



Measuring the effectiveness and quality of RMNCH Services at the CiVHSND Platform through Onsite Observations in Uttar Pradesh



Abbreviations

ANC:	Antenatal Care
ANM:	Auxiliary Nurse and Midwife
ASHA:	Accredited Social Health Activist
AWC:	Anganwadi Centre
BCPM:	Block Community Process Manager
BoC:	Block Outreach Coordinator
BP:	Blood Pressure
CDPO:	Child Development Project Officer
CHO:	Community Health Officer
CiVHSND:	Chhaya Integrated Village Health, Sanitation and Nutrition Day
DCPM:	District Community Process Manager
DHS:	District Health Services
DNC:	District Nutrition Committee
DQA:	Data Quality Audit
DISCO:	District Specialist Community Outreach
EC:	Executive Committee
GoUP:	Government of Uttar Pradesh
HPD:	High Priority District
HWC:	Health and Wellness Centre
ICDS:	Integrated Child Development Services
IFA:	Iron and Folic Acid
MD:	Mission Director
MOIC:	Medical Officer In Charge
NHM:	National Health Mission
FLW:	Frontline Worker
ODK:	Open Data Kit
PW:	Pregnant women
RMNCH:	Reproductive, Maternal, Newborn Child Health
RMNCH+N:	Reproductive, Maternal, Newborn, Child Health and Nutrition
SAM:	Severe Acute Malnutrition
SC:	Sub Centre
UP TSU:	Uttar Pradesh Technical Support Unit
VHND:	Village Health Nutrition Day



Background

Uttar Pradesh, with more than 235 million people, is the most populous state in India. With a crude birth rate of 25.1 births per 1,000 population, the state has an estimated 6.7 million pregnancies annually¹. Government of Uttar Pradesh (GoUP), with support from the Uttar Pradesh Technical Support Unit (UP TSU), strengthened the community-based platform (initially termed) Village Health Nutrition Day (VHND) for antenatal care, routine immunization, family planning and other related services.

The VHND is held in more than 100,000 villages, covering each of the 150,000 ASHA areas monthly, with services provided by about 25,000 Auxiliary Nurse Midwives (ANMs). VHND is now called Chhaya Integrated Village Health and Sanitation and Nutrition Day (CiVHSND) to focus on providing integrated, beneficiary-centric quality Reproductive Maternal, Newborn, Child Health and Nutrition (RMNCH+N) services to reduce missed opportunities. CiVHSNDs are scheduled once a month in every 1000 population/ each ASHA area, preferably on Wednesday or Saturday, at locations such as Sub-centres/Health and Wellness Centres (SC/HWC), Anganwadi Centres (AWC), or other suitable locations within the village/ ASHA area. About 70% of pregnant women access Antenatal Care (ANC) services in CiVHSND², and about 91.6% of children³ are immunized via this platform. About 0.17 million (170,000) CiVHSND sessions are organized monthly across the state, totalling to about 144 million health events at CiVHSND annually.

Table 1: Estimated number of health events at CiVHSND (Yearly calculations based on the estimations from SRS)

Services	Childhood Immunization	ANC
Calculations	Cohort: ~5.7 million	• Cohort: ~6 million
	25 events by 5 years of age	• ~3ANCs at VHND
	92% at VHND	• 71% at NHNDs
Annual Health events at CiVHSND	~131 million	~13 million

1. Sample Registration System, 2022 (<https://censusindia.gov.in/nada/index.php/catalog/44376>)
 2. Sambodhi 2019
 3. Rapid Facility Survey (RFS) 2021

Rationale for a robust measurement matrix

Measuring the effective coverage of interventions provided at a service delivery platform like CiVHSND is a complex task as it operates over a wide geographical area, is held on a recurrent basis and focuses on multiple aspects including platform readiness, beneficiary-centric services and missed opportunities.

UP TSU supported GoUP in developing a measurement matrix and setting up a robust monitoring mechanism through the direct observation of CiVHSND by district, block and below block-level officials including Community Health Officers (CHOs), Block Community Process Managers (BCPMs) and District Community Process Managers (DCPMs). This was essential to track the progress in service delivery coverage and continuously identify the programmatic gaps.

This note describes the methodology that was evolved by UP TSU along with GoUP to measure the availability, coverage, and quality of service delivery at CiVHSNDs.

Observation methodology

Direct observation of CiVHSND was initiated in 2014 during Phase 1 of the UP TSU intervention. Observing CiVHSND sites evolved through various stages pertaining to the extent of coverage, the criteria used to select sites for observation, the expansion of information, and the mode of data collection. Initially, the district and block-level community specialists of UP TSU did these observations. The GoUP officials, other partners, and UP TSU now observe the same indicators.

Coverage

In 2014, this direct observation was done across CiVHSND sessions conducted in 100 focused blocks. This was scaled up to all 294 blocks in 25 high-priority districts (HPDs) in 2017. In July 2021, all 75 districts were covered under CiVHSND observations.

Selection of sites for observation

During the period 2014-2018, the selection of the CiVHSND site for direct observation was decided by the field staff as a part of their field monitoring work plan. However, over the period, it was observed that this approach sometimes led to the omission of CiVHSND observation within a sub-centre (SC)/ANM catchment area. This could lead to information bias. In 2019, a non-repetitive random sampling method of site selection was adopted to ensure randomness and representativeness of observed CiVHSND. In this approach, a random selection of sub-centres was done from the state level such that all of the sub-centres within a given block were covered by the observation within 4 to 6 months. This approach ensured fair and equitable coverage of all sub-centres within the block.

CiVHSND observation check-list components

To ensure a standardized way of monitoring and recording observations, a standard integrated checklist for CiVHSND observation was developed, covering session site readiness, service utilization, and next session site preparedness.

- Session site readiness:** The checklist recorded the availability of frontline workers (FLWs)
 - ASHA and AWW, functional equipment, logistics, drugs, family planning commodities, growth monitoring devices, and vaccines for immunization to understand the CiVHND session readiness.
- Service utilization:** The checklist recorded the distribution of family planning commodities, ANC (including HRP identification and referrals), routine immunization services, and assessment for nutritional deficiencies among pregnant women and children (maternal weight gain, Severe Acute Malnutrition (SAM), and counselling) to understand the service utilization at the CiVHSND. It included the beneficiaries who attended/did not attend as per the due list and beneficiaries availing services but not on the due list.

- **Planning for the next session:** Plans included preparation of a due list of the pregnant women and children for the next session. In addition, the plan would include actions to address identified gaps (Ex., lack of privacy for abdominal examination), and strategies to reach beneficiaries who had discontinued services, and village segments that were previously unreached by services.

Data collection process:

Every month, the monitoring and evaluation division of UP TSU shared a list of randomly selected sub-centres with the district teams. The district team then supported the Block Outreach Coordinators (BoC), a block-level cadre from UP TSU and GoUP officials, to develop an observation micro-plan. The micro-plan included essential details such as the names of the villages, ANM availability, day of CiVHND, ASHA name, population, and the current registration status of pregnant women. Based on the micro-plan, BoCs made visits for CiVHND session observations.

In the initial phase, around 3000 sessions were observed every month by the GoUP functionaries and BoC. Data was monitored at the state and district levels to avoid repeat observation by field staff to any CiVHSND site, during the year. Data Quality Audits (DQA) and field visits were conducted regularly. Since 2017, the observations have been digitally recorded in an Open Data Kit (ODK) to obtain real-time data.

Analytical framework

UP TSU adopted the availability, utilization and quality framework to inform decision-making. The data was examined from the equity lens wherein granular information was culled out on geographical heterogeneity in service-delivery platform readiness, service delivery and quality at various levels. Tracking the number of sessions observed, including unique or repeat CiVHSNDs observation sites within a SC/ANM, helped ensure complete coverage of CiVHSNDs observation. In addition, analysis of trends and patterns of service availability and service provisioning offered insights to make evidence-based programmatic decisions.

The following section provides insights on ways in which this has helped the program improve over time.

How did the CiVHSND data help in program planning and monitoring?

CiVHSND observation data was regularly analysed to measure the readiness and heterogeneity of CiVHSND sites within and between sub-centres/blocks/districts. This tracked the coverage in sessions, the occurrence of sessions as per the micro plan, service availability, and provisioning. Figure 2a and 2b show the number of CiVHSND sessions observed during six months from July 2017 to June 2023. Over the period, there was an increase in the number of CiVHSNDs observed due to the scale-up in the coverage to all 75 districts since August 2021. The number of CiVHSNDs observed depended on the numbers of trained BoCs in the district and the numbers of sessions conducted.

Figure 1: Analysis framework

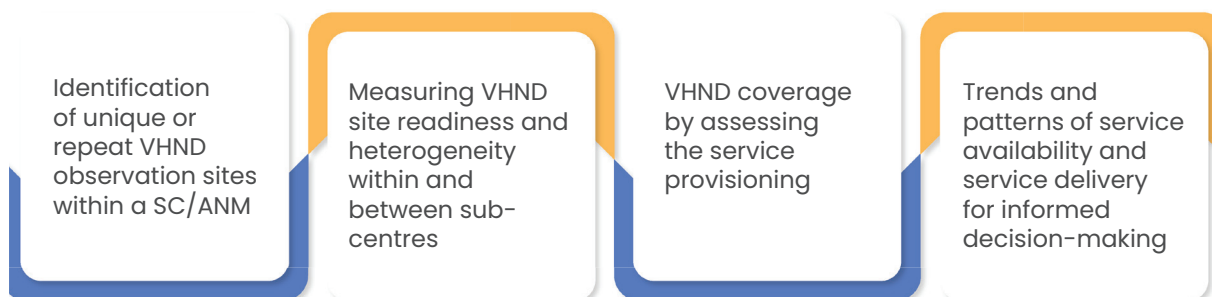
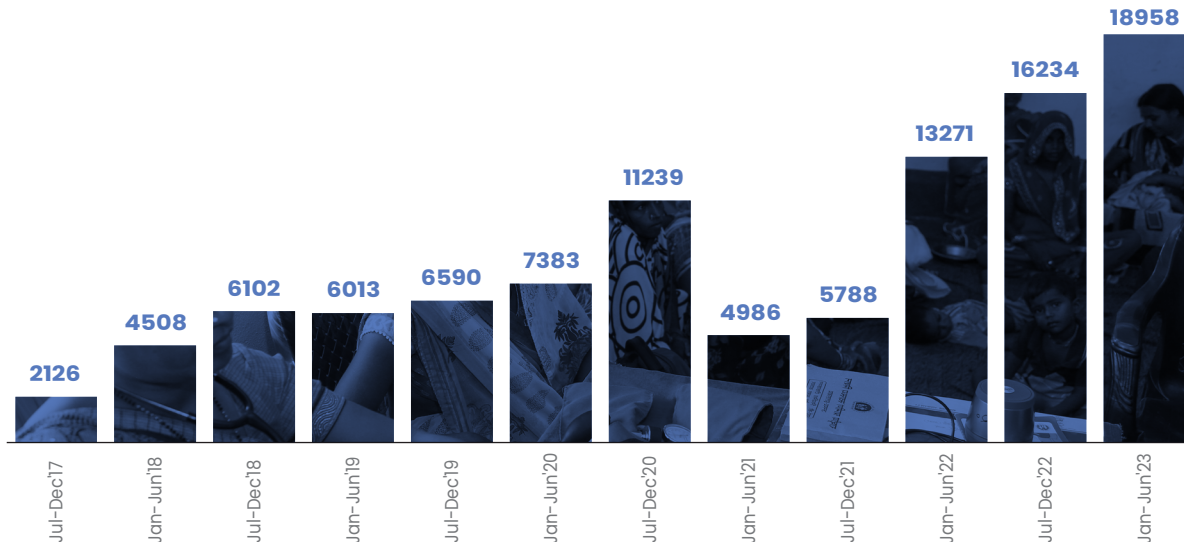
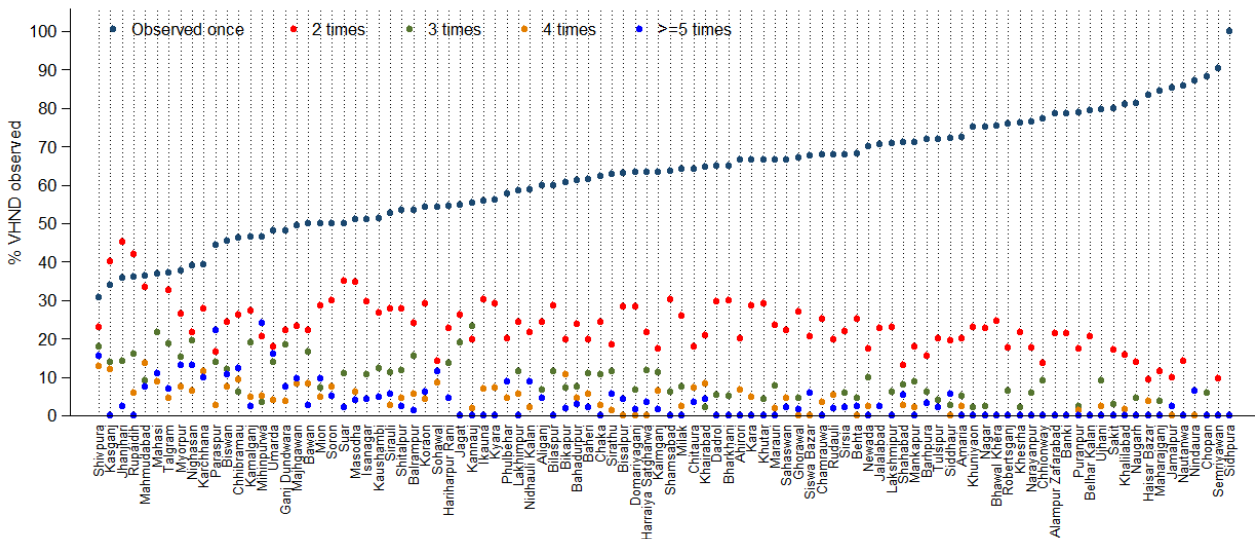


Figure - 2a. Number of CiVHSNDs observed: July'2017* – Jun'2023



*The period is chosen from Jul 2017 due to the availability of digital data

Figure 2b. Percentage of CiVHSNDs observed by number of times of observation

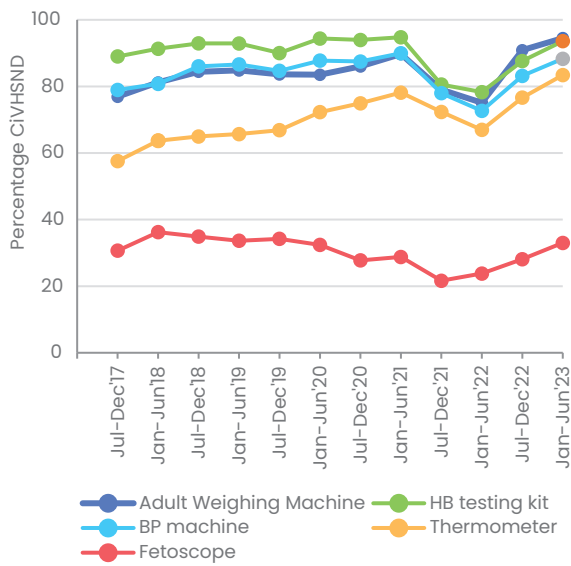


CiVHSND site readiness:

The CiVHSND site readiness was measured in terms of functional availability of equipment and adequate availability of supplies. The observation data indicated a higher proportion of sessions having functional availability of thermometers, BP machines, Hb testing kits, and adult weighing machines, tracking changes over time. One-third of CiVHSND sites had functional foetoscopes. Regarding supplies, 94% of CiVHSND sites had adequate IFA tablets (min 600 tablets) and albendazole (min 5 tablets). In comparison, 68.5%

had adequate calcium tablets (min 900 tablets) during the session. The trend analysis in the availability of functional equipment and adequate availability of supplies showed that the functional availability of thermometers and supplies recorded substantial improvement over time (Figures 3a and 3b). The dip in the availability during July-December 2021 was a reflection of the fact that CiVHSND increased from 25 HPDs to all 75 districts in the state, and many of the CiVHSND in non-HPDs initially had unavailability

Figure -3a. Availability of functional equipments at CiVHSND (%), (July 2017 - Feb 2023)



of functional equipment and adequate drugs. This improved over time by monitoring and addressing the gaps in availability.

Geographical heterogeneity

Geographical heterogeneity in the CiVHSND readiness was examined to understand the levels of inequality at the district and block levels. For example, Figure 4 shows that most blocks in January -2022 had inadequate availability of IFA tablets (<60% of CiVHNDs), which was reduced in December 2022.

As CiVHSND platform also includes provisioning of the FP method; Figure 5 shows that the unavailability of OCP-CHHAYA reduced to 5.7% in Mar-23 from

Figure -4a. Adequate availability of IFA at CiVHSND sessions by blocks, (January 2022)

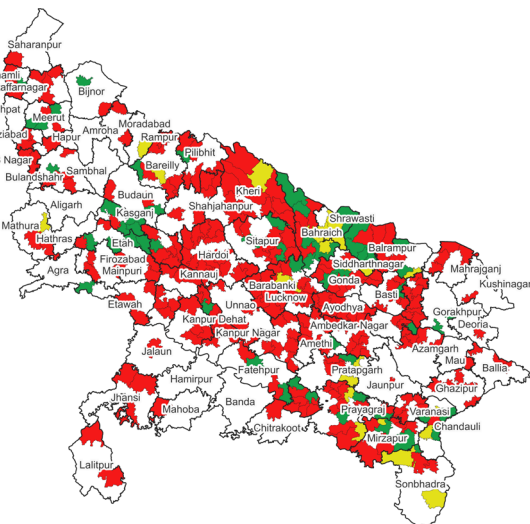
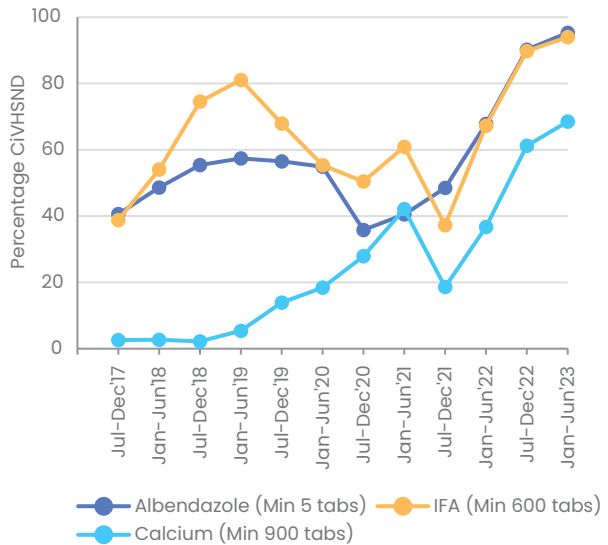


Figure -3a. Availability of functional equipments at CiVHSND (%), (July 2017 - Feb 2023)



22% in Apr-22, while the adequate availability of OCP-CHHAYA (minimum 12 strips) increased to 35% from 11% during the same period. The figure also shows that most districts reduced in 'zero' availability and moved towards the adequate availability of OCP-CHHAYA by March 2023.

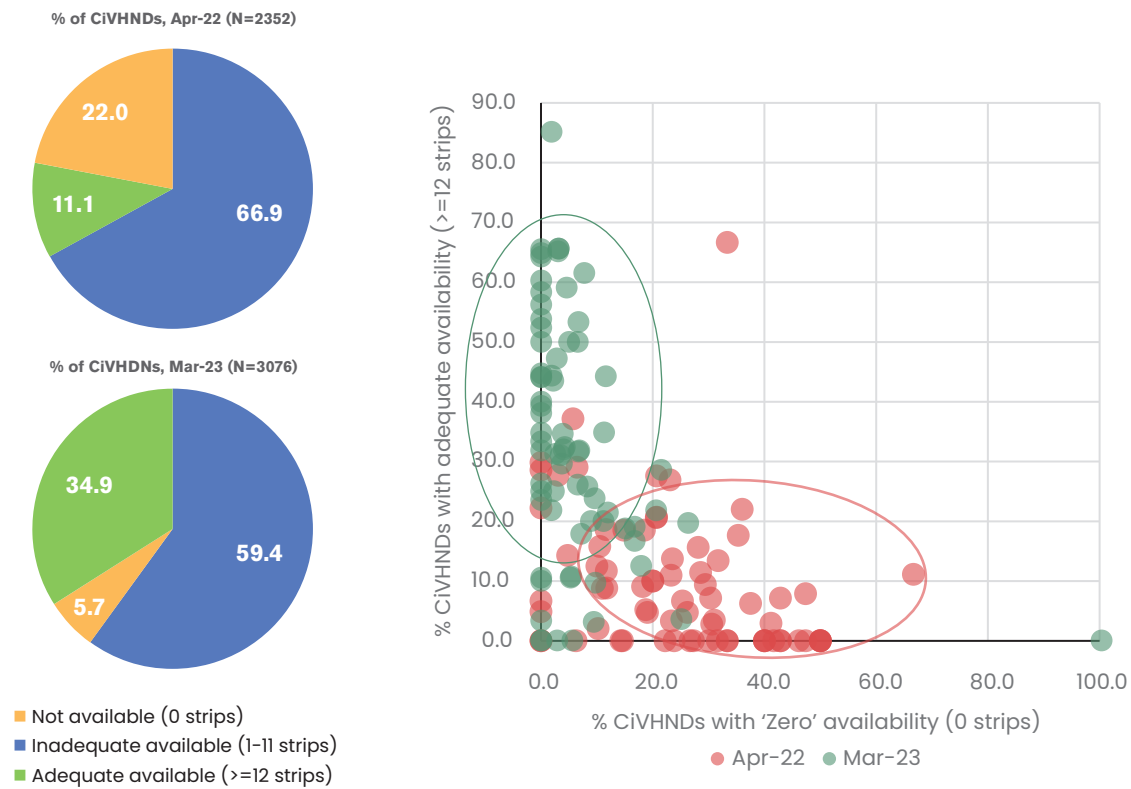
Service provisioning:

As described before, the CiVHSND measurement matrix also included monitoring service provisioning to different beneficiaries. Figure 6 shows that the service provisioning for the pregnant women who attended the session is higher for Hb testing to identify anaemic PW, BP measurement to identify hypertensive PW and weight measurement.

Figure -4b. Adequate availability of IFA at CiVHSND sessions by blocks, December 2022

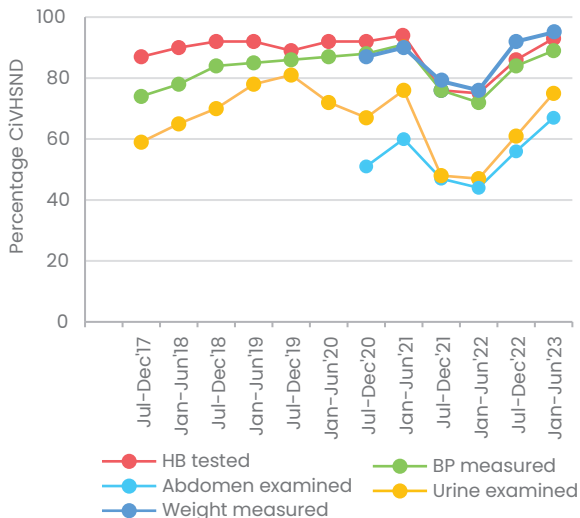


Figure 5. Distribution of CiVHSNDs (%) according to number of OCP-Chhaya (strip) availability



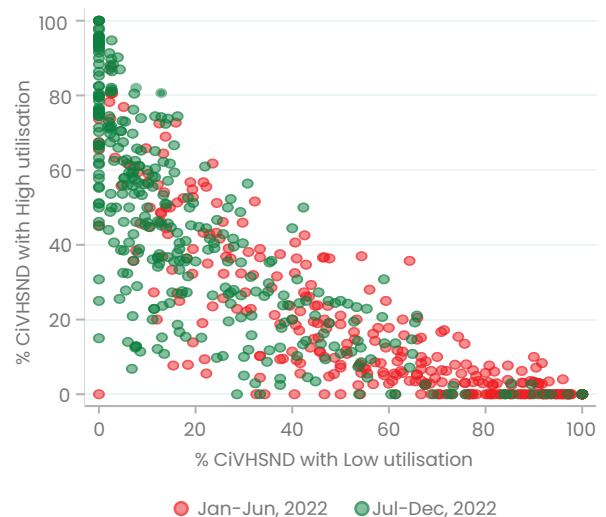
At the same time, an abdomen examination is conducted in 67% of CiVHSNDs and a urine examination in 75% of CiVHSNDs. To understand the geographical inequality at the block level, the CiVHSNDs were grouped into three categories based on an overall coverage index (ranges from 0% - 100%) in the five critical antenatal care services - Hb testing, BP measurement, abdomen examination, urine examination and weight measurement. The

Figure -6. Trends in service provisioning



CiVHSNDs with $\leq 60\%$ coverage index labelled as **'low utilization'**, 61-90% coverage index labelled as 'moderate utilization' and 90% and above coverage index labelled as **'high utilization'**. There were 336 unique blocks with at least 10 CiVHSND sessions observed in both periods (January-June 2022 and January-June 2023). Among 336 CiVHSND sessions, low utilization reduced from 55% to 19%, and high utilization increased from 19% to 46% during the

Figure - 7. Distribution of CiVHSND according to service provisioning at the block-level (n=336 blocks)



same period. Figure 7 shows that the blocks moved from low to high utilization between January-June 2022 and January-June 2023.

Use of monitoring data for programmatic decisions

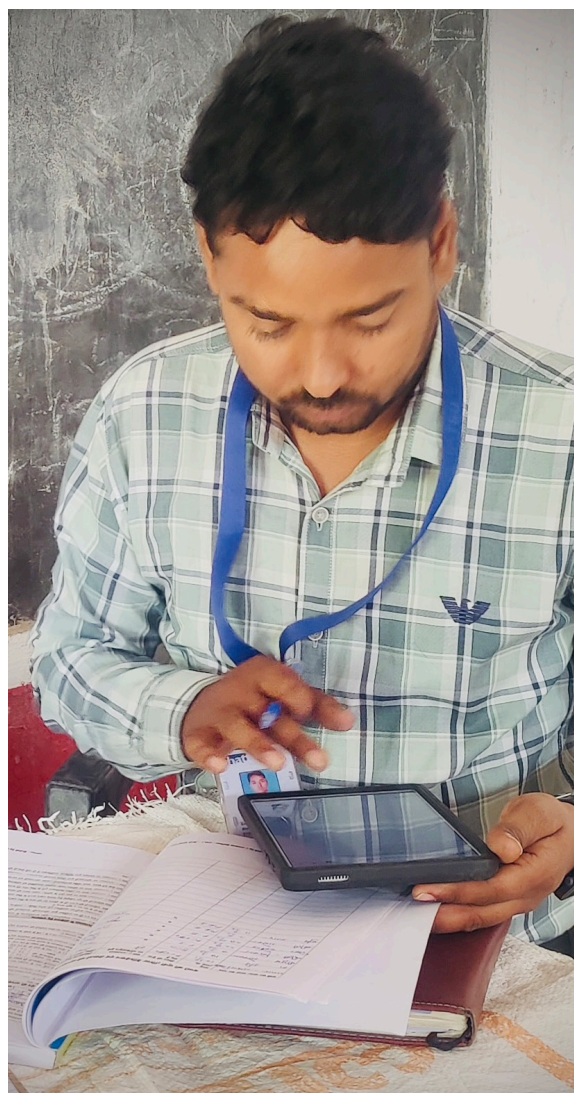
The data points were visualized through a web dashboard and updated every month. UP TSU, through GoUP, had established a feedback mechanism system to address the gaps related to the non-availability of equipment, logistics, consumables, and drugs. Through this system, the feedback at the sub-block, block, district, and state levels was continuously shared by the UP TSU cadre.

Sub Block: BoC shared feedback on critical service gaps and mobilization with the FLWs at ANM meetings and AAA platforms. Solutions were explored through a participatory approach to fill these gaps, such as ensuring privacy during abdominal exams, urine tests, and mobilization of beneficiaries for services.

Block: UPTSU developed a weekly feedback format to provide feedback to the Medical Officer in Charge (MoIC) and Child Development Project Officer (CDPO). BoC provided weekly written feedback, highlighting observed gaps in the functional availability of equipment, logistics, consumables, and drugs. This written feedback eventually enabled MoIC/CDPOs to take immediate and necessary actions to ensure that the completeness of services improved over time.

District: District Specialist Community Outreach (DSCO) shared feedback on CiVHSND observations at different platforms like the **District Health Society (DHS), Executive Committee (EC), and District Nutrition Committee (DNC)** meetings and raised issues which required district-level consideration. UP TSU has also developed web-based dashboards⁴ to share CiVHND feedback at the district and block levels. This feedback helped identify improvement areas and ensured that necessary resources were available for optimal functioning and focus on quality issues.

State: UP TSU provided regular monthly feedback to the Mission Director (MD) of the National Health Mission (NHM) and the Director General of Medical and Family Welfare regarding critical RMNCH, Immunization, and Nutrition parameters. Based on this feedback, the MD NHM and Director ICDS issued



feedback letters to the concerned district authorities to address gaps and improve overall performance.

Transition

UP TSU supported GoUP to standardise the CiVHSND observation checklist focusing on availability, mobilization and utilization components. UP TSU converted the checklist into an Android-based digital application to capture real-time CiVHSND observation data. Over 9000 CiVHSND direct sessions were observed by GoUP officials, NHM, and other development partners. To make the data easily accessible, GoUP, with support from UP TSU, developed web-based dashboards for both the state and each district⁵, featuring visual representations. Additionally, UP TSU creates fact sheets for rural and urban CiVHSND observations and shares them with GoUP. At the same time, efforts have been put into building the analytical capacity of NHM to develop the factsheets.

4 https://lookerstudio.google.com/reporting/b7d74a83-8d4e-4cbc-a511-b98ea01ae43a/page/p_d5pow90uyc
5 <https://nhm-bcpm.in/vhnd/index.php/auth/login>

Uttar Pradesh Technical Support Unit

Uttar Pradesh Technical Support Unit (UP TSU) was established in 2013 under a Memorandum of Cooperation signed between the Government of Uttar Pradesh (GoUP) and Bill & Melinda Gates Foundation (BMGF) to strengthen the Reproductive, Maternal, Newborn, Child, Adolescence Health and Nutrition (RMNCAH+N). University of Manitoba's India-based partner, India Health Action Trust (IHAT) is the lead implementing organization.

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