerned Block Medical Officer and a representative from the Engineering wing at the district level. If a new construction was being planned, location of HWCs was to be decided through a consultative process involving community, gram panchayat members, community forest rights committees, frontline health functionaries, Block Medical Officers and others. For new constructions, the guidelines specified that a central location with high population density is to be preferred over peripheral sites of the villages. To save time and optimize resources, identification of government buildings available with other departments were to be prioritized for operationalizing HWCs after necessary repair/renovation.

### What stakeholders said?

*Maharashtra is at the third rank in India now, in terms of facilities upgraded. We are aiming to become 1st rank as time progresses"*

**-State Official Maharashtra.**

*"I will admit that they are stiff targets but at the same time, they are not impossible to achieve. There will be difficulties, there will be certain roadblocks, unpredictable in nature, but we are hopeful that we will be able to overcome all those hurdles*

**- State Level Official Assam**

- As per the information available on the portal (<https://ab-hwc.nhp.gov.in/#about>), the overall achievement of target by March 2021 was 102%. Punjab (179%) & Maharashtra (163%) led the table while Bihar (38%) and Odisha (51%) lagged. Except Tripura, most north-eastern states did well.
- Notwithstanding the significant implementation challenges, the level of commitment to ensuring universal transformation of peripheral public health facilities to Health and Wellness Centres across all states was high. The level of ownership and accountability to making this happen was observed across the board. Strikingly, this commitment was limited not only to state levels, but had also percolated to district levels. A sense of competition was noted amongst the states on ranking on the progress on HWC conversion.

All states have prepared a definite plan and roadmap for conversions and most state level officials were confident of reaching the targets by December 2022. They have streamlined the upgradation processes enabling more rapid scale up except Bihar whose state officials identified infrastructure bottlenecks as a key constraint in achieving the target.

- Gap analysis was undertaken by most states before planning infrastructure upgrade, though the involvement of district level stakeholders in this process was limited, as it was being led largely by state nodal officers in the early months.
- The national guidelines mentioned one of the approaches to prioritize HWC operationalization using block saturation, and another approach as identifying facilities with availability of NCD screening services in order to leverage pre-existing investments in primary care facilities. However, the assessment findings report both these approaches as not being commonly used by states for prioritization while upgrading the facilities to HWCs.



- Following the National guidelines for planning and developing the road map for HWCs, some of the criteria adopted by states to prioritize conversion to HWCs are as follows -

- ◆ Prioritization of sub centres over PHCs / urban PHC (Punjab)
- ◆ Prioritization of aspirational districts (Gujarat, Chhattisgarh, Sikkim, Uttar Pradesh)
- ◆ Prioritization of Urban PHC / PHCs or facilities with good infrastructure and human resources (Andhra Pradesh, Karnataka, Maharashtra, Mizoram, Nagaland, Tripura).

- ◆ Prioritization of facilities located in remote and difficult to reach areas. (Maharashtra, Chhattisgarh)

- For infrastructure upgradation work, most states have used the government engineering department (state medical services or health system corporations, rural engineering services and PHEDs) while some states outsourced the work. Both approaches had the challenge of keeping to timelines due to competing priorities.
- A major infrastructure related bottleneck was related to the building / land ownership since almost all states have facilities located on leased / rented building. About 15% of the buildings visited during the assessment were in rented premises. Such buildings were usually smaller and not suitable for HWCs. Stakeholders reported that even if Panchayat would give land, it would often be away from the main village which would violate the 30 minutes travel norm.
- Also, some of the concerns raised by the stakeholders were poor infrastructure attributed to rented buildings, for eg. Bihar where 56% facilities were reported to be functional in a rented building; and unavailability of land for HWCs at a central location, eg. Gujarat. Acquiring of land for this purpose in a central location with high population density, has been specified as a priority for the respective districts.
- Some additional challenges identified included - repair of facilities as well as their maintenance and, scarcity of water in HWCs was reported to be problem in Manipur.
- The pace of converting a peripheral health facility a HWC varied across states. The two key factors influencing the pace, is the time taken for infrastructural upgradation and the posting of the Community Health Officer. The time required for upgrading was reported to vary between 8-12 months on an average. However, for HWCs to become fully functional including availability of trained human resources and essential medicines and diagnostics took between 18 months to two years.
- Most the converted HWCs had undergone branding. Many states have also undertaken internal or state-specific branding like in Punjab, Nagaland, Chhattisgarh.

### What stakeholders said?

*“When you see the existing infrastructure, there are many UPHCs which only have one or two rooms and we cannot talk of SHCs because more than 56% of the SHCs are in rented buildings. The rent is very less too; it’s almost 500 rupees per month for the SHCs. So, infrastructure wise we are very poor.”*

**- State Level Official Bihar**

*“Most of the land available to us is outside of the villages. But this problem is not exclusive to Dahod. I have raised this issue with state officials but that does not help, they can only give whatever land is available to them. Not having the facility at the right place, does not help in the utilisation of the facility.”*

**- State Official, Gujarat**

## FINANCING AND PROVIDER PAYMENT REFORMS

Ensuring adequate infrastructure at PHC level would require undertaking minor civil repair and infrastructure upgradation for existing buildings to meet necessary gaps in enabling these centres to deliver patient friendly services with an estimated allocation of Rs. 4 lakh per PHC-HWC. An amount Rs. 7 lacs per facility was allocated for SHC-HWCs, as major civil infrastructure upgrade would be required for them. Though financial provision for repair and new construction are made available under the National Health Mission, resource mobilization for new construction could also be explored from different central and state government programmes. In addition, resources from FC-XV grants and PM-ABHIM are also providing infrastructural support to states for establishing HWCs. Support from Corporate Social Responsibility (CSR) and philanthropic organizations may also be explored. Private buildings could be taken on rent as an interim measure.

- While Nodal officers in most states expressed that the resource envelope for conversion to be sufficient, some state and district stakeholders in Jharkhand and the NE states, expressed that this was a constraint, especially for the SHC. A request was repeatedly voiced for flexibility in the financing of HWCs, especially given the different circumstances in north-eastern states.
- While most states have relied largely on funds provided through the National Health Mission's PIP process, some states have mobilized funds from other sources. These included other departments (Panchayati Raj Institutions, tribal affairs, mining), international agencies (World Bank Health System Fund), States government funds and Corporate Social Responsibility (CSR) funds.
- The flow of funds from the centre to states was generally reported to be timely (except few north-eastern states), but the allocation of funds from the states to district was quite often delayed. The allocation of funds for routine activities was also reported to be inadequate.
- Performance based Incentives (PBIs on the basis of 15 indicators) for CHOs have been rolled out across all states. All stakeholders felt that PBIs are a good idea and very useful to motivate the health staff.
- Some states have modified the amount of incentive at their end. Awareness of the actual method for calculation of PBI was not clear at district levels and below. It was generated at the system level and was felt to be a complicated and opaque process.

### What stakeholders said?

*"Upgrading sub centre needs more budget as there is no building and accommodation for so many sub centres in Arunachal Pradesh".*

#### **-State Level Official**

*"The main reason for poor infrastructure is we are given the budget of 7 lakhs. This budget in most cases is a meagre budget*

#### **- District Official Jharkhand.**

*"This is a hilly terrain. Some of the centres are on a slope. So, you need to construct a supporting wall by the side. This, itself would cost near about 4 to 5 lakhs. So, we feel the funding is not adequate. We wouldn't be able to construct a HWC above the existing structure; this is because the structure is weak and very old.*

#### **- State Official, Sikkim.**

*"the modality of setting a cost for the entire country is fundamentally wrong. For example, The Amul Taaza milk sold in Delhi costs higher here, at least 10%. So, such costs need to be factored in, particularly with respect to constructional materials.*

#### **- State Official Meghalaya.**

*"We have to spend so much for photocopying only. Then we have to spend their own money to recharge their internet packs to upload the data into the portal."*

#### **- District Official Arunachal Pradesh**

- Delay in payment was reported as a major barrier for its effective implementation across all the states. The delay was because of the delay in sending the data as well as at higher level for processing of the payment.
- Some states paid the full amount of incentive for the COVID period to CHOs, even though the work was not possible and reverted to original scoring system from October 2020.
- Only few states have rolled out the team-based incentives and so most ANMs who were interviewed had not received any incentives. This was resulting in dissatisfaction among the staff.
- Financial management capabilities at PHCs and SHCs including that of MOs was also pointed as a problem for effective implementation of HWCs. Currently, the budget is allocated to PHC-MO in-charge, who are supposed to distribute to SHCs.
- Financial management at SHC has been limited till now with the ANM / MPW only being involved in the financial management. The involvement of CHO into this process, along with being a contractual employee, brings an added level of complexity.
- In one of the states, the service providers highlighted requirements for enhanced fund allocation responding to the needs of HWCs, in view of expanded range of services.

### **PARTNERSHIP FOR KNOWLEDGE MANAGEMENT AND IMPLEMENTATION**

- In most states, the programme management structure for CPHC was well defined, with most of the positions filled. Mostly officers of Director/Joint Director/Additional Director rank were appointed as State program Officer.
- While a dedicated programme management team at state level for CPHC implementation is observed in most of the states; at the district level, nodal officers from other existing programmes are designated as CPHC nodal. Given the nodal officer handling multiple responsibilities, they reported of not being able to devote sufficient time to CPHC related activities.
- In some states, technical agencies have been roped in to provide technical support for the roll-out of AB-HWC. These were highly appreciated by the state level stakeholders.
- Effective communication was noted from district to PHC-HWC and SHC-HWC. As a result, the policy decisions are being translated into action faster and better.
- Supportive supervision is occurring with the officials posted at district and block level regularly visiting the facilities. Review meetings are also being conducted regularly as a part of the monitoring process by the district and state steering groups.
- The CHOs are also visiting the field area to supervise the work of ASHA and ANM, though to a limited extent.

### **EXPANDING AND SKILLING HUMAN RESOURCES**

A PHC that is linked to a cluster of SHC-HWCs serves as the first point of referral, and supportive supervision for the SHC-HWCs in its jurisdiction. In addition, PHCs are also being strengthened as HWCs, delivering the expanded range of primary health care services of a higher order of



complexity, given that a medical officer is positioned at this level of care. The Medical Officer at the PHC is responsible for ensuring the delivery of healthcare services in her/his area including care for referred patients from SHC/HWC and handholding of the Primary Healthcare Team. A major input required for a SHC or PHC to serve as a HWC, is to ensure the full complement of the primary health care team at both levels, and build their skills to deliver the comprehensive primary health care. The desired **Primary health care team** to deliver the expanded package of services are:

- **SHC**– A team of at least three service providers (one Mid-level provider i.e. Community Health Officer (CHO), two Multi-Purpose Workers – Male/ Female) and team of ASHAs at the norm of one per 1000 or as per norms for hilly and tribal regions.
- **PHC**– PHC team as per IPHS standards led by a Medical Officer and supported by a staff nurse, pharmacist and laboratory technician.

### ENSURING FULL COMPLEMENT OF HUMAN RESOURCES

- Among the facilities visited during the assessment, Mizoram was the only state that had the full complement at both PHCs and SHCs. (table 3) Lowest proportions of primary care facilities with full complement were seen in Karnataka, Jharkhand and Uttar Pradesh.

**Table 3.** Availability of full complement of human resources in HWCs visited as a part of the assessment

State	Number of HWC-PHCs visited	% of HWC-PHCs with full complement*	Number of HWC-SCs visited	% of HWC-SCs with optimal complement@
Andhra Pradesh	5	40%	10	70%
Arunachal Pradesh	4	75%	6	83.3
Assam	4	25%	6	83.3
Bihar	4	0%	6	100
Chhattisgarh	4	75%	9	44.4
Gujarat	4	75%	9	88.8
Jharkhand	4	0%	6	16.7
Karnataka	4	25%	9	11.1
Maharashtra	9	22.2%	3	66.7
Manipur	3	66.6%	2	50
Meghalaya	4	50%	6	66.7
Mizoram	4	100%	6	100
Nagaland	4	75%	6	66.7
Odisha	4	25%	6	50
Punjab	4	25%	5	80
Sikkim	4	75%	6	33.3
Tripura	4	50%	6	16.7
Uttar Pradesh	4	0%	4	50

\*Full complement for PHC and UPHC was defined as – Medical Officer (MBBS) – 1; Nurse -2; Lab Technician -1; Pharmacist -1

@ **Optimal complement for HWC:** One Mid-level provider/CHO and at least two multi-purpose workers (Male or female)

- While some states did better in ensuring full complement at the PHC level (Chhattisgarh, Sikkim, Nagaland), some did better at the SC level (Andhra Pradesh, Assam, Bihar, Maharashtra, Punjab) and some at both (Arunachal Pradesh, Gujarat)
- At PHC level, deficiencies were noted more for nurses followed by pharmacists, laboratory technicians and none for doctors. Male MPWs were seen in all HWCs in Gujarat, Mizoram and Chhattisgarh, whereas they were not seen in Bihar, Jharkhand, Manipur, and Nagaland. The details of staffing in these facilities by states is provided in the annexe (A7& A8).

## COMMUNITY HEALTH OFFICERS

In another significant departure from the past, the scheme introduced non-physician health worker (generically referred to as Community Health officers (CHO)/Mid-level health care provided (MLHP) at the Sub Health Centre – Health and Wellness Centres (SHC-HWC) level. They are BSc. in Community Health or a Nurse (GNM or B.SC) or an Ayurveda practitioner, trained and certified through IGNOU/other State Public Health/Medical Universities for a set of competencies in delivering public health and primary health care services; designated as CHO with both clinical, public health and managerial responsibilities. The rationale for introducing this new cadre of worker is to augment the capacity of the HWC to offer expanded range of services closer to community, to improve clinical management, care coordination and ensure continuity of care; and to improve public health activities. To support rapid scale up for CHO recruitments, states were encouraged to partner with public health /medical universities to deliver the Certificate Course. Avenues for career progression of CHO in clinical or public health functions up to block, district and regional level have been drawn up. In 2020, as an effort to expedite the deployment of CHOs, the Nursing Council issued directions to all state nursing colleges to integrate the key skills and competencies of the CHO curriculum into the four year B.Sc. nursing curriculum, so that, candidates graduating from this course, could be directly posted at SHC-HWC level. Additionally, an induction training module has been developed for CHOs to build their capacities in estimating their beneficiaries, knowing their population, health promotion & prevention activities and for monitoring & supervision, in order to equip them adequately to perform their roles at their respective place of postings.

- Overall, the addition of the CHO to the Sub Centre team was well appreciated, both by the frontline workers and the community. The shift from a single worker in the SHC to a team-based approach has enabled more efficient task allocation and provision of expanded range of services to the community.
- States such as Chhattisgarh and Assam that already had a pre-existing cadre of mid-level health providers could manage a more rapid scale up. Some states already had a cadre of CHOs (Mizoram), and thus the nomenclature used for this new cadre under CPHC is Health and Wellness Officers (HWOs).

### What stakeholders said?

*Suddenly someone comes and takes over their centre, they do not tolerate it. They do not like CHOs teaching them something."*

#### – State official Karnataka

*"For Ayush doctors there was a conflict of who will be the leader and ANMs said why they should listen to the Ayush doctor."*

#### – State official Odisha

*"I wished to be in a good post and to provide more service to people, that is why I joined as CHO... but after taking training of CHO, I have come to know about a lot of things"*

#### – CHO Odisha

- In the initial stages, Punjab allowed their regular nurses to apply for this post. However, this led to administrative challenges including those related to salary structure and incentives resulting in litigations and thus delayed roll-out. Similar experience was reported from Odisha.
- Only a few states have posted Ayurveda practitioners at SHC-HWCs. In Maharashtra, it was reported that the Panchayat leaders asked for doctors (BAMS/ BUMS) and not a “nurse”. A conflict between BAMS and nursing CHOs was also reported from Maharashtra. Some officials expressed concerns about the identical training being given to CHOs with Ayush and nursing background, as both have very different professional trainings and curriculum.
- Lack of locally available candidates (on account of few nursing colleges within the state) initially resulted in candidates being recruited from other states. However, as all states scaled up the implementation of AB-HWC, the CHOs moved back to their home states. (Bihar, Jharkhand UP, North Eastern States). These states are now planning to restrict recruitment to local candidates. In Punjab, female nurses were preferred over male nurses, since the latter were more likely to resign and go overseas.
- Many states have successfully used state level institutions to roll-out the training of CHO/ MLHPs rather than opt for the IGNOU certificate course (Gujarat – IIPH Gandhinagar & SIHFW, Maharashtra- PHI Nagpur). It was felt that it would be better to have master trainers for CHO who are well-versed about their work rather than subject matter experts.
- CHOs while acknowledging the training to be useful, expressed the need for mentoring, since the training did not prepare them adequately for the managing the myriad functions of the SHC-HWC.
- In the clinical competency assessment, out of the 106 CHOs assessed, 61 (58%) scored  $\geq$  50%, which was considered satisfactory. (figure 4) State and area specific differences in CHO competencies was noted Most CHOs felt confident in management of NCDs, & RCH related conditions and less of emergencies especially injuries, mental health and conducting home deliveries. While the initial seven range of services including NCDs is already being rolled out across HWCs; the remaining packages i.e. mental health, oral health, eye and ear care, emergencies, burns and trauma, elderly care and palliative care are now being rolled out in a phase wise manner. (Table A9 in annexure).

### What stakeholders said?

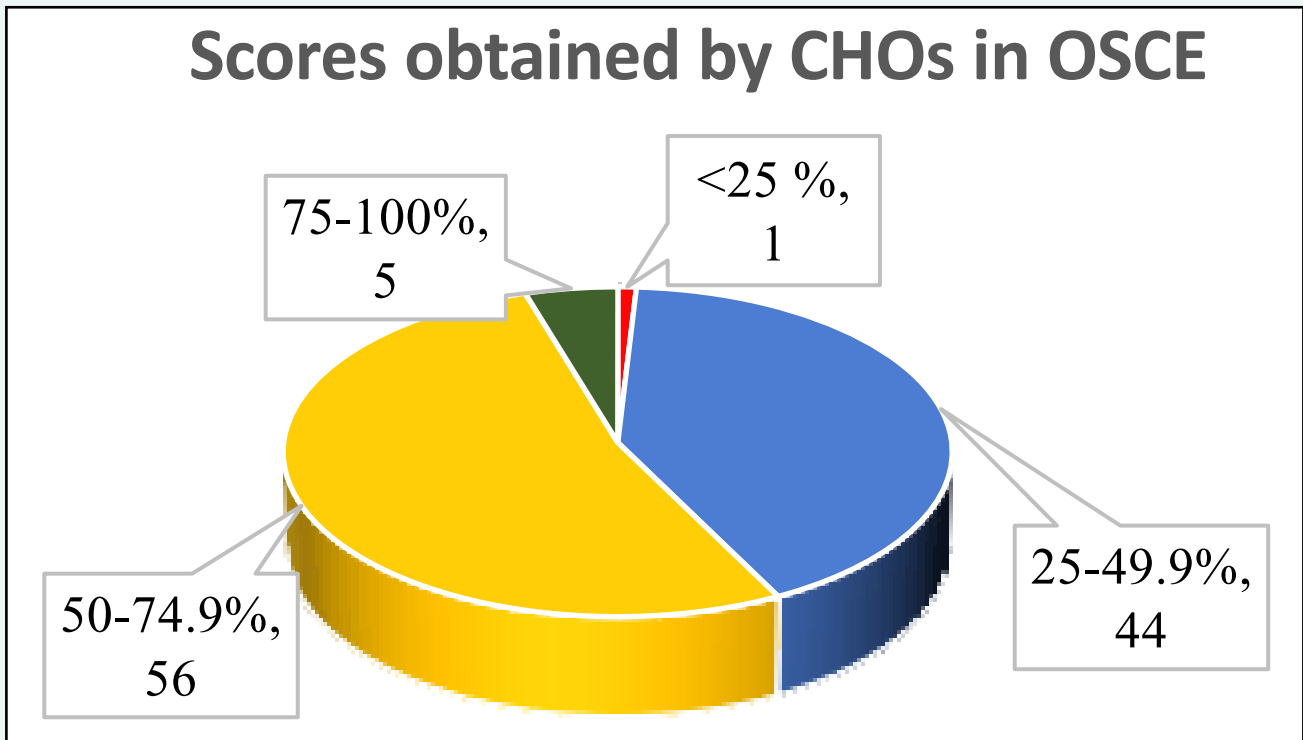
*“We receive lot of support from CHO. We do not know a few things. When we get confused, we get moral support and also support for field work. It is difficult to manage everything singlehandedly. They provide support”.*

**- ANM Arunachal Pradesh**

*“I think our relationship is important, like trusting each other, and instead of waiting for others to do the work, I would start it myself, so that other people can follow, because I work with people who are way senior and elder than me, and it’s not nice to tell them to do this and that, but also, we need to work in harmony, so if I start, they follow me.”*

**- MLHP-SHC-HWC\_L**

Fig 4. Competency score of Community Health Community Health Officers. (n=106)



- Linking of CHO to MO has proven to be an effective solution for tele-consultation, which largely occurred telephonically.
- All interviewed CHOs felt that this was a good career option with a chance to serve the community. None of the CHOs expressed any concerns related to their career progression. They generally reported satisfaction with their role in the health systems, though some felt that their role was not well understood or appreciated by the other members of the team.
- There has been a sense of urgency to roll-out this cadre of workers as they were critical to the provision of expanded range of services which is an essential part of CPHC.

#### **TEAM APPROACH AND DYNAMICS**

- A mixed picture of working relationship between CHO and the sub centre team emerged from the states. Most states reported hurdles in the beginning with things slowly getting smoother. Some states reported that since CHOs were younger and recruited in a contractual post, ANMs resented their leadership position. CHO/MLHPs reported that once they took the initiative to foster teamwork the ANMs responded positively, and they were able to establish good teamwork.
- ANMs and pharmacists also opined that due to the expansion of services, there was better sharing of work between them.
- All states reported conducting regular training of CHOs and the other personnel in HWC-SHC and HWC-PHC on NCDs, ICT initiatives, etc. The duration of training varied widely, with perceptions of nodal officers that this needed strengthening. e-CHO platform was as being used for tele-mentoring in many states. States were encountering some challenges in training of the regular staff as they did not have the motivation to learn new things.

#### **IMPROVING AVAILABILITY OF MEDICINES & DIAGNOSTICS**

Ensuring availability of essential drugs and developing basic diagnostic facilities at the HWC was identified as being critical to delivering CPHC. In line with the paradigm shift envisaged, the HWC

are expected to provide a broader range of services and this necessitates expanding the list of essential medicines and diagnostic services currently available. The first step in this process was to ensure availability of all medicines as per the SHC- EML (Essential Medicine List). This also applied to consumables, equipment for diagnostics listed as per the Indian Public Health Standards (IPHS) for each level. The guidelines also suggest that additional medicines and equipment and consumables for diagnostics be added at the HWC level in accordance with the expanded range of services as per the State requirements and resources. Drugs and Vaccine Distribution Management System (DVDMS) is a software platform to automate various activities related to purchase and distribution of medicines and vaccines. It deals with purchase orders, inventory management and distribution of various drugs. The DVDMS dashboard enables monitoring of purchase and stock levels. e-Aushadhi is a web-based application dealing with the management of stocks of various drugs and surgical items required by different district drug warehouses and used for indenting and supply.

With regards to the diagnostic services at the HWC, a hub and spoke model was to be established by creating the hub (Central Diagnostic Unit) at CHC or block level PHC for 20-30 HWCs, depending on the distance and population served. The objective is to minimize the movement of patient and improve the timeliness of reporting.

## **INVENTORY MANAGEMENT**

- The initiatives aimed at ensuring availability of medicines, diagnostics seem to be working well with a clear trend of shifting to digital method of indenting and inventory management.
- The use of DVDMS for indenting and supply chain management up to the level of PHC was being adopted by the states. Some States were still in the process of shifting to the DVDMS portal for indenting as training is still ongoing.
- Manual indenting was continuing in many states, especially at SHC-HWC level. Most CHOs reported indenting of drugs manually from the PHCs, where the indent would be put on DVDMS portal or could be handled manually. The collection of medicines and supplies was also occurring manually in many places.
- Use of e-aushadhi system for inventory management was very much appreciated by the staff as the process was easy, it enabled keeping track of expiry dates as well. State like Andhra Pradesh and Bihar were using e-aushadi at subcentre level through the handhelds.
- Some States (Andhra Pradesh, Maharashtra) have allocated funds for emergency drug purchase at the HWC level. Some also used untied funds for the same.
- Stockouts were still being reported from many states, even for EDL. This was more frequent for drugs prescribed more often or for longer duration especially NCD medicines. At the time of stockouts, patients were being referred to purchase medicines from Jan Aushadi Kendras.
- Some of the problems identified in the indenting and inventory process for medicines were
  - ◆ Pharmacists, being contractual, changed repeatedly for establishment of a regular system.
  - ◆ In the SHC- HWCs, poor connectivity hindered effective use online based portals.
  - ◆ Poor forecasting of medicine demand due to inadequate capacity for forecasting among the staff members and because OPD attendance had not yet stabilized.
- While few hub-and-spoke models for diagnostics were available within public sector or as a private-public partnership, these are yet to be setup in most states.

- Key barriers for improving availability of diagnostics at HWCs were
  - ♦ Lack of electricity for refrigerators as reagents/kits need to be kept at appropriate temperature.
  - ♦ Lack of storage space in HWCs
  - ♦ Purchase and repair of laboratory equipment.

## AVAILABILITY OF MEDICINES AND DIAGNOSTICS

The credibility of a Health and Wellness Centre rests on the availability of essential medicines and diagnostics for a wide range of health care needs of the population served by the HWC.

- Overall, all stakeholders reported an increase in the availability of medicines and diagnostics especially for NCDs, which was supported by the facility audit findings. This was also cited as a reason for improved trust among the patients and increased attendance to the HWCs by the health care providers.
- At subcentre level the mean number of medicines available in HWC-SHCs was 16.9 as compared to 11.4 in non-HWC SHCs (fig 5). This higher availability was most for NCDs (2.1 Vs 0.6) and less for communicable diseases (4.2 Vs 3.2) and MCH (2.5 Vs 2.2).
- The availability of diagnostic tests was also higher in HWCs (mean of 6.8) and non-HWCs for (mean of 4.7). This was seen across all the three categories of NCDs, MCH and CDs.

### What stakeholders said?

*The medicines get short and it is not available when it is required. We try to demand it, but we don't get it at our place. We have to go by ourselves to get it. As per the register maintained we get the medicine."*

**- CHO, Jharkhand**

*"We have just started (DVDMS), but I think there's lot of advantages. It will be easy to track the drug supply whether one is getting stockout and whether we have enough supply or not. And another thing is that sometimes the internet is down and we have problems because of that."*

**- MO\_UPHC-HWC - Mizoram**

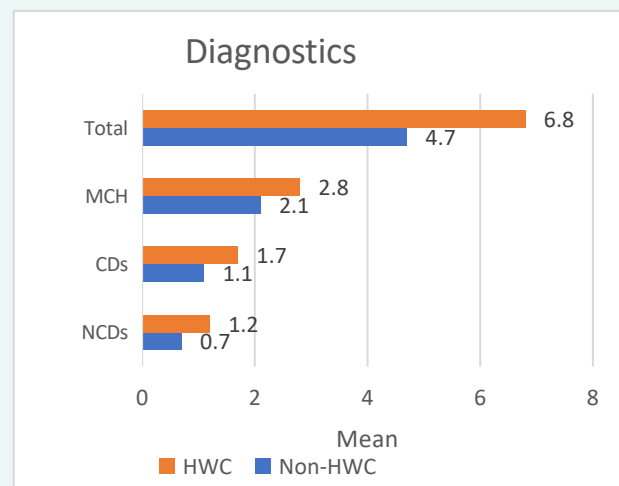
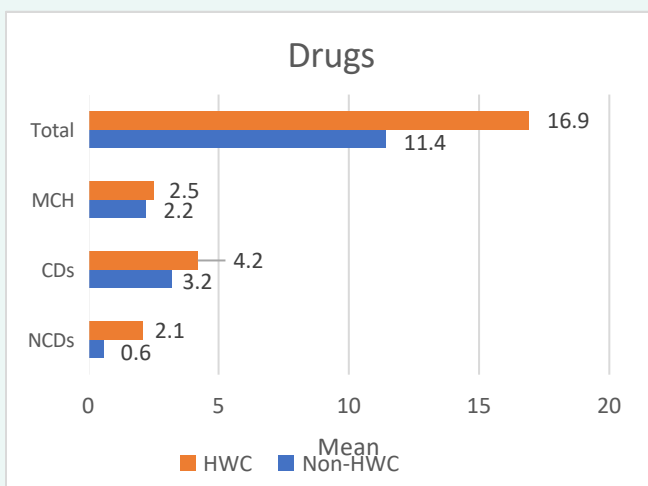
*"The reagents are stored in the refrigerator at the temperatures between 2-8 degrees. And if there is no power supply, we do not have any backup but we try our best to maintain and track the stocks by recording them in the stock register."*

**- LT-HWC Mizoram**

*With increase in medicines and diagnostic availability, more people are coming to Health and Wellness Centres - MPW Chhattisgarh*

*NCD patients get one-month free medicines at home, that saves transportation expenses."*

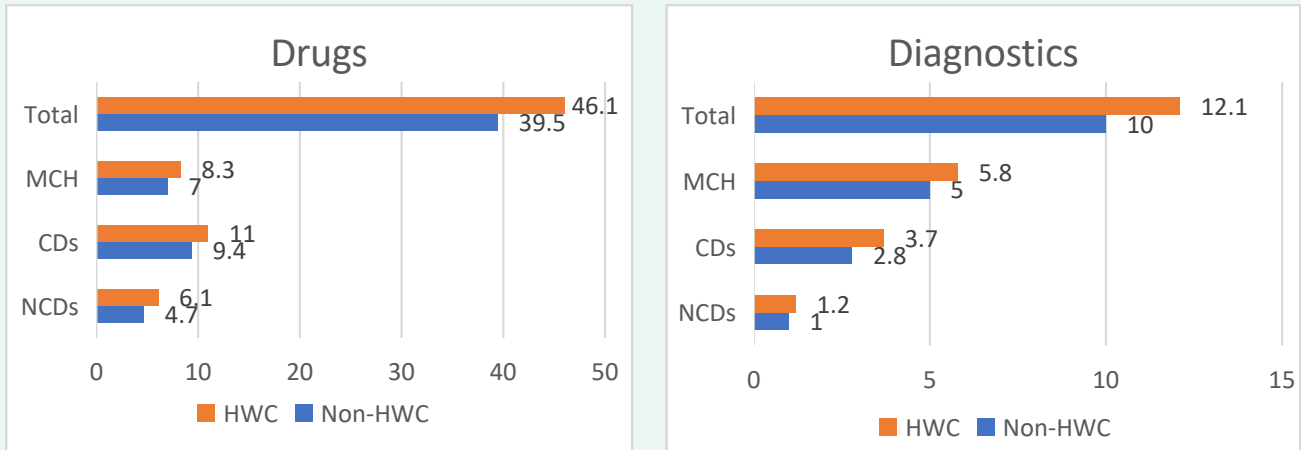
**- User Gujarat**



**Fig 5.** Mean number of drugs and diagnostics available in the health facilities visited by groups at SHCs (Source: Facility Assessment Checklist)



- Increased availability of medicines and diagnostics was also seen in HWC-PHCs (fig 6). Mean number of medicines was 46.1 in HWC-PHCs versus 39.5 in non-HWC-PHCs. Similar difference was also noted for diagnostics (mean of 12.1 versus 10.0).
- State level differences in the availability of medicines and diagnostics at SHC and PHC level are shown in Annexure (table A10 & A11)
- Provision of emergency care including availability of medicines and oxygen supply continue to be a challenge at most PHCs.



**Fig 6.** Mean number of drugs and diagnostics available in the health facilities visited by groups at PHCs/UPHCs (Source: Facility Assessment Checklist)

## INFORMATION AND COMMUNICATION TECHNOLOGY RELATED INITIATIVES

The use of standardized digital health record and establishing a seamless flow of information across all levels of health care facilities is an aspirational goal. Use of Information and Communication Technology (ICT) is essential to enable efficient delivery of services at the HWCs. An ICT system has been envisioned at the Health and Wellness Centres, to support the HWC team in planning, recording, monitoring and management of delivery of all essential services. It entails registering the population in a database, (Population Enumeration, the first critical step in identifying the target population in every HWC) record service delivery including teleconsultations, manage and monitor service delivery, support logistics and inventory management, use for Capacity Building including the use of Massive open online courses (MOOC) and use of platform such as ECHO (Extension for Community Health Care Outcomes) and for reporting and monitoring. The ICT system, when fully functional, is expected to reduce the burden of data recording and reporting for front line workers and service providers to less than 10% of their total time. Once the digital system is made fully operational, and all connectivity related challenges addressed, a gradual phase out of paper-based records and registers is proposed. To support ICT transition, ASHA is expected to have smartphone and MPWs to have tablets, while the CHO is provided with a tablet/handheld and desktop/laptop is provided to MO at many states.

- Population enumeration was going on in all states with the help of ASHA and MPW/ANMs. Some states were doing this through tablets given to ANMs or ASHAs, while others were doing it manually followed by entry into tablets at the ANM level. Thus, a population database is under development.
- All states reported increased use of ICT for different aspects of health care and its management and appreciated that it has helped to increase the reach and efficiency of the system.

- However, malfunctioning of IT systems was also a cause for frustration to the health workers. Many noted problems with their devices or lack of training for the use of it, as well as internet related issues. Some of the common complaints noted were
  - ◆ Continued use of paper-based reporting as well as reporting by both manual and digital mode
  - ◆ The need to work on multiple applications and portals for different programs and initiatives.
  - ◆ Non-availability of hardware resulting in the need of sharing devices between staff
  - ◆ High data entry workload on doctors who have other responsibilities as well.
- Many states are taking initiatives at their own level to address these problems recognizing the need for increased use of IT solutions. Some have developed their own CHO/MLHP application which has more granular information than the Gol developed App. Such state -specific solutions can also be a source of interoperability problems.
- The problem of poor digital literacy especially among the older regular staff was also pointed out as a challenge to effective roll-out of digital initiatives.
- End users at the facility level shared that due to multiple applications in use, there is duplication of records and thus double burden in terms of feeding the data on different software/applications for same facility.
- The use of IT systems for program monitoring has not yet become a regular feature.

## EXPANDED SERVICE DELIVERY

HWCs would provide expanded package of services beyond the tradition RCH and communicable diseases and common ailments (Box 1). These services would get implemented in different states in a phase wise manner depending on the maturity of the systems and availability of resources. States will also have the flexibility to expand the service package to address problems of local importance based on disease prevalence and community feedback.

### What stakeholders said?

*“While reporting is being digitalized, paper reporting is also still going on side by side for many of the services that are being provided, so it’s both.”*

#### - SO-MD-NHM (Mizoram)

*“State and central government programmes are running parallel, different data are collected for both of them. New Programmes keep coming up and the demand for new data increases. Why cannot we operate with a single app?”*

#### - MO Gujarat

*There is double burden of documentation of same data in different apps, as in NCD app with HWC app or ABHWC app with HMIS. Most of the institutions are doing manual reporting also above this.*

#### -District Level Official (Sikkim)

*“When I go on leave, there is no one to do data entry especially because the amount of data to be entered is also huge”.*

#### - MO Manipur

### What stakeholders said?

*Digitalizing will make things faster and transparent, but it is important to ensure good internet availability”*

#### - Official (Uttar Pradesh)

*Without an additional tablet, it will be simply impossible to go for the digitization of records. Another issue is that now the ANMOL is given to the ANM. It unnecessarily creates misunderstandings because sometimes the ANM needs it and sometimes the CHO is using it. If something goes wrong, they blame each other.*

#### - SNO Sikkim

*“There is a software tsunami”*

#### - State Official Karnataka

*“If you take the instance of HWC portal, we are using that data for analysing the footfall, the availability of drug or other things. Obviously, we have used it for monitoring, but when you talk of planning, we have not reached that phase. We can use the data for planning and improving services in the future.*

#### - State Official Bihar



## NON-COMMUNICABLE DISEASES PACKAGES

- The CBAC forms being used as a community-based assessment tool, are being administered across all states, thus enabling frontline workers to mobilize the community for screening at the HWCs. All districts reported of completion of NCD trainings for all cadre of health care workforce at HWC level.
- All HWCs reported of providing NCD services pertaining to Hypertension and Diabetes, including screening, management and referral services. Availability of NCD services is also a predefined functionality criterion for any primary facility to be upgraded as HWCs. The facilities reported uninterrupted NCD services during COVID 19 pandemic, where doorstep delivery of services was ensured through ASHA and community volunteers during movement restrictions.
- Availability of NCD services as an added package at HWCs did not affect the pre-existing RCH related services.
- All states reported screening activities for breast, cervical and oral cavity cancers being undertaken at HWCs. However, SHC/HWCs with a male CHOs were not providing cervical cancer screening services, which is through Visual Inspection with Acetic Acid (VIA), as was not acceptable by community members.

## OTHER PACKAGES (8-12)

- The current status of provision and awareness of expanded range services being provided in the HWCs and Non-HWCs (both SHCs and PHCs) visited during the assessment is shown in table 4.

**Table 4.** Service availability in SHCs and PHCs and their awareness among users by HWC conversion status

Type of facility (Sample size)	SHCs		PHCs/UPHCs		SHCs		PHCs/UPHCs	
	Non-HWC (118)	HWC (102)	Non-HWC (48)	HWC (69)	Non-HWC (1146)	HWC (1162)	Non-HWC (488)	HWC (836)
Service	% Of health facilities providing these services*				% Of users of the facility who were aware of these services **			
Screening for Diabetes Hypertension, Cancers	69	99	85	99	29	34	36	40
Oral/dental care	21	83	50	80	8	10	10	14
Eye Care	31	88	69	94	14	28	24	28
Elderly & Palliative care	31	70	44	72	17	31	27	36
Ear, Nose, Throat care	22	82	58	88	13	16	12	16
Mental health	32	48	35	65	24	42	38	36
Wellness and Yoga	17	82	25	75	9	25	13	21

Source – \*Health Facility Assessment Checklist; \*\* User Survey

- The availability of expanded range of services beyond NCDs was a work in progress. The national guidelines for these are just being released to be followed by training. Hence these were not the focus of the evaluation. However, preparedness for rollout was to be assessed.
- Many states have rolled out some of these packages in collaboration with academic institutions and non-governmental organizations. These include basic Eye/ENT/oral/elderly/palliative/mental health services.

- Substantially more HWCs were providing these services as compared to non-HWCs. Mental health and elderly and palliative services were the least rolled out services. Many states said that the training for these services have not yet been held.
- The awareness of availability of these services among the community was higher in HWCs, but still poor (< 50 % for all). The respondents also believed that along with rolling out these services, efforts to build awareness among the community needs to be increased.
- Concerns were raised by District and State level officers about the pace of addition of newer services as they felt that the existing health system is already overburdened and the increase in services must be gradual to enable the system to adjust itself.
- Respondents from Assam stated that emergency preparedness and disaster planning was very essential in flood prone states so that the planning for emergency and disaster preparedness can be decentralized.

### ENSURING CONTINUUM OF CARE

Continuity of care is one of the key tenets of primary health care. Continuum of care spans for the individuals from the same facility to her/his home and community, and across levels of care. Ensuring care from the level of the individuals/family through to the facility level can be ensured by a team of workers from ASHAs to manage at the community level to specialist at the district level. ASHAs are mandated to support in follow up for compliance to treatment and community mobilization for life style changes and behaviour modifications, through regular home visits (back referral). Multi-purpose workers/ CHOs can fix appointments with consultants, use tele-consultation to improve availability of higher-level care and maintaining the care continuum, by addressing physical and geographical access. In effect, every existing HWC providing the expanded package of services, would manage a large proportion of disease conditions and organize referral for consultation and follow up with doctor at the PHC level. These health facilities would now need to provide referral services beyond emergency obstetric care, to include general medical and specialist consultation as well as first level of hospitalization. One of the expected benefits of the HWCs is care coordination. A strong network of HWCs at the sub district level would facilitate resolving more cases at primary level and reduce overcrowding at secondary and tertiary facilities for follow up cases as well as serve a gate keeping function to higher-level facilities, and better functioning the lower level facilities.

- Two-way linkages between SC-HWC and PHC-HWCs have improved as also between SC-HWCs and the community.
- Follow up mechanism needs to be established and strengthened, as tracking of patients referred to higher levels is not yet institutionalized, and needs attention. Back-referral systems from secondary to primary levels is yet to be effectively set up.

#### What stakeholders said?

*“Centre does not have basic amenities like electricity, water etc. Teleconsultation Kaise Karenge”*

**– CHO Uttar Pradesh”**

*“We have noticed that if HWC is working well, if the CHO is really good, then the OPD load in PHC has decreased as patients are now going to subcentres, like hypertensives.... If they get things in their own village, they won't come to PHC except if they are really sick*

**– SNO Meghalaya**

*Initially therefore the load at the higher centres will increase because you are identifying more people. Once things have been managed and settled, then the load may decrease.”*

**- State official (Andhra Pradesh)**

- The documentation of referral continues to be paper-based; through registers and referral slips with little use of technology. Telephonic calls to the doctors both before referral and for follow-up was occurring.
- Review of records from facilities showed that about 45% of NCD patients were being referred to higher facilities and about 63% of them were complying to that advice. This was not very different between HWCs and non-HWCs. State differences are highlighted in Annexure table A12.

### What stakeholders said?

*A few days ago, I was not feeling good. ASHA didi and the health worker helped me at that time. As I am aged and cannot walk properly, ASHA didi delivered medicine and ANM didi did my health check-up at home itself"*

#### - Palliative care patient in Odisha

*"Referral linkages need to be made stronger in terms of diagnostic services and follow up services. Strong strategy needs to be made from the expert level nationally. This will reduce out of pocket costs."*

#### - Official (Gujarat)

- ASHAs voiced that when they take patient (high-risk pregnant women) to higher facilities, they are not given due respect as a member of the health team. This issue may become important as referrals increase.
- No clear evidence was available on success of "gatekeeping" role. This was because increase in services including screening of NCDs resulted in more referral to the higher facilities. However, there was a perception among the doctors at Taluk and District Hospitals that they were getting "quality patients" meaning that only really those needing secondary care were coming there now. It was also felt that the gatekeeping effect will take some time to be seen when the primary facilities cover the entire range of services for sufficiently long-time for the community to take note of it.
- All the states had started implementing teleconsultation as a part of the packages of services at HWCs. All states were using E-sanjeevani software for the teleconsultation, and it was reported to be very useful.
- In general, three models for teleconsultations were noted.
  - ◆ Linking a local medical college as a hub with peripheral health facilities as spoke (most common).
  - ◆ Linking district hospitals with its subsidiary health facilities.
  - ◆ A "call centre" model managed by a continuous set of doctors to provide teleconsultation.
- Some states have fixed targets for teleconsultations for CHOs/MOs. This was resented by them as primary reasons for lower teleconsultation were poor connectivity and non-availability of consultant, and CHOs/ MOs could not be held accountable for it.
- The system of fixing day-wise specialists was not appreciated by MOs as the patients do not visit health centers based on specialist's availability.
- Some of the key challenges identified for the implementation of the teleconsultation services were:
  - ◆ non-availability of internet infrastructure,
  - ◆ use of handheld computers resulting in poor quality video.
  - ◆ non-availability of consultants leading to increased waiting time for patients.

## HEALTH PROMOTION AND COMMUNITY MOBILIZATION

### HEALTH PROMOTION

Health promotion and information provision at the community level is an integral part of the expanded package of services under CPHC. Wellness component including Yoga is to be mainstreamed into the health care delivery system, by actively engaging practitioners of these systems and HWCs provide a platform for enabling this integration.

- Most facilities reported that health promotion in the form of yoga services were being made available in the HWCs. In addition, all states reported that they were promoting the Fit India and Eat Right Campaigns of the Govt. of India. Innovative approaches like Zumba Sessions (Mizoram, Chhattisgarh), Reiki Sessions (Gujarat) were also being provided. Use of anganwadis, schools or places offered by Panchayats as alternative places for yoga sessions was reported by many states.
- Use of Health Promotion calendar (weekly or monthly) focusing on specific themes was noted among many states. Visits to Schools for nutritional assessment, and community sessions for awareness generations were also held. Special events like cycle rallies, cricket matches were also held as per local preferences. The need for uploading pictures of wellness sessions on the AB-HWC portal along with geo-tagging was reported to be difficult primarily because of slow internet speeds in remote areas.
- Sporadic community-based activities related to addressing substance use (tobacco, alcohol, drugs) or diet and physical activity was reported. In general, there was support from community for such activities.
- Key challenges in its implementation of health promotion activities were:
  - ♦ Lack of availability of space in the HWCs.
  - ♦ Availability and affordability of yoga Instructors and other trained human resource for such activities.

### COMMUNITY MOBILIZATION

Jan Arogya Samiti (JAS) is an institutional platform for community participation in the management and governance of the HWC-SCs and HWC-PHCs. Guidelines for JAS has been recently launched. They are meant to ensure accountability for provision of health care services and amenities and mentor VHNCs.

- The JAS is operational in some states (Andhra Pradesh and Chhattisgarh), while others are in the process of forming and implementing JAS effectively. Some states like Karnataka have similar committees like Aarogya Raksha Committee functional at the PHC level. There was confusion about the roles of JAS vis-à-vis VHSNCs among the different stakeholders.
- Mahila Aarogya Samiti (MAS) has also been formed and was functional at certain states like Jharkhand, Gujarat, Andhra Pradesh and Punjab
- Patient support groups (PSGs) are also formed in some states like Gujarat. There was also active involvement of PRI in states like Andhra Pradesh, Chhattisgarh, Jharkhand, Mizoram, Nagaland, Meghalaya, Odisha and Manipur. The views of patients on PSGs varied. Some felt that they were of no use and one has to travel for no reason, others believed that it would benefit them. CHOs feel that PSGs have aided in the mobilization of patients tremendously.

- High involvement of Panchayat and local politicians in activities of HWCs was reported from Jharkhand and Tripura. This involvement was in initial gap analysis and assistance in conduct of health promotion activities.

## **HWCS AND COVID-19 PANDEMIC**

### **Role of HWCs in COVID-19 pandemic response**

- Overall, the officials reported that the PHC team worked very hard during the COVID pandemic to address COVID-specific issues and to maintain essential services. Having expanded primary health care team in times of COVID was seen an asset to handle the unanticipated increased load of pandemic control and relief operations. While CHOs were posted for the COVID duty, ANMs and ASHAs were spared so that SHC-HWC could remain functional. Thus, the availability of additional worker seems to have resulted in maintaining essential health services at HWCs.
- Health care providers at PHC and SHC levels reported that key services like immunization, tuberculosis case-finding and treatment were affected for varying periods. DOTS services were not much interrupted. ASHAs undertook home visits to COVID cases, conducted community mobilization to promote adherence to masking, social distancing etc. They were provided with masks, sanitizers and gloves but no PPE kits.

### **IMPACT OF COVID-19 ON ROLL-OUT OF AB-HWCS**

- The essential health services were disrupted during the COVID period due to:
  - ◆ Restricted movement of people and goods.
  - ◆ Hesitation on the part of people to visit HWC / any health facility.
  - ◆ Public perception that the HWC are closed or non-functional.
  - ◆ Facilities being converted into dedicated COVID centres
  - Field sessions not held for various activities.
- COVID-19 impacted the roll-out of AB-HWCs in multiple ways. These were related to:
  - ◆ Delay in the completion of training of CHOs and subsequent operationalization of HWCs.
  - ◆ Deputation of CHOs (including those on training) and other staff for COVID related duties.
  - ◆ Non-availability of workers for building work/branding
  - ◆ Disruption of procurement, supplies and logistic

### **KEY CHALLENGES AND STATE-LEVEL INITIATIVES TO ADDRESS THEM**

Existing good practices in the states were identified during interviews with stakeholders and facility visits. The criteria for defining best practices were that it must

- address a specific health system problem or barrier in AB-HWC Implementation
- be replicable in other states and districts
- make moderate to high impact towards achievement of objectives of AB-HWC.

Planned activities like campaigns or training or implementation for an additional specific service package were excluded.

This list of best practices shown in Table 5 does not intend to be exhaustive but only indicative of the innovative spirit among the States to address the barriers being faced during the implementation.

Most of the initiatives were related to the use of technology – be it for indenting of medicines, teleconsultations, or tele-training. These themselves led to two types of problem which needed solutions – first being the lack of access to internet connectivity especially in more remote corners of villages of north-eastern states. The other problem of multiple IT fixes to the problems was the proliferation of softwares for which some states developed integrated applications. These IT solutions also catered to improved monitoring and eased financial payments.

These practices reflect the unique geographical-social-political situation of the state and each state will have to review the replicability of the practice in their situation.

**Table 5.** List of key barriers and state-level initiatives to address them

Domain	Problems/Barriers	Best Practices by States
Infrastructure (Beyond Health sector)	<ul style="list-style-type: none"> <li>Lack of electricity in peripheral health facilities</li> <li>Lack of local identity to health facilities</li> </ul>	Silko foundation work in the area of solar energy. Silko has agreed to power 100 SHCs with solar lights through Corporate Social Responsibility (CSR) funds wherein the contribution by the private player was fixed at 40% and the government would fund the remaining 60%. <b>(Meghalaya)</b>
		Branding of AB-HWC as “ <b>Tandurust Punjab Sehat Kendra</b> ” in Punjabi to give local identity and ownership. <b>(Punjab)</b>
Expanding Human Resources	<ul style="list-style-type: none"> <li>Poor connectivity makes intensive online training of CHO difficult.</li> <li>Delays in CHO recruitment</li> <li>Poor team dynamics</li> <li>Lack of full complement of health workers</li> </ul>	Low-bandwidth training module of CHOs and use of blended training using both offline and online training of CHOs. Morning 4 hours at district hospital and afternoon 4 hours online theory sessions. <b>(Karnataka)</b>
		A decentralized virtual training model for CHOs implemented through KGMC and State and Regional HWTC with KGMU conducting the certification examinations. <b>(Uttar Pradesh)</b>
		Setting up of Program Study Centres under IGNOU course in Nursing Skill laboratories <b>(Orissa)</b>
		Online exam for CHO recruitment with result declared the same day. CHOs can choose their place of posting based on the merit roster. <b>(Karnataka)</b>
		Team Huddle – HWC staff meets every morning to discuss their duties and responsibilities for the day. CHO leads the meetings and assigns responsibilities <b>(Gujarat)</b>
		Posting of male Health and Wellness Assistants at SC-HWCs <b>(Uttar Pradesh)</b>
Finance and Performance based payments	<ul style="list-style-type: none"> <li>Delayed payment of PBIs to ASHAs</li> <li>Suboptimal monitoring of CHO performance</li> </ul>	ASHA Sangini App for ASHA Mentors to calculate PBIs for ASHAs. <b>Uttar Pradesh</b>
		An online reporting portal for CHO monthly monitoring of their work. Uses the fifteen indicators and can be used to calculate PBIs as well. <b>Assam</b>
		Swastha Sewa Dapoon is a CHOs performance-based monitoring system portal. It has four modules – first for CHO to input the data for indicators, BPM to verify the data, through District Program management unit for its final approval from ADC health. The system then calculates the payment which then gets paid. <b>(Assam)</b>
IT based Initiatives	<ul style="list-style-type: none"> <li>Multiplicity of digital applications for different programs/ initiatives</li> </ul>	Development of MLHP app that lists the beneficiaries who can be tracked for details and provision of services. Can also be used for monitoring CHOs and calculation of their PBIs. <b>(Andhra Pradesh)</b>
		Techoplus - a novel mobile based IT application at SC-HWCs, which integrates the RCH, the NCD application, and Nikshay. <b>(Gujarat)</b>



Access to medicines and diagnostics	<ul style="list-style-type: none"> <li>Absence of electronic indenting at SHC level.</li> <li>Poor access to diagnostics</li> </ul>	An electronic indenting and stock keeping at the sub centre level using the e- <b>ashadhi</b> portal. ( <b>Andhra Pradesh</b> )
		Mobile vehicle mounted laboratory to villages. ( <b>Manipur</b> )
		Hamar Lab Initiatives based on a Hub and Spoke Model where blood samples from periphery are transported in insulated boxes to the main lab located at district hospital. ( <b>Chhattisgarh</b> )
Expanded range of services	<ul style="list-style-type: none"> <li>Lack of access to emergency care</li> <li>Lack of Integrated care</li> </ul>	104 Mobile medical services with a centralized roster of doctors for making monthly visit to all SHC-HWCs. ( <b>Andhra Pradesh</b> )
		Bike ambulances used to provide emergency medical interventions in field. These bikes are available for carrying medicines, vaccines, diagnostics and other field travel. "First responder" role has been added to it. ( <b>Arunachal Pradesh, Chhattisgarh, Assam</b> )
		Aarogya Samanvay – Integration of Allopathy and Ayurveda/ Yoga by training of the CHOs to integrate them. ( <b>Gujarat</b> )
Health Promotion & Community Participation	<ul style="list-style-type: none"> <li>Lack of Yoga trainer for Yoga sessions in HWCs</li> <li>Non-adoption of healthy lifestyle</li> <li>Lack of Community Participation</li> </ul>	Training in Yoga/Reiki provided to CHOs for conducting training sessions in the HWC ( <b>Uttar Pradesh, Sikkim, Gujarat</b> )
		"Jawabdar Kutumb" – Responsible Family to be scored based on one indicator for each package of services. Families doing well will be felicitated. ( <b>Maharashtra</b> )
		Community mobilization by orientation of village leaders on CPHC with emphasis on community participation through VHNSCs. Committees mobilized local funds, monitored constructions. Has increased community ownership. ( <b>Nagaland, Manipur</b> )
		The Village Volunteers 1 for every 50 Households are a part of the Village Secretariat Model ( <b>Andhra Pradesh</b> )
Continuum of Care	<ul style="list-style-type: none"> <li>Poor treatment of patients referred at the higher facility</li> <li>Tracking of NCD patients</li> <li>Disruption of NCD services due to COVID</li> <li>Lack of integrative services.</li> <li>Lack of access to specialized care</li> </ul>	Establishment of "HWC Window" at all CHCs/DH to serve as a registration and triaging point facilitates two-way referral of all beneficiaries. ( <b>Chhattisgarh</b> )
		Piloting of a two-way linkage in Nagari Block, Dhamtari district, through digitization. Currently the providers are using Google sheets in some places. ( <b>Chhattisgarh</b> )
		A NCD tickler bag is being used to track NCD patients on a monthly basis. In the bag, check-up details of each visit is placed in the pocket of next due date. Worker can use this to prepare a follow-up list. ( <b>Assam</b> )
		Chemotherapy centre with 2 beds set up at UPHC after training of one medical officer and two staff nurses to provide continuity of cancer care during COVID-19. ( <b>Chhattisgarh</b> )
		The state has registered 23,000 doctors from Public Health Department for e-Sanjeevani with a roster of about 100 doctors being available online per day for consultation with the HWCs. ( <b>Maharashtra</b> )
		Naga Telehealth initiative - the CHOs have been provided with tablets/laptops and sim-cards. With the help of these, The HWCs are connected through a hub and spoke model to District Hospitals and Medical Colleges for conducting medical consultations virtually. ( <b>Nagaland</b> )
		Linkage of e-UPHCs with private hospital (Apollo Hospitals) for teleconsultations in cardiology, orthopaedics, endocrinology etc. ( <b>Andhra Pradesh</b> )

# ANNEXURES

## TABLES A1-A12

**Table A1. Number of SC-HWCs that reported data during the period (July 19-March21)**

States	2019												2020												2021		
	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar						
Andhra Pradesh	33	32	48	50	66	66	65	65	65	59	62	62	62	62	63	64	65	68	69	69	71						
Arunachal Pradesh	0	5	5	5	5	5	5	6	5	3	3	4	4	5	5	6	6	6	6	6	6						
Assam	4	4	3	3	3	3	4	30	26	21	20	12	12	10	11	17	28	37	40	41	41						
Bihar	1	4	5	6	6	6	6	6	6	1	1	3	2	3	4	5	6	4	6	6	6						
Chhattisgarh	4	76	75	67	78	85	85	85	85	86	86	86	86	86	86	86	86	86	86	86	86						
Gujarat	63	63	64	64	62	66	67	67	67	67	63	64	64	65	67	68	68	67	66	67	66						
Jharkhand	48	48	45	46	48	45	45	46	45	18	12	48	47	27	24	29	37	38	40	42	41						
Karnataka	57	57	59	58	58	59	61	61	61	61	60	61	61	61	57	58	60	60	60	63	63						
Maharashtra	18	24	23	22	22	22	21	21	22	23	23	23	22	22	22	21	21	23	24	23	23						
Manipur	13	11	19	25	21	23	27	26	25	21	24	23	24	23	22	26	23	25	24	24	21						
Meghalaya	6	9	9	10	11	11	10	10	10	10	10	10	11	11	11	11	11	11	11	11	11						
Mizoram	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
Nagaland	11	12	13	14	13	12	11	10	7	5	5	10	13	13	13	13	13	12	12	12	11						
Odisha	1	1	1	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	11	12	12						
Punjab	0	0	0	21	81	87	86	87	84	83	83	83	86	87	89	89	90	90	91	91	91						
Sikkim	7	8	8	8	8	8	8	8	8	8	8	7	7	7	7	7	7	7	7	7	7						
Tripura	26	27	27	27	27	27	27	28	28	28	28	28	28	28	28	28	28	28	28	28	27						
Uttar Pradesh	19	20	21	21	20	20	21	21	23	20	23	23	23	23	23	23	22	23	22	22	22						

Table A2. Number of PHC-HWCs that reported data during the period (July 19-March21)

States	2019												2020												2021		
	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar						
Andhra Pradesh	65	68	85	86	86	86	86	86	86	87	86	86	86	86	86	86	86	86	86	86	86	86					
Arunachal Pradesh	0	1	1	1	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0					
Assam	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3	4	5	4	4					
Bihar	0	0	20	21	22	22	22	21	21	1	3	11	9	16	21	21	21	19	20	20	18	18					
Chhattisgarh	1	19	20	21	21	23	23	23	23	23	23	23	23	23	23	23	23	24	24	24	24	24					
Gujarat	32	39	44	45	57	63	73	84	83	79	79	80	80	79	80	81	81	78	79	79	77	77					
Jharkhand	1	0	0	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0					
Karnataka	0	0	14	13	14	14	14	14	14	12	12	11	11	14	14	12	14	14	14	14	14	14					
Maharashtra	0	8	9	14	14	11	10	11	15	84	90	90	91	90	75	79	94	95	92	92	91	91					
Manipur	0	0	0	1	0	2	1	2	2	1	1	1	1	1	2	2	1	2	2	3	3	3					
Meghalaya	1	1	1	1	1	1	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3					
Mizoram	2	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2					
Nagaland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
Odisha	53	53	53	52	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53					
Punjab	0	0	0	0	0	1	9	14	18	14	13	14	14	13	11	11	11	10	10	11	13	13					
Sikkim	1	1	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2					
Tripura	0	5	5	11	10	11	11	10	8	7	5	4	3	3	2	2	3	3	2	2	2	2					
Uttar Pradesh	21	25	25	25	25	25	25	24	26	16	24	21	20	21	21	22	22	21	21	20	20	20					

Table A3. Number of UPHC-HWCs that reported data during the period (July 19-March21)

States	2019												2020												2021		
	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar						
Andhra Pradesh	28	28	29	29	29	29	28	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29					
Arunachal Pradesh	0	3	3	3	3	3	3	3	3	2	2	2	2	2	2	3	3	3	3	3	3	3					
Assam	0	0	0	0	0	0	0	0	3	2	1	1	2	2	2	2	2	3	3	3	3	3					
Bihar		1	8	8	8	8	8	8	8	2	2	4	6	6	6	8	7	7	6	6	6	4					
Chhattisgarh	0	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4					
Gujarat	11	11	11	11	11	11	11	11	13	13	13	13	13	13	13	13	13	13	13	13	13	12					
Jharkhand	4	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3					
Karnataka	0	0	23	23	22	23	23	23	22	23	23	23	23	23	23	23	23	23	23	23	23	23					
Maharashtra	0	0	0	26	29	29	29	29	22	21	21	21	20	20	21	21	21	21	20	19	18	18					
Manipur	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Meghalaya	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1					
Mizoram	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
Nagaland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
Odisha	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2					
Punjab	0	0	0	0	1	1	7	13	6	6	7	9	9	10	9	9	9	8	6	7	8	8					
Sikkim	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
Tripura	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
Uttar Pradesh	14	18	18	18	18	18	18	18	17	17	18	18	18	18	18	17	16	16	16	16	16	16					

**Table A4. Mean monthly attendance per facility of SC-HWCs by Quarter**

<b>States</b>	<b>July-Sep 2019</b>	<b>Oct-Dec 2019</b>	<b>Jan- Mar 2020</b>	<b>Apr-Jun 2020</b>	<b>July-Sep 2020</b>	<b>Oct-Dec 2020</b>	<b>Jan- Mar 2021</b>
Andhra Pradesh	335	355	370	425	341	419	497
Arunachal Pradesh	51	48	31	26	36	33	62
Assam	270	281	265	133	129	276	311
Bihar	107	179	190	112	152	116	303
Chhattisgarh	299	353	489	362	352	322	357
Gujarat	329	344	382	405	305	290	270
Jharkhand	213	251	233	164	142	143	177
Karnataka	571	485	497	537	545	529	506
Maharashtra	444	530	605	520	518	430	437
Manipur	203	205	245	134	141	152	165
Meghalaya	352	262	367	489	390	342	331
Mizoram	NA	NA	NA	NA	NA	NA	NA
Nagaland	142	117	107	127	131	109	116
Odisha	207	303	413	396	433	447	359
Punjab	0	191	362	319	177	208	314
Sikkim	163	136	144	139	131	100	135
Tripura	217	210	210	140	159	169	202
Uttar Pradesh	308	409	397	23	282	387	384

\*Calculated by dividing the total number of footfalls in that state for that quarter at that level by total reporting month units (sum of units reporting in that quarter). Shaded cells indicate the first drop in attendance after March 2020.

Table A5. Mean monthly attendance per facility* of PHC-HWCs by Quarter									
States	July-Sep 2019	Oct-Dec 2019	Jan- Mar 2020	Apr-Jun 2020	July-Sep 2020	Oct-Dec 2020	Jan- Mar 2021		
Andhra Pradesh	1449	1545	1375	1049	974	1224	1287		
Arunachal Pradesh	140	63	46	0	246	112	0		
Assam	0	0	0	0	0	404	625		
Bihar	399	513	448	90	212	245	345		
Chhattisgarh	1607	1053	1120	743	609	457	636		
Gujarat	1251	960	990	1020	868	772	705		
Jharkhand	1068	688	446	0	0	0	0		
Karnataka	0	1086	1106	1052	818	757	829		
Maharashtra	0	1747	1716	1425	942	904	1158		
Manipur	0	265	1106	993	296	195	168		
Meghalaya	464	511	1611	1375	1170	829	1083		
Mizoram	187	352	308	317	313	263	237		
Nagaland	NA	NA	NA	NA	NA	NA	NA		
Odisha	1426	1280	1288	1250	1188	1082	1151		
Punjab	0	0	300	417	361	332	401		
Sikkim	818	874	930	698	805	681	826		
Tripura	237	458	551	248	167	130	291		
Uttar Pradesh	1114	1383	1254	97	436	598	601		

\*Calculated by dividing the total number of footfalls in that state for that quarter at that level by total reporting month units (sum of units reporting in that quarter). Shaded cells indicate the first drop in attendance after March 2020.



**Table A6. Mean monthly attendance per facility\* of UPHC-HWCs by Quarter**

<b>States</b>	<b>July-Sep 2019</b>	<b>Oct-Dec 2019</b>	<b>Jan- Mar 2020</b>	<b>Apr-Jun 2020</b>	<b>July-Sep 2020</b>	<b>Oct-Dec 2020</b>	<b>Jan- Mar 2021</b>
Andhra Pradesh	1712	1658	1632	934	1586	1574	1218
Arunachal Pradesh	146	135	120	266	249	182	396
Assam	0	0	683	250	298	372	671
Bihar	918	988	862	205	461	774	767
Chhattisgarh	0	1568	2076	1234	990	1245	1665
Gujarat	2082	2089	2373	1113	1190	1188	901
Jharkhand	429	0	0	0	0	0	353
Karnataka	0	2186	2160	1143	1300	1493	1734
Maharashtra	0	2434	2460	1382	1120	1275	1188
Manipur	0	0	229	0	0	0	0
Meghalaya	0	0	495	492	254	233	304
Mizoram	NA	NA	NA	NA	NA	NA	NA
Nagaland	NA	NA	NA	NA	NA	NA	NA
Odisha	2163	2313	2528	1558	1648	1473	1428
Punjab	0	0	850	574	518	465	631
Sikkim	NA	NA	NA	NA	NA	NA	NA
Tripura	NA	NA	NA	NA	NA	NA	NA
Uttar Pradesh	1105	1390	1264	52	357	355	609

\*Calculated by dividing the total number of footfalls in that state for that quarter at that level by total reporting month units (sum of units reporting in that quarter).

Shaded cells indicate the first drop in attendance after March 2020.

**Table A7. Availability of key human resources in HWC- PHCs visited as a part of the assessment**

State	Number of HWC- PHCs visited	Number of facilities where staff were available (figures in parentheses are number of staff)					% Of PHCs with full complement*
		Medical Officer (1)	Nurses (2)	Laboratory Technician (1)	Pharmacist (1)		
Andhra Pradesh	5	5	3	5	3	40	
Arunachal Pradesh	4	4	4	4	3	75	
Assam	4	4	3	2	4	25	
Bihar	4	4	0	1	1	0	
Chhattisgarh	4	4	4	4	3	75	
Gujarat	4	4	4	4	3	75	
Jharkhand	4	4	2	1	2	0	
Karnataka	4	4	2	3	1	25	
Maharashtra	9	9	3	6	9	22	
Manipur	3	3	2	2	3	67	
Meghalaya	4	4	2	4	4	50	
Mizoram	4	4	4	4	4	100	
Nagaland	4	4	4	4	3	75	
Odisha	4	4	1	4	4	25	
Punjab	4	4	2	1	3	25	
Sikkim	4	4	4	4	3	75	
Tripura	4	4	2	4	4	50	
Uttar Pradesh	4	4	0	2	4	0	

\*Full complement for PHC and UPHC is defined as – Medical Officer (MBBS) – 1; Nurse -2; Lab Technician -1; Pharmacist -1

**Table A8. Availability of key human resources in SC-HWCs visited as a part of the assessment**

State	Number of HWC visited (A)	Number of SC-HWCs where below mentioned staff were available				Number of SC-HWCs out of those visited (A) which had	
		CHO	One ANM	Two ANMs	Male Worker	Optimal * Contingent	Minimal@ Contingent
Andhra Pradesh	10	10	3	7	3	7	10
Arunachal Pradesh	6	6	3	3	4	5	6
Assam	6	6	3	3	5	5	6
Bihar	6	6	0	6	0	6	6
Chhattisgarh	9	5	7	2	8	4	5
Gujarat	9	9	8	0	9	8	8
Jharkhand	6	6	5	1	0	1	5
Karnataka	9	8	6	0	1	1	6
Maharashtra	3	3	2	0	3	2	3
Manipur	2	2	1	1	0	1	2
Meghalaya	6	6	2	4	1	4	2
Mizoram	6	6	5	1	6	6	6
Nagaland	6	6	2	4	0	4	6
Odisha	6	6	5	1	3	3	6
Punjab	5	5	5	0	3	4	5
Sikkim	6	6	4	1	2	2	5
Tripura	6	6	4	0	3	1	6
Uttar Pradesh#	4	4	3	1	1	2	4

Definition of Full Complement as per CPHC OGL

\* Optimal: One Mid-level provider/CHO and at least two multi-purpose workers (Male or female)

@ Minimal: One Mid-level provider/CHO with any one multi-purpose workers (male or female)

**Table A9: State-wise results of knowledge of competency assessment of CHOs by Video OSCEs**

<b>State</b>	<b>Number of CHOs</b>	<b>&lt; 49.9% Score</b>	<b>50-74.9% Score</b>	<b>&gt;75% Score</b>
Meghalaya	06	-	05	01
Bihar	06	04	02	-
Assam	06	01	04	01
Arunachal Pradesh	06	01	05	-
Jharkhand	06	04	02	-
Nagaland	06	02	04	-
Mizoram	06	-	06	-
Odisha	06	06	-	-
Sikkim	06	-	05	01
Tripura	06	04	02	-
Karnataka	06	04	02	-
Manipur	02	-	02	-
Punjab	05	05	-	-
Gujarat	09	05	03	01
Chhattisgarh	07	03	03	01
Andhra Pradesh	10	03	07	-
Maharashtra	03	01	02	-
Uttar Pradesh	04	02	02	-
<b>Total</b>	<b>106</b>	<b>44</b>	<b>56</b>	<b>05</b>

**Table A10: Availability of Medicines and Diagnostics for PHCs/UPHCs, by type of health facility – Non-HWC vs. HWCs\***

Availability of drugs/ diagnostics	Mean number of drugs												Mean number of diagnostics								
	NCD drugs			CD drugs			MCH related drugs			Total drugs			Diagnostic tests for NCDs		Diagnostic tests for CDs		Diagnostic tests for MCH		Total diagnostic tests		
	Non-HWC	HWC		Non-HWC	HWC		Non-HWC	HWC		Non-HWC	HWC		Non-HWC	HWC	Non-HWC	HWC	Non-HWC	HWC	Non-HWC	HWC	
Type of facility																					
Arunachal Pradesh	1.0	2.3	9.3	7.3	4.0	5.8	34.8	33.0	34.8	0.3	0.8	2.7	3.8	2.7	3.8	7.0	7.0	6.7	13.0		
Assam	4.5	5.0	7.0	9.0	9.3	8.3	43.3	41.5	43.3	0.8	1.3	2.5	2.3	5.0	4.5	4.5	9.5	9.8			
Bihar	NA	4.0	NA	8.5	NA	7.0	39.8	NA	39.8	NA	1.0	NA	4.0	NA	7.0	7.0	NA	12.8			
Jharkhand	2.5	5.0	10.8	13.5	6.5	9.0	50.5	38.3	50.5	1.0	1.0	2.0	4.0	3.3	3.5	7.3	9.0				
Meghalaya	3.0	4.6	11.0	10.6	10.5	9.2	46.8	43.5	46.8	1.0	1.2	3.5	2.6	3.0	5.6	8.5	10.2				
Mizoram	1.8	3.3	9.0	10.3	6.2	7.7	43.7	40.8	43.7	1.4	2.0	4.2	4.7	7.0	6.7	14.8	15.3				
Nagaland	6.0	10.0	12.0	14.0	8.5	10.8	63.5	50.0	63.5	1.0	1.3	1.0	5.8	5.0	7.5	7.0	17.5				
Odisha	8.0	7.3	12.0	13.3	8.7	8.0	55.3	56.3	55.3	1.0	1.7	2.0	4.7	4.3	7.0	8.3	15.7				
Sikkim	6.5	6.5	5.5	8.5	8.0	7.8	40.3	37.5	40.3	1.5	2.0	2.0	5.3	4.0	7.8	8.5	17.5				
Tripura	7.0	6.5	12.5	12.0	9.0	7.5	47.5	52.0	47.5	2.0	1.8	4.5	3.5	8.0	7.5	16.0	14.8				
Andhra Pradesh	NA	7.4	NA	11.4	NA	7.4	48.2	NA	48.2	NA	1.6	NA	5.0	NA	6.6	NA	14.8				
Chhattisgarh	NA	6.6	NA	13.2	NA	10.6	51.0	NA	51.0	NA	1.4	NA	4.8	NA	7.0	NA	15.2				
Gujarat	10.3	11.5	11.3	13.0	10.0	9.5	52.8	52.0	52.8	1.3	1.0	3.8	3.5	6.5	5.8	13.0	12.0				
Maharashtra	5.6	8.3	8.8	12.0	5.1	8.7	50.1	33.3	50.1	0.9	0.9	2.9	3.1	5.0	5.0	10.0	10.1				
Manipur	3.0	4.7	5.0	10.7	4.7	7.0	38.0	23.0	38.0	1.0	0.3	3.3	1.7	5.3	1.3	11.3	3.7				
Punjab	5.5	5.0	10.0	10.8	7.0	7.5	41.8	39.5	41.8	1.0	1.0	2.0	3.0	5.5	5.3	9.0	10.0				
Uttar Pradesh	2.0	3.3	9.7	9.5	6.0	8.0	33.8	28.0	33.8	1.0	0.8	1.0	0.8	5.0	1.5	7.0	3.0				
<b>Total</b>	<b>4.7</b>	<b>6.1</b>	<b>9.4</b>	<b>11.0</b>	<b>7.0</b>	<b>8.3</b>	<b>46.1</b>	<b>39.5</b>	<b>46.1</b>	<b>1.0</b>	<b>1.2</b>	<b>2.8</b>	<b>3.7</b>	<b>5.0</b>	<b>5.8</b>	<b>10.0</b>	<b>12.1</b>				

\* Source: Facility Assessment Checklist

**Table A11: Availability of Medicines and Diagnostics for SHCs, by type of health facility – Non-HWC vs. HWCs\***

Availability of drugs/ diagnostics	Mean number of diagnostics															
	Mean of available drug groups						Mean number of diagnostics									
	NCD drugs		CD drugs		MCH related drugs		Total drugs		Diagnostic tests for NCDs		Diagnostic tests for CDH		Total diagnostic tests			
Non-HWC	HWC	Non-HWC	HWC	Non-HWC	HWC	Non-HWC	HWC	Non-HWC	HWC	Non-HWC	HWC	Non-HWC	HWC			
Type of facility																
Arunachal Pradesh	0.0	1.5	2.7	3.7	1.3	1.5	7.3	13.0	0.2	1.0	0.4	0.8	0.1	0.7	0.8	2.5
Assam	0.0	2.0	3.2	4.0	2.2	2.8	11.2	17.3	1.0	1.0	0.7	1.0	1.5	2.0	4.2	5.2
Bihar	0.0	2.0	1.6	4.3	1.6	2.7	6.1	17.0	0.3	1.0	0.0	2.0	2.0	3.7	2.7	7.3
Jharkhand	0.3	2.2	3.4	4.0	2.0	2.8	10.4	17.0	1.0	1.2	1.1	1.2	2.3	2.5	4.9	6.0
Meghalaya	0.4	2.0	3.1	4.7	2.1	2.8	11.4	17.3	0.3	1.2	1.0	2.0	1.9	2.2	3.3	7.0
Mizoram	0.2	2.0	3.0	4.2	2.0	2.3	10.0	15.0	0.5	2.0	1.7	2.2	2.8	5.0	5.2	10.0
Nagaland	0.9	2.0	3.3	5.0	2.6	3.0	12.5	18.2	0.6	1.0	0.9	2.0	3.5	4.0	5.0	7.8
Odisha	0.0	2.2	3.3	4.3	1.9	2.0	10.9	16.7	1.0	1.0	1.4	1.3	3.1	3.5	6.6	7.0
Sikkim	1.0	2.0	2.9	3.0	2.8	2.7	15.1	16.0	0.8	1.2	0.3	0.8	1.5	2.3	2.9	5.3
Tripura	0.8	2.0	4.6	5.0	2.0	2.2	12.5	16.3	0.9	1.0	1.8	2.0	2.3	3.0	6.3	7.8
Andhra Pradesh	1.6	3.0	4.6	4.4	2.4	2.9	16.8	19.8	1.1	1.8	1.9	2.6	2.2	3.9	7.0	9.4
Chhattisgarh	1.7	2.3	4.8	4.8	2.9	2.8	16.6	20.8	1.3	1.3	2.1	2.4	2.0	2.7	6.6	7.8
Gujarat	0.0	2.2	2.8	4.9	2.1	2.9	10.1	18.1	0.8	1.0	2.4	2.4	1.9	2.0	6.6	6.1
Maharashtra	1.8	1.7	3.8	3.0	2.5	2.3	16.3	14.3	1.3	1.0	1.8	1.3	2.8	2.3	6.3	6.7
Manipur	0.5	2.0	1.5	4.0	2.0	2.0	7.5	13.0	0.0	1.5	0.5	0.5	1.0	1.5	1.5	4.5
Punjab	0.2	2.2	1.2	2.8	2.0	2.2	7.4	14.6	0.2	0.6	0.0	1.2	1.8	2.0	2.0	4.4
Uttar Pradesh	0.0	1.3	0.7	3.3	2.0	2.3	5.3	13.5	0.7	1.0	0.0	1.3	3.3	3.8	4.0	6.8
<b>Total</b>	<b>0.6</b>	<b>2.1</b>	<b>3.2</b>	<b>4.2</b>	<b>2.2</b>	<b>2.5</b>	<b>11.4</b>	<b>16.9</b>	<b>0.7</b>	<b>1.2</b>	<b>1.1</b>	<b>1.7</b>	<b>2.1</b>	<b>2.8</b>	<b>4.7</b>	<b>6.8</b>

\* Source: Facility Assessment Checklist



**Table A12. Referral for chronic disease management and its compliance**

State	Referred by MLHP/Doctor to a higher health facility (%)		Compliance to the referral (%)	
	Non-HWC	HWC	Non-HWC	HWC
Andhra Pradesh	58.82	57.81	45	21.62
Arunachal Pradesh	33.33	61.11	100	72.73
Assam	20	25.64	100	30
Bihar	25	0	100	0
Chhattisgarh	33.33	71.11	20	96.88
Gujarat	94.87	100	67.57	53.85
Jharkhand	100	22.73	50	100
Maharashtra	66.67	47.37	66.67	55.56
Manipur	22.86	33.33	87.50	55.56
Meghalaya	50	20	100	50
Mizoram	26.32	29.03	80	66.67
Nagaland	46.15	29.63	50	25
Odisha	24.14	48.48	100	100
Punjab	14.29	30.23	0	53.85
Sikkim	42.37	57.89	48	42.42
Tripura	34.62	31.25	77.78	80
Uttar Pradesh	100	95.24	100	85

Source: User Survey

## ASSESSMENT TEAMS

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3	Mr Vikas Sheel	Additional Secretary & Mission Director, NHM
4	Mr Vishal Chauhan	Joint Secretary, Policy
5	Dr N. Yuvaraj	Former Director - NHM
6	Mr Harsh Mangla	Director-NHM
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6	Dr Nabil Abdulmajid	Research Officer
7	Ms Kritika Anand	Research Officer
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