

A Systems Approach to Strengthen Supply Chain Management in Jharkhand

Anemia Mukh Bharat (AMB) program lays emphasis on improving supply chain mechanism and procurement processes to effectively implement the prophylactic Iron Folic Acid (IFA) supplementation intervention. Jharkhand is one of the states in India that has taken a series of initiatives to overhaul the supply chain management and introduce sustainable systems. This Practice Insight (PI) captures learnings from experiences in Jharkhand.

Overview

As a part of the roll out of AMB program, a study conducted by Institute of Economic Growth (IEG), Delhi on National Supply Chain Assessment (2019-20) identified challenges in supply chain management across various states, including Jharkhand (Table 1).

Component	Issues
 Forecasting	Forecasting of IFA is done at the state level based on AMB guidelines. The budgeting is done as per the previous years' coverage and expenditure. If the unspent budget is high, budgeting for the financial year is done accordingly.
 Procurement	The state warehouse experienced stock-outs of IFA leading to delayed distribution. The procurement process required a lead time of 3-4 months. At times, delays result due to time involved in identifying and finalizing suppliers and waiting period for the lab test results.
 Warehousing & Inventory Management	The study identified that the infrastructure and capacity development of personnel needed to be improved for effective supply chain and inventory management.
 Transportation	The shelf-life of drugs at the peripheral levels was shortened due to lack of transportation facilities at the state warehouse and the district stores for distributing IFA.
 LMIS	Drugs and Vaccine Distribution Management System (DVDMS/e-Aushadhi)/e-Aushadhi was implemented across the districts but the capacity of store-in-charges to use the portal-based systems need to be built. The capacity building is meant to enable routine monitoring of real-time stock data and Logistics Management Information System (LMIS) for the management of stocks. During the initial stage of AMB program, IT infrastructure was being established for DVDMS/e-Aushadhi

Table 1: Source: AMB IFA Supply Chain Assessment (2019-20), Institute of Economic Growth (IEG), New Delhi. The report can be accessed at <https://anemiamukhbarat.info/resources/>

These study informed the processes and interventions implemented by NHM, Jharkhand to focus on:

- » Effective Budgetary Allocations
- » Strengthening Systems (pertinent to supply chain management)
- » Capacity Building through Training Programs

Key Processes and Interventions

NHM is working closely with three development partners, UNICEF, WeCan and Evidence Action to strengthen the implementation of AMB program in the state. The initiatives undertaken are mentioned below:

Closing Budgetary Gaps for Improved Budgetary Allocations

The initiatives undertaken in Jharkhand included a comprehensive analysis of the budget by NHM to ascertain whether the program implementation plan (PIP) in the state was aligned to the AMB operational guidelines. The analysis was contextualised to budget heads highlighted under the AMB program. The study was supported by UNICEF in close association with IEG, New Delhi (AMB-TSU). Based on these findings, budgetary allocations were made for the coming financial year. This helped in accelerated advocacy for earmarking adequate funds for initiatives required for strengthening the supply chain for IFA supplements through NHM PIP.

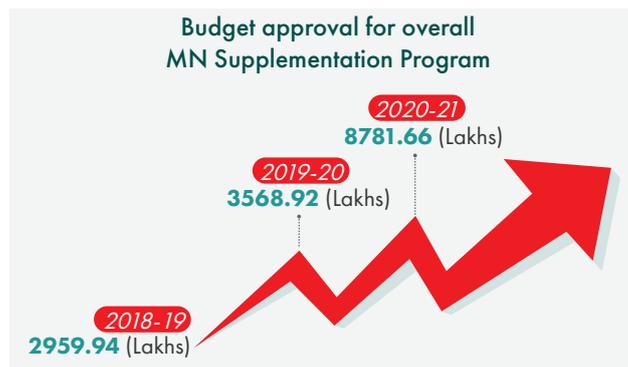


Figure 1

Revamping DVDMS/e-Aushadhi

As per the AMB operational guidelines, strengthening the supply chain and logistics for IFA is an important component for improved institutional mechanism. For this, a state should consider provision of auto-indenting¹ at the district level, provision of multi-year rate contracts and multi-vendor policy, centralised procurement at state level, inclusion of IFA and Albendazole in the EDL, and periodic verification and audit of the supply chain at all levels. Even though the journey towards these goals is a continuous process, Jharkhand has taken progressive measures towards achieving them (Fig. 2 below).

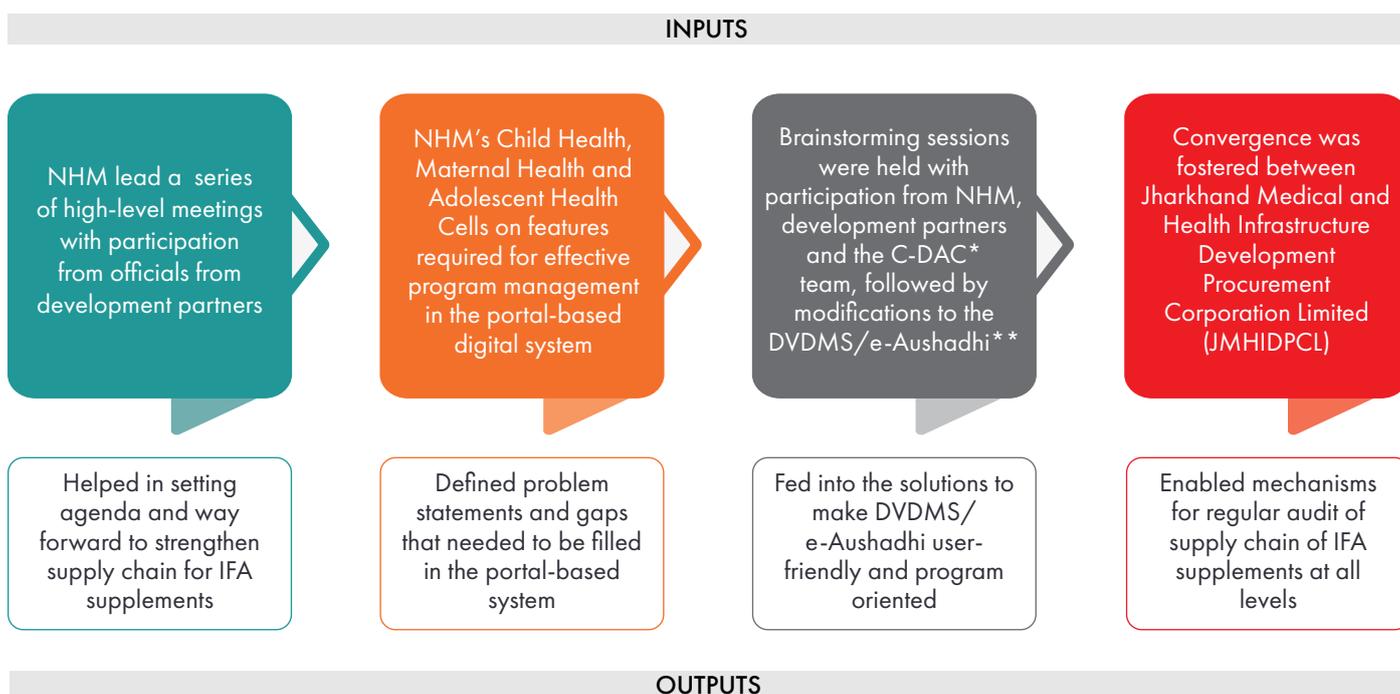


Figure 2: Process adopted to revamp DVDMS/e-Aushadhi in Jharkhand

¹Auto-indenting refers to a paperless system through which districts can submit their indents for requirement of IFA supplements to the state and states can initiate procurement process using the same automated system, thus cutting down the lead time in procurement and distribution of supplements.

Key modifications done to the DVDMS/e-Aushadhi:

- a Integration of all IFA supplements into DVDMS/e-Aushadhi along with other drugs and developing a dashboard for the state based on indicators with in DVDMS/e-Aushadhi (Fig 3 below).

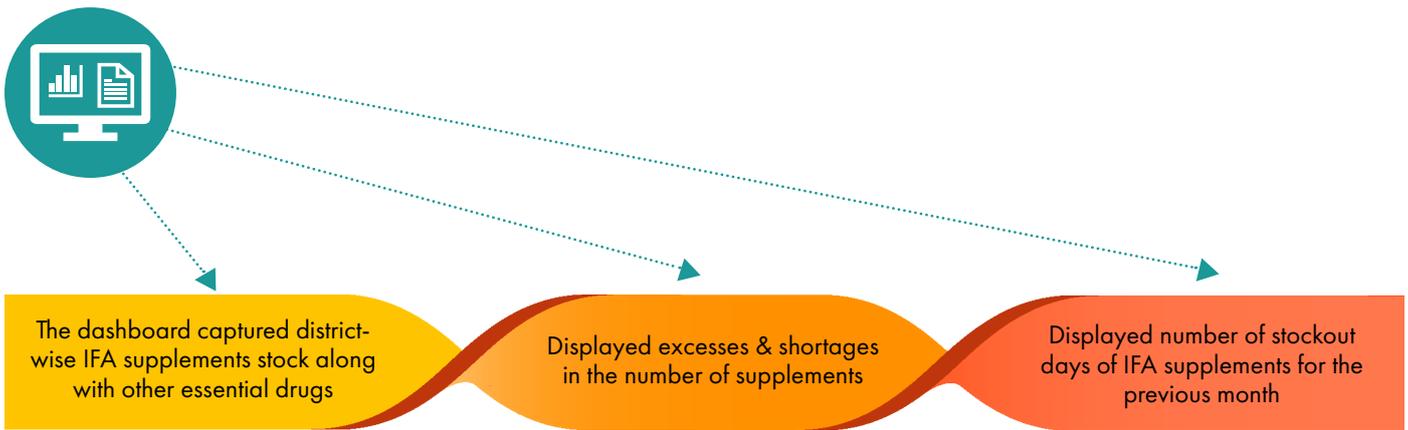


Figure 3: How did the inclusion of IFA supplements to the dashboard along with other drugs help in tracking information?

- b Inclusion of options for automated alerts for IFA supplements about to expire in the near future for the districts and state. At the district level, the store-in-charges have been entrusted and trained to enter stock-in-hand and expiry dates for supplements, so that automated alerts could be generated on the status of the stock. Based on this, the stock is sent according to the previous utilisation. At the state level, district-wise and block-wise data is compiled by JMHDPCCL based on the status of the stock every month. This data is shared with respective program officers from the Child Health, Adolescent Health and Maternal Health Cell of NHM.
- c In order to avoid delays in stock-updates due to technical glitches, provisions were made for back-end support to users of DVDMS/e-Aushadhi at all levels.

Introduction of Standard Forecasting Tools

With the rollout of AMB, NHM Jharkhand introduced standard forecasting tools which were applied for forecasting in the PIP of 2019-20, 2020-21. Population based methods were used, whereby the denominators² were taken from the AMB guidelines. The state, districts and block-level officials were trained on the methods of calculation and the use of forecasting tools for sustaining the initiative.

Capacity Building and Training

The initiatives undertaken by NHM, Jharkhand included training and capacity building of in-service public health and ICDS officials as well as frontline workers, education department officials and schoolteachers. NHM included the following complementary components in the training program:

Technical and operational components under AMB programme, supported by UNICEF and National Centre of Excellence and Advanced Research on Anemia Control (NCEARA)- AIIMS and IEG.

In-detail training of Store managers and Data managers on using DVDMS/e-Aushadhi to perform pertinent supply chain functions using DVDMS/e-Aushadhi, supported by CDAC and WeCan.

A three-tier approach was adopted to improve competencies at all levels and to build capacity amongst public health officials and frontline workers.

²The denominators are the target beneficiary numbers across each age group of Anemia Mukta Bharat. These denominators are estimations (based on Census 2011 data) and reported programme targets. The denominators for each of these target groups are fixed for the FY and no edits of the data are allowed in back end.



Figure 4: Approach adopted for capacity building

Institutionalising Review Mechanism

- » The AMB dashboard provides a one-stop portal for reporting on indicators included in the programme and extracting query-based information. The NHM officials at the state level review the dashboard monthly along with officials at the district using video conferencing. In order to enable this, UNICEF, supported the state in developing format for a district wise scorecard for AMB implementation. This scorecard is shared by the Mission Director, NHM with all the districts and partners to track progress. Corrective measures are actioned based on these scorecards and their review.
- » NHM is monitoring the supply for IFA supplements supported by UNICEF, Evidence Action and WeCan in their respective geographical locations. One of the initiatives by Evidence Action is using tele calling to monitor the supply of IFA Pink, IFA Blue and IFA Syrup at districts, block and community level. In addition to that, NHM has taken measures to strengthen the strategic use of data through POSHAN Tathya. The tool analyses and generate reports on the performance of nutrition indicators and their determinants for child, maternal and adolescent health programs from the HMIS data source. It can be accessed at <https://poshantathya.jharkhand.gov.in/>.

Addressing Distribution

Prior to 2019, mostly the rented vehicles from the state and vehicles(vaccine vans) coming from the districts were used to distribute essential drugs from State Warehouse, including the IFA supplements. In the month of November 2019, the JMHDPC entered into an MoU for transport vehicles to distribute all the essential drugs from state warehouse to districts. With the new system in place, each day, 3-4 vehicles move from state warehouse to district warehouses on a well-defined route map. Since IFA supplements are now a part of EDL, this arrangement has also increased the frequency of distribution for the IFA supplements.

Provisions in the Wake of COVID-19 Pandemic

NHM prioritised initiatives to counter the impact of the pandemic. The measures included timely issue of directives to various districts on community based distribution of IFA supplements following COVID appropriate behaviour. The NHM also took measures to continue the capacity building programs for personnel during the pandemic by shifting the training to digital platforms (Figure 5)

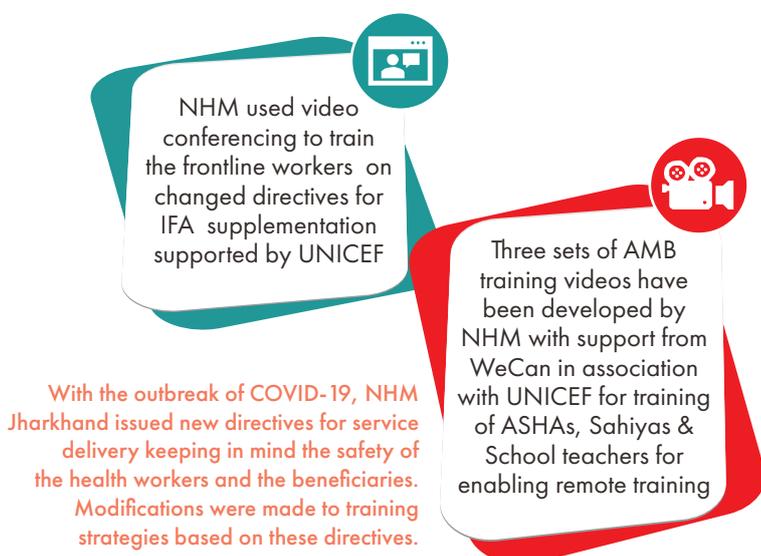


Figure 5: Provisions made during COVID outbreak

Outcomes

Improvement in Forecasting

The accuracy in forecasting of IFA supplements has improved after implementation of AMB guidelines. The overall impact of the improvement in the forecast modelling and process can also be seen in the corresponding increase of micronutrient coverage in Jharkhand for various beneficiary groups under the AMB programme.

Indicators	Year-wise coverage in %		
	2018-19	2019-20	2020-21
IFA Red - PW	89.9	66.8	89.3
IFA Red - LW	50.8	78.5	83.3
IFA Blue - Adolescents	27	30	18
IFA Pink (5-10 years old)	13.4	11	15
IFA Syrup (6- 59 months old)	2.0	2	6.8

Source: HMIS

Budgetary Allocations

There has been an increase in budgetary allocations for AMB since 2018-19. 11 major heads including procurement, capacity building, ASHA incentive, IEC-SBCC, printing, strengthening of services, research and innovation have seen improved budgetary allocations.

Evidence Generation and Advocacy at the State Level

The learnings from the implementations by partners in their respective districts were shared with senior officials at high-level meetings in the state. The evidence from these districts, and sustained advocacy in the state brought IFA supplementation into focus. The mainstreaming of IFA discourse at high-level meetings became one of the enabling factors in taking steps to implement state-wide actions for improving the supply chain management for IFA supplements.

Strengthening of Infrastructure & Proactive Procurement

Convergence between NHM and JMHDPCCL helped in amplifying digital connectivity. 253 public health facilities from state till the CHC level have been equipped with the hardware and software to connect to DVDMS/ e-Aushadhi. The facilities include headquarters, district warehouses, district hospitals, sub-divisional hospitals, community health centres and medical colleges. Also, all types of IFA supplements and Albendazole were included in the drug list of DVDMS/ e-Aushadhi.

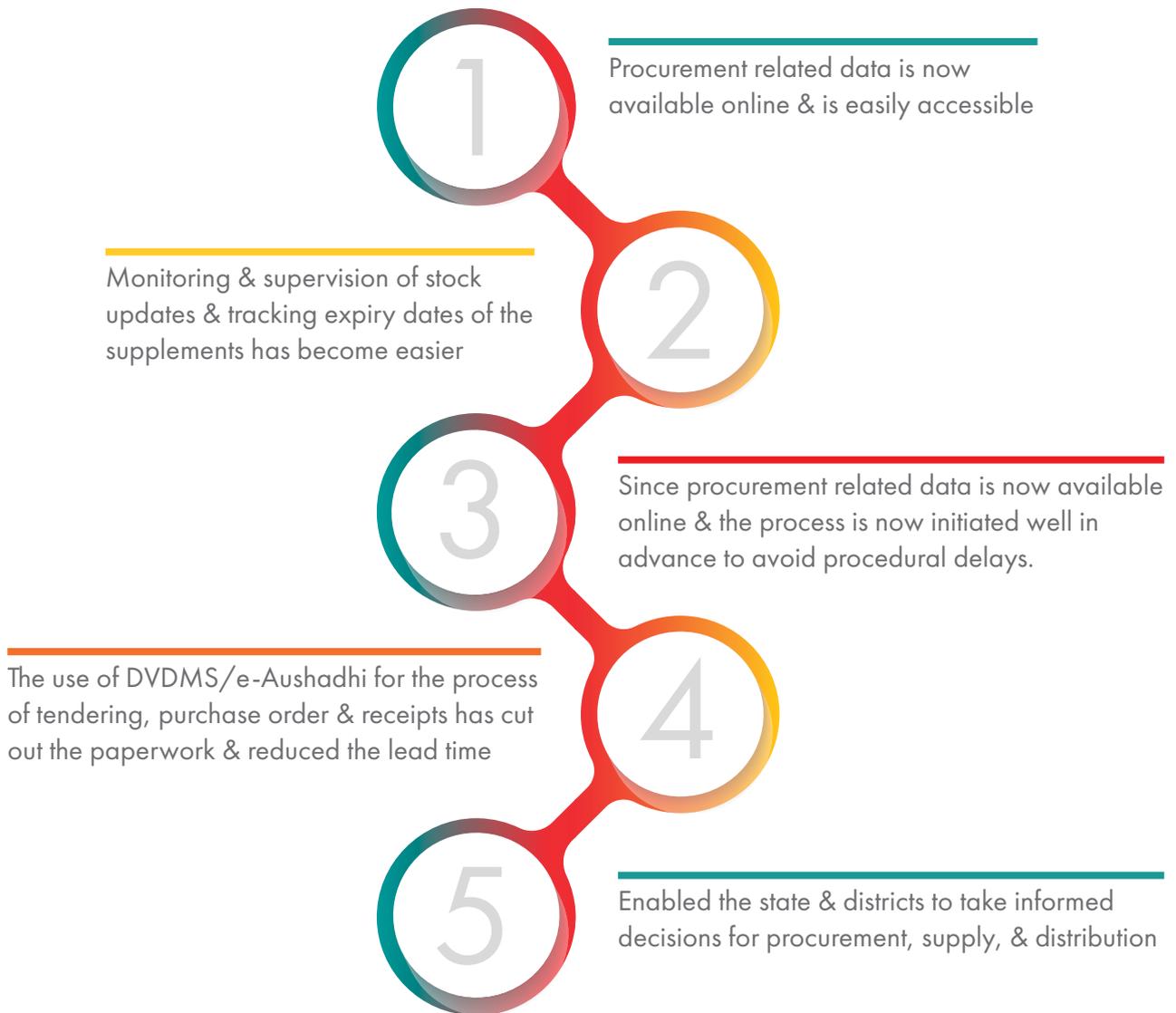
One of the key areas in AMB program is use of innovative methods of testing haemoglobin levels using digital haemoglobinometers. NHM, Jharkhand prioritised and proactively procured the haemoglobinometers and consumables, despite the disruptions due to COVID-19 pandemic and made provisions for virtual training of health personnel to use the device.

Improving the availability and use of data

AMB dashboard provides clear sets of indicators to monitor the program. The success rate of IFA supplementation is now being deduced by quarterly reviews of data from HMIS, DVDMS/e-Aushadhi and AMB dashboard by program managers. Real-time monitoring of the supply chain data has been gradually improving at the state and district level in the past two years. This in turn has resulted in improved tracking of IFA coverage in the state. In addition, the tele-calling initiative by Evidence Action in 24 districts is helping in generating data on IFA supply and distribution to feed into the decision making process.

The customisation of DVDMS/e-Aushadhi for managing supply chain generates real-time data of stock-in-hand and stockout, and expiry dates of stock that has enabled the following:

How has DVDMS/e-Aushadhi influenced procurement process & monitoring?



Institutional Capacity Building

A focus on strengthening inter-departmental cooperation by NHM Jharkhand lead to convergence between Health, WCD (ICDS), Education in the development of training materials, training programs, monitoring, and review of the AMB program at State and Districts including the supply chain and inter-departmental reporting. The training programmes also helped in improving the capacity of district administrators (DC, DDCs CS, DSWO and DEO) on the AMB program. The trainings are an ongoing process to build sustained institutional capacity.

State-level	(Nodal Officer, State warehouse, Consultants)	District	(DDM, DPM, DPC, STT)	Block	(BPM, BDM, MOIC, CDPO, BEO, Nodal Teacher, ANM, Sahiya, AWW)
18	officials	316	officials	5974	personnel

Key Learnings & Challenges

What helped in achieving positive outcomes?

- » Holding extensive training and orientation sessions while moving supply chain management from the paper-based system to an online, portal-based system helped in building confidence amongst the public health officials across levels to use the portal.
- » NHM lead the training programmes for capacity building across districts supported by partners. A crucial feature of capacity building and training programmes was convergence and synchronicity among partners providing technical support to NHM. Firstly, it prevented the duplication of efforts in the planning and execution of training sessions. It is essential to monitor the use of system, perform follow-ups and take corrective measures.
- » Inviting feedback from programme officers and other users for optimisation of DVDMS/e-Aushadhi was a crucial step in ensuring that the online platform was customised as per programmatic requirements.
- » Monitoring and supportive supervision through physical visits to public health facilities and telephonic monitoring for validation of stock-updates are proving to be of great support in improving real-time stock updates.
- » Involvement of District Collectors, district and block officials in review meetings helped to strengthen inter-departmental coordination between Health, Education and ICDS to positively impact the procurement and coverage of IFA supplements among school going and out of school children.
- » Routine review and orientation of the Health, ICDS and Education using the existing monthly meeting platforms at each level has helped in addressing the local issues related to distribution and reporting.

What are the challenges?

- » Change in the specifications of IFA supplement may impact the lead time for procurement and supply, delaying the supply
- » Capacity building on using online systems is an ongoing process in the state and requires intensive focus for sustained and efficient use of DVDMS/e-Aushadhi
- » An emphasis is needed on the supply of Information, Education & Communication (IEC). While the Test, Treat, Talk (T3) camps have seen progressive use of IEC materials, the strengthening of supply of these materials is essential for demand generation
- » Apart from IFA supplements, the supply of digital haemoglobinometers remains critical to the success of the programme. Along with the haemoglobinometers, the supply of consumables such as lancets and test strips should be procured adequately, at regular intervals
- » At present, only the State/Regional/District team of UNICEF, WeCan and Evidence Action conduct monitoring, spot check and telephonic survey to verify the supply status of IFA and Albendazole. More development partners working with NHM in RMNCH+A program should be involved in supportive supervision for the AMB program on a routine basis using a standard protocol checklist. A consortium of partners would help in more intensive monitoring and supportive supervision. Cascade training, regular monitoring of stock out of consumables will be beneficial.
- » Lab testing of new supplements takes time and hence sometimes supplements take time to reach down the line for distribution

About the Document

Anemia is a grave cause of concern and a public health challenge of colossal proportions for the country despite concerted efforts being made by all the stakeholders involved.

The Anemia Mukht Bharat (AMB) program intensified and added to the interventions and endeavours being made under the National Iron Plus Initiative, Weekly Iron Folic Acid Supplementation and other iron supplementation programs. The AMB Compendium of Learnings is anchored in the lessons learnt from efforts made to strengthen the various system pillars for implementation of AMB program in Chhattisgarh, Jharkhand, Madhya Pradesh and Uttar Pradesh. In addition, the compendium also consists of an intervention on Anemia Control implemented in Odisha, that showed promising results. The package consists of a total of seven documents- an introductory synthesis document and six practice insights.

Author: We Collaborate for Nutrition (WeCan)

WeCan (We Collaborate for Nutrition) is a national level platform to foster cross-learning within the nutrition community, to collaborate and to leverage each other's experiences. WeCan facilitates scaling up of proven interventions for optimal utilization of resources and time to improve nutrition outcomes in India. Our goal is aligned with the overarching mandate of POSHAN Abhiyaan, a multisectoral nutrition flagship program of the Government of India. We work with a special focus on Maternal, Infant and Young Child Nutrition (MIYCN) and its key thematic areas.

Contributors

This document is a collaborative effort. It has been developed with inputs from National Center for Excellence for Advanced Research in Anemia (NCEAR-A), National Health Mission (NHM), Chhattisgarh, NHM-Jharkhand, NHM-Madhya Pradesh and contributions and inputs from the following development partners:

National Center for Excellence for Advanced Research in Anemia (NCEAR-A)

NCEAR-A is partner institute of the AMB program. To enable accelerated anemia control in India, under the aegis of Anemia Mukht Bharat – National Health Mission, National Centre of Excellence and Advanced Research in Anemia Control (NCEAR-A) has been established at Centre for Community Medicine, All India Institute of Medical Sciences (AIIMS), New Delhi.

UNICEF

UNICEF is the global leader promoting and protecting children's rights in 190 countries, including India.

Evidence Action

Evidence Action scales evidence-based and cost-effective programs to reduce the burden of poverty for hundreds of millions of people.



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