Uttar Pradesh

National Deworming Day



Photo Credit: Evidence Action

August 2017 Report

Evidence Action

Deworm the World Initiative

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Acronyms

ANM:	Auxiliary Nurse Midwife
ACMO:	Additional Chief Medical Officer
CIFF:	Children Investment Fund Foundation
CDO:	Chief Development Officer
CMO:	Chief Medical Officer
DM:	District Magistrate
DCPM:	District Community Program Mobilizer
GoI:	Government of India
IEC:	Information, Education and Communication
NHM:	National Health Mission
NDD:	National Deworming Day
WCD:	Women and Child Development
WHO:	World Health Organization

Executive Summary

The state of Uttar Pradesh implemented round four of National Deworming Day (NDD) in 51 districts[1] in August 2017. Aligning with the national guidelines, NDD program was scheduled to be conducted on August 10, but due to delay in drug availability at the districts the round was conducted on August 10 in only 46 districts. Six districts revised the NDD and mop-up dates[2] as per receipt of drugs and related feasibility of implementation. One district Shamli, did not conduct the mop-up day due to local administration decision to undertake drug testing,[3] following adverse events on NDD.

In this round, the state dewormed 3,21,63,360 children aged 1-19. NDD coverage in the state has increased four folds since the first round of NDD was implemented in the state on February 10, 2016. This achievement is an outcome of exemplary leadership from the National Health Mission (NHM), State Innovations Family Planning Services Project Agency (SIFSPA), Departments of Basic and *Madhyamik* Education, and Women and Child Development (WCD). Evidence Action provided technical assistance towards program planning, implementation and monitoring through funding support from the Children Investment Fund Foundation (CIFF) and Dubai Cares.

Table 1: Key Achievements of National Deworming Day August 2017

Indicators		Census-base Target	Targets Finalized Before NDD	Target (in Figures)	Coverage*(August 2017 Round)
Total number of districts implemented NDD		75	51	51	51
Total number of blocks implemented NDD		820	606	606	606
Number of schools reporting coverage		2,46,539		1,47,462	1,39,054
Number of *anganwadis* reporting coverage		1,65,215		1,24,832	1,21,573
Number of enrolled children (classes 1-12) who were administered Albendazole on NDD and mop-up day	Government Schools		2,63,23,342[4]	1,38,58,735	1,20,54,312
	Private Schools		98,79,769[5]	80,25,870	66,23,320
Number of registered children dewormed (1 to 5 years) at *anganwadis* on NDD and mop- up day				1,28,51,453	1,10,36,714
Number of unregistered children dewormed (1 to 5 years) at *anganwadis* on NDD and mop- up day				10,77,595	8,15,546
Number of out-of-school children (6-19 years) dewormed on NDD and mop-up day		7,62,37,695	57,36,720[6]	22,41,915	16,33,558
Total number of children dewormed (1-19 years)		**9,76,54,648**	**5,64,93,876**	**3,80,55,568**	**3,21,63,360**

* NDD August 2017 coverage report submitted by NHM to GoI submitted on September 28, 2017 (Annexure A)

24 districts were scheduled to conduct Lymphatic Filariasis-Mass Drug Administration (MDA). LF-MDA program consists of single dose of DEC (Diethylcarbamazine citrate) and Albendazole for 5 years or more to the eligible population (except pregnant women, children below 2 years of age and seriously ill persons) to interrupt transmission of the disease.

[2] NDD and mop-up day were delayed in five districts: Azamgarh, Jaunpur, Basti, Deoria and Bahraich due to non-availability of drugs. Azamgarh, Jaunpur conducted NDD on August 17 with a mop- up day on August 21 and 22 respectively; Basti and Deoria conducted NDD on August 21 with a mop-up day on August 25, Bahraich conducted NDD on August 25 with a mop-up day on August 30). Shamli district hasn't conducted the mop -up day, as the district has decided to conduct mop-up day after drug testing report to be received given some adverse events that happened during NDD in the district

[3] Shamli procured drugs locally, the drugs were tested post the adverse events on NDD but mop-up day was not conducted

[4] Source- U DISE (2015-16)

[5] Source- U-DISE (2013-14)

[6] Source- Targets for out-of-school children finalized under the WIFS program 2016-17

It is crucial to conduct fixed-day NDD across all districts of the state for high coverage and to decrease high prevalence of Soil Transmitted Helminths (STH). The state was able to cover the 51 districts scheduled for the NDD August 2017 round, unlike the August 2016 round where 21 districts couldn't conduct the NDD round and the rest 49 districts postponed the NDD round by a month.

Aligning with national guidelines and the strategy adopted by the state in the previous NDD rounds, Uttar Pradesh has conducted the NDD round in coordination with the LF elimination program.

Setting targets as per the census population and reporting coverage against the targets set prior to the NDD round is important for a high-quality program, Though the target has moved closer to the census population (60%) in this round, as compared to 10% in the first NDD round, further alignment with census population when setting targets still needs to be achieved. Thus, finalizing targets as per census population continue to be an area of improvement for the forthcoming NDD round.

As awareness generation efforts are linked to program coverage, the state engaged in an intensive communications campaign to boost demand for deworming in the state. In addition to traditional awareness generation and mobilization efforts, the state utilized the cost platform of social media to increase awareness and interest for the NDD campaign.

1. About National Deworming Day

The GoI implemented its first NDD in February 2015 and the program has since achieved high coverage at scale. Based on national-level STH mapping[7] and WHO treatment guidelines, the GoI issued a notification to states recommending the appropriate treatment frequency based on prevalence data. The state of Uttar Pradesh is required to conduct deworming twice a year due to high prevalence of 76%[8].

1.2 State Program Background

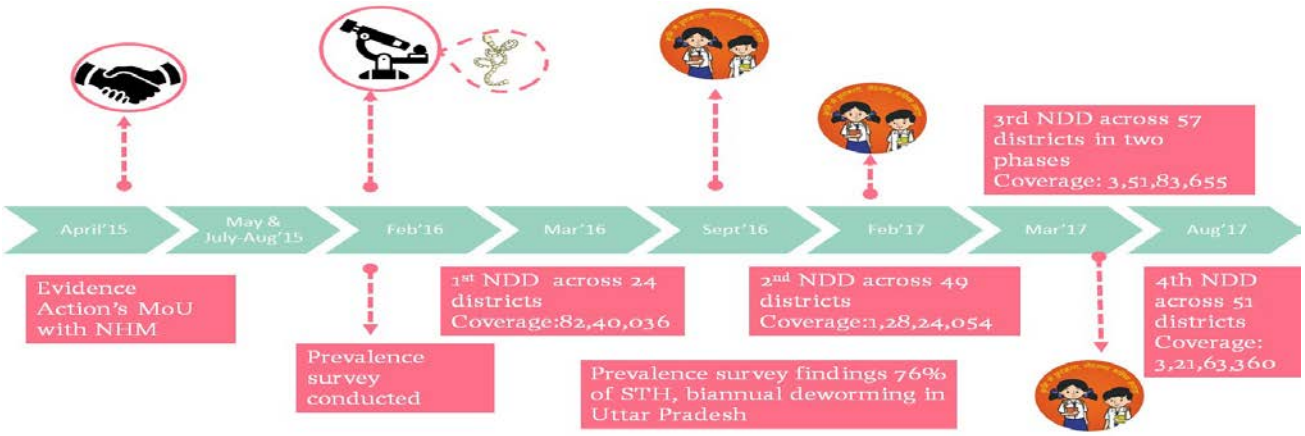
Anganwadi and school-based NDD program in Uttar Pradesh is being implemented since February 2016, with the state making adaptations to the GoI's NDD operational guidelines. Below are the key highlights and milestones achieved under the program.

7 Prevalence mapping was led by the National for Disease Control (NCDC) and partners. STH mapping for UP completed by Evidence Action with NIE, PGIMER, NICED and GFK MODE

8 Prevalence Survey was conducted in the state in two phases (first phase in May 2015 and second phase in July-August 2015. With approvals from state government, Evidence Action conducted the survey amongst school children in government, private schools across all nine agroclimatic zones of the state. National Institute of Epidemiology (NIE)designed the survey, field teams were hired through GfK Mode. Parasitologists from the Post Graduate Institute of Medical Education and Research – Chandigarh (PGIMER, in Phase 1), and the National Institute for Cholera and Enteric Diseases, Kolkata, (NICED, in Phase 2), analyzed stool samples in field laboratories set up in district health facilities, using the WHO recommended Kato-Katz method.

Figure 1: NDD Program Highlight

Figure 2: Uttar Pradesh NDD Roadmap



2. State Program Implementation

2.1 Policy and Advocacy

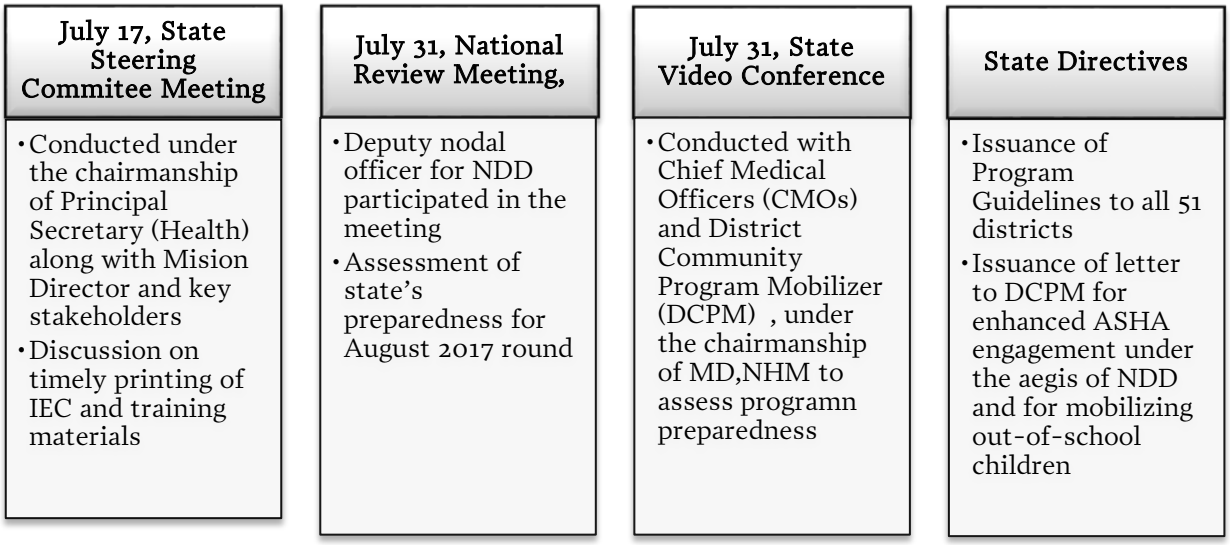
State Steering Committee Meeting (SCCM) for NDD

- The meeting was conducted on July 17 under the chairmanship of the Principal Secretary (Health) along with MD (NHM), with participation from Department of *Madhyamik* Education, WCD and technical partners like UNICEF and Evidence Action, to take key decisions for NDD August 2017 including number of districts to be covered under NDD and LF MDA.

- As per the operational guidelines submitted to the state, the SCCM was scheduled to be conducted in the third week of June. However, a delay of five weeks affected overall implementation of the program, particularly stakeholder coordination across all levels, training implementation, community mobilization and other key program components. The non-involvement of key stakeholder such as Department of Basic Education in the SCCM impeded the program, as is also corroborated by the process monitoring findings detailed further in the report.
- Discussion on children's low attendance in schools and its impact on the program; and the importance of community awareness generation activities took place during this meeting.
- The Joint Directives were not released in this round as the state decided to refer to NDD February 2017 round directives. This contributed to adversely affecting timely decisions at districts and blocks such as finalization of training dates. MoHFW guidance to all states is to disseminate state joint directives to districts with key information reiterating roles and responsibilities of each stakeholder and key learnings from the past NDD round. It is crucial that joint directives be signed at state level in the upcoming NDD rounds.

Key highlights of inter-departmental collaboration are displayed in Figure 3.

Figure 3: Efforts towards Stakeholder Collaboration



Despite early intervention to enable coordination between LF-MDA and NDD, finalization of the list of LF-MDA implementing districts from state LF- MDA department was delayed. Given the time-sensitivity of NDD, the NHM decided to conduct NDD in the remaining 51 districts at the SCCM. This delay also contributed to the delay in drug procurement by the state. As a result NDD was conducted in a phase-wise manner, thus impacting coverage and cost effectiveness of the program.

The NHM prepared and disseminated NDD program and financial guidelines to respective stakeholders across all districts on July 12. This was, however, delayed by a month as per the NDD operational guideline (Annexure B), contributing to a delay in printing of training, IEC materials.

NDD District Coordination Committee Meetings (DCCM) were held across 51 NDD districts[9] during July 11 to August 8 under the chairmanship of District Magistrates or Chief Medical

[9] Three districts i.e. Rampur and Fatehpur conducted DCCM on August 7, 2017 and Allahabad conducted DCCM on August 8, 2017

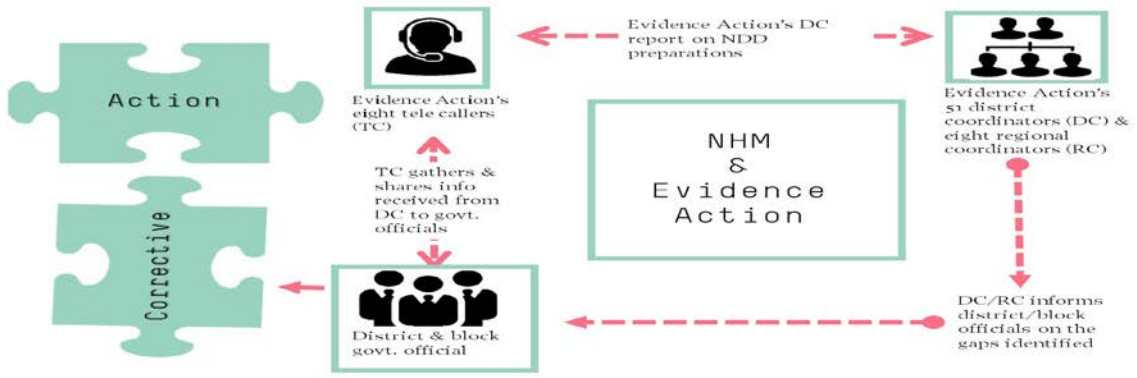
officers of the districts. During these meetings stakeholders reviewed preparations for the program and clarified roles for improved inter-departmental coordination. Private schools participated in 23 of the 51 DCCMs conducted. Private schools did not participate in some DCCMs due to lack of ownership among private schools in the program. This is further reflected in the coverage report with 66 lakh private school children being dewormed as compared to the February round where 69 lakh children were dewormed.

Though DCCMs were to begin from the last week of June as per the operational guidelines, only 44 districts conducted DCCMs in July. Allahabad, Auraiya and Fatehpur districts, which conducted DCCM in August, witnessed a delay in the district and block trainings, and IEC printing order affecting the overall quality of the program.

2.2 Program Management

Evidence Action drafted a state specific operational plan in discussion with State NDD Nodal Officer to lead program planning and implementation. The plan was further shared by Department of Health to Department of Education and Department of WCD. Evidence Action's technical assistance was extended through a four-membered state-based team, eight field-based regional coordinators and short-term staff, consisting of 51 district coordinators (at each NDD district) and eight tele-callers at state-level. Evidence Action assisted the State NDD Nodal Officer with program planning and also coordinated with stakeholder departments to share real time updates on program preparations, implementation, and facilitated corrective actions as required. Figure 4 gives an overview of the information flow between the Evidence Action team at the state and district.

Figure 4: Evidence Action's Corrective Action Mechanism



2.3 Drug Procurement, Storage, and Transportation

a) Drug Procurement: Drugs were made available to districts starting July 11, 2017. Based on the WIFS, U-DISE, and WCD data, covering all children aged 1-19, including 10% buffer, the state required a total of 6,21,43,265 Albendazole tablets in 51 districts. The MoHFW, GoI provided 2,81, 25,741 albendazole tablets from the WHO drug donation program for NDD August 2017 round in 41 NDD districts. The remaining 98, 24,285 tablets were procured locally by the remaining 10 districts[10]. The state also utilized 64, 88,743 tablets left over from the February 2017 round. The remaining 77, 04,496 tablets were made available from the various district depots available from previous stock.

[10] The Minopharm Laboratories Ltd. Could not provide Ballia drugs on time, hence Ballia received 12,79,957 drugs from the Kanpur Depot.

b) Drug Logistics and Distribution: Drug procurement for August 2017 round was delayed in the state with district procurement orders placed between first to third week of July 2017 and thus drugs were received between first to third week of August 2017. 41 districts supported under WHO drug donation program, placed the order in mid-June 2017 and received the drugs in mid- July 2017. Evidence Action supported the state department in tracking drug availability at districts and blocks, and provided timely updates to allow officials to undertake corrective actions.

Evidence Action developed district and block-wise drug bundling and distribution plans (Annexure C) to help streamline integrated distribution of NDD kits[11] to blocks. The plan, however, could not be utilized completely as integrated distribution of drugs and print material was hampered with 22 out of 606 blocks conducted training on August 9 as a result of delayed drug procurement in five of the NDD implementing districts.

c) Adverse Event Management: In line with the NDD February 2017 round, the state followed the adverse event management protocol from the national guidelines. On both NDD and mop-up day, 104-ambulance service, block-level emergency response teams and *Rashtriya Baal Swasthya Karyakram*[12] teams were on alert to manage any such events. 63 severe adverse events were reported on NDD, as per NDD coverage report submitted to GoI. There were 124 reported cases of mild adverse events from 5 districts (Shamli, G.B. Nagar, Mathura, Bulandshahar, and Ambedkarnagar) of which 9 cases required hospitalization but were discharged after 15 minutes. There is a need to strengthen functionaries understanding of their roles and responsibilities related to adverse event management and differentiating between severe and mild adverse events. These points need to be further iterated during the training of teachers/ *anganwadis*. Given that Shamli did not conduct mop-up day following mild adverse events, trainings should focus more on the management of the adverse events. In response to the media coverage on the adverse events, the MD NHM convened a press release on August, 10 to reiterate the benefits of deworming for children and to reinforce albendazole drug safety.

d) Drug Recall: Evidence Action supported NHM in tracking leftover Albendazole tablets after the NDD round in all 51 districts. (Annexure D). The drug recall status of all 51 districts is presented in the table below.

Table 2: Drug Recall Status in Uttar Pradesh

Abendazole tablet inside the sealed box	1,43,82,800
Albendazole tablet inside the sealed strips	31,95,340
Albendazole tablets in used strips	19,11,951
Total Albendazole tablet available sealed box/strips and used strips	1,94,90,091

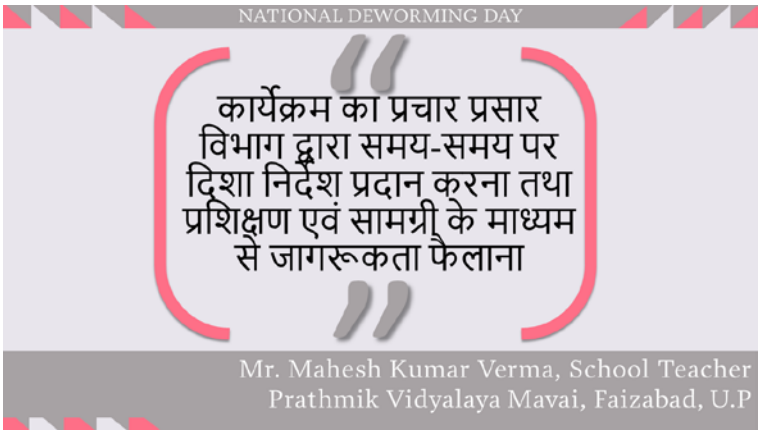
The Department of Health will be directing districts to utilise sealed boxes and strips in the upcoming February 2018 round as per drug safety recommendation.

[11] NDD kits includes drugs, IEC materials such as posters and handbills and reporting formats.
[12] Rashtriya Baal Swasthya Karyakram (RBSK) is an important initiative aiming at early identification and early intervention for children from birth to 18 years to cover 4 'D's viz. Defects at birth, Deficiencies, Diseases, Development delays including disability.

2.4 Public Awareness and Community Sensitization

Uttar Pradesh, with support from Evidence Action, customized the NDD resource kit. Further all 51 districts printed the IEC materials including posters, banners, and community handbills. This material was later disseminated to all blocks for onward distribution at training of teachers and *anganwadi* workers. According to field-level tracking conducted by Evidence Action, Baraich, Sohnbhadra, Fatehpur, Badohi, and Ballia districts did not follow NHM's printing guidelines, in terms of size and paper quality for posters. The printing of the material was delayed with the first printing order being placed on July 17, as opposed to the June 25-30 timelines under the operational plan. As a result, there was a delay in receiving the IEC material order[13] by the districts (during July 26- August 8). One of the reason for delayed printing order was the Good Service Tax (GST) levied with effect from July 1, which had financial implication at districts. Robust planning and timely decisions at state and districts could have mitigated the delays.

Fig 5: Testimonial from a Teacher



As part of other awareness generation efforts, the state leveraged free-of-cost airtime on All India Radio and *Doordarshan* from August 1 to broadcast NDD TV and radio spots[14]. Each district rolled out a communication campaign, which included; radio, TV, and newspaper advertisements and miking (public service announcement). To complement mass media efforts, Evidence Action developed and submitted a social media plan to reach out to audiences online via Facebook[15] and Twitter[16]. Social media is a cost-effective medium for generating awareness among broader public and influencers about the benefits of deworming. Additionally, MoHFW recommends using social to reach parents of private school children and other groups whom the program might not have direct access to.[17] (Annexure E)

Fig 6: Snapshot of Mass Media and Social Media Efforts in Uttar Pradesh - NDD August 2017

Platform	Timelines	Frequency
TV Spots	August 8, 9, 15,16	4 (once every day on DD UP)
TV Scroll	August 9 to 17	24X7 (on DD UP)
Radio Spot and Radio Jingle	August 1 to 17	3 spots relayed 60+ times (on Vivid Bharati and FM Rainbow)
Newspaper Advertisement	August 10	12 (published in 12 leading newspapers)
Prabhat Pheris	August 2 to 15	1278 (in 39 districts)
Miking (Public Service Announcement)	July 31 to August 10	14 (in 5 districts)
Wall Writings	July 17 to August 9	2135 (in 32 districts)
Social Media	August 5 to 13	30 Posts (On Facebook and Twitter) 415 Likes 141 Shares

[13] Faizabad received the print order by August ,8 and Baraich did not receive in the print order by August, 9
[14] Radio and TV spots developed by Evidence Action for NHM, GOI for awareness on NDD
[15] The Facebook page of NHM, UP can be accessed here https://www.facebook.com/NationalHealthMission.UP/
[16] The Twitter handle of NHM, UP can be accessed here https://twitter.com/nhm_up?lang=en
[17] Report on National Deworming Day Review Meeting, July 2016 , MoHFW

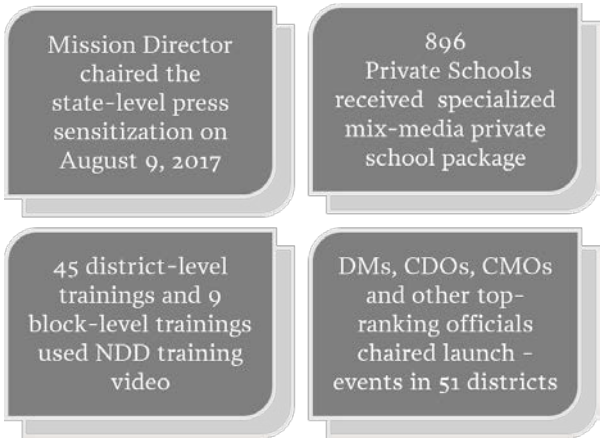
There was an increase in the intensity of community awareness efforts by the state department in August 2017, as compared to February 2017. For instance, the NDD TV spot was aired only once during the February round[18] but in August the TV spot[19] was aired for four days, pointing to a better planned awareness generation strategy by the state, which should continue for forthcoming rounds. Additionally, state showed further ownership of the campaign by designed and printed the newspaper advertisement in the August round. TV scrolls[20] and TV show were broadcasted for the first time during the August round in the state. The NDD Nodal officer participated on a live talk show on *Doordarshan* UP on August 9, 2017 on discussions centered on harmful effects of worm infection and benefits of deworming.

The NHM disseminated 10 reinforcement WhatsApp messages developed by Evidence Action with key program information to district and block officials in 42 district groups. WhatsApp is another cost-effective platform that can used to reach a large number of people in a quick and easy manner.

Evidence Action developed a mixed media[21] package for private schools that the Department of Health circulated to 896 private schools in the state via an email. This package consisted of WhatsApp messages, *prabhat pheri* banners, posters, and social media content to encourage better participation of private schools in the program.

Even though it is important to conduct a state-wide launch for greater awareness in the community, the launch did not take place in this round because the state capital (Lucknow) and the neighboring districts were not NDD-implementing districts. District launches took place in all 51 NDD conducting districts on August 10 in government schools, with district officials and/or local Member of Legislative Assembly as chief guests to increase coverage and public branding of NDD.

Fig.7 NDD Highlights in Uttar Pradesh



The state department organized a press sensitization meeting in Lucknow on August, 9 chaired by the MD, NHM, to inform media about the upcoming NDD round and to sensitize them about the need and importance of deworming all children at schools and *anganwadis*. Representatives from 35 leading print, electronic, and digital media houses attended the meeting. Evidence Action provided media kits to all participants.

2.5 Training Cascade

State NHM, with support of Evidence Action, carried out state Training of Trainers (ToT) for all districts NDD nodal officers from the Department of Health in three batches in the first week of July[22]. A cascade training model was adopted for training of all 51 districts and 606 blocks, wherein 135,485 teachers/headmasters; 119,166 *anganwadi* workers; and 995,563 ASHA's; were trained during July 15 to August 9. Evidence Action supported with training monitoring and quality assessment of sampled block trainings. The details on training dates are annexed. (Annexure F)

[18] TV Spot was aired only on February, 28 on Doordarshan UP
[19] TV spots and radio spots are short 30 sec advertisements that help generate awareness about NDD
[20] TV Scrolls are short tickers that run in quick successions at the bottom of the TV screen and present the key messages
21 The package consisted of material that can be used for multiple outreach platforms like banners for Prabhat Pheris
[22] The training was carried out in three batches i.e. on July, 3, July ,3 and July, 10 with participation from 102 officials from Department of Health (two from each NDD implementing districts)

The NDD training video was used in 45 district trainings, and 9 out of 150 block trainings[23]as these districts and blocks had the necessary supporting infrastructure for broadcasting them. The video helped in dissemination of standardized information and can be used at all levels of the training cascade.

Training Cascade: As per the operational plan, (Annexure B) block trainings were planned to be completed by the first week of August. However, due to the delayed finalization of NDD implementing districts that deferred program planning, there was a delay in procurement of drugs, trainings of functionaries, and printing of IEC material. The block trainings were completed by August, 9. 95% of total targeted government schools, 80% of targeted private schools' teachers and 95% of targeted *anganwadis* were reported to be trained. This is in stark contrast to the data reported from independent monitoring, wherein only 46% of the government schools, 76% of *anganwadis,* and 30 % of private schools reported attending training for the current round. Trainings at block-level further needs to be closely monitored and the reported block training data needs to be reviewed at district for a robust data reporting on trainings.

There is need for completion of block trainings at least a week prior to the NDD round for enhanced program quality. Delayed trainings of teachers and *anganwadi* workers also leaves little time for the trained teachers to train other teachers in the school, as well as for the teachers and *anganwadi* workers to sensitize and mobilize community prior to the round.

Training Resources: Printing of training and IEC materials for NDD was done at the district with state NHM releasing funds to districts. Printed training resources included flipcharts for trainers, handouts for teachers and *anganwadi* workers, and leaflets for ASHAs. Evidence Action supported in drafting the IEC bundling plan, enabling materials to be transported to all districts. It was gathered from the field team of Evidence Action that there were delays in receiving the print order[24] which impacted program efficiency due to resulting at all stages of the cascade.

Table 3: Details of SMS sent

Department	Number of SMS sent by Evidence Action
Total text messages	88,92,536
Health	11,10,083
Education	45,12,912
ICDS	32,69,542

Training Reinforcement: Evidence Action supported the reinforcement of key messages from the training sessions by delivering bulk SMS to program functionaries of 51 districts, as shown in the table 3. Evidence Action sent 88, 92,536 SMS of which 84, 28,721 SMS (95%) were delivered. This is a drop from the February round where the success rate of delivery was at more than 99%. This is probably because of transfers reshuffling of numerous government school teachers to different districts in the month of May-June, resulting in changes in the contact information and a low SMS delivery rate.

In the previous round, the Department of Health had sent SMS from its portal to ASHAs and ANMs, however the same could not be leveraged in this round due to non-availability of budgets to send SMS. It is important that government stakeholder departments ensure budget availability for this initiative and utilize their existing platforms for sending SMS for greater program impact and sustainability. There is also better acceptability of information at the field when the SMS's are received from a known government source.

[23] Training Monitoring data collected by Evidence Action District Coordinators

[24] Allahabad and Fatehpur placed the print order on July 28, 2017. The print order of Baraich was received on August 28, 2017

Training Support: For quality assurance of training sessions, Evidence Action administered pre- and post-tests to participants at state-level ToT. The findings and observations highlighting key messages, which needed to be reinforced at district trainings, were shared with the Department of Health. Using the standardized training monitoring checklist, Evidence Action's district coordinators attended and provided supportive supervision to all 51-district trainings and 150 block trainings. These training sites were selected on random sampling basis and the activity helped in evaluating the quality of NDD trainings conducted. The real-time findings and recommendations were shared with the state to take any mid-course program corrections. In the districts of Chandauli and Deoria, the district & block trainings were conducted for a second time as the participation in the first was very poor. Chief Development Officer in Chandauli directed the Department of Health, Education and WCD to conduct the district level training again as the participation from stakeholder department was poor with only 12 out of 36 participants from 9 blocks attending the training. In Deoria district, only two out of 17 blocks conducted the block training by August 6, 2017 and the drugs were also unavailable during that time. The Chief Medical Officer directed all blocks to conduct the training and ensure integrated distribution of drugs at trainings, including the two blocks who had already conducted.

A brief snapshot of the findings can be seen below. The detailed analysis is included in Annexure G.

Table 4: Key Findings of State Pre-Post and Training Monitoring at State, Districts and Blocks

State Pre-post	District Training Monitoring	Block Training Monitoring
18% (n-14) participants were not able to mention correctly about the submission dates of the reporting cascade from district to state level which was reduced to 6% (n-5) in the post-test.	There was no participation from any stakeholders in Chandauli, Sahabganj blocks of Chandauli and Jewar blocks of G B Nagar districts. Flipchart/ presentations were available with 94% (n-51) in the districts of Chandauli, Ghaziabad and Shamli.	Flipcharts / presentations were used in 90% (n-159) of the trainings except districts Amethi, Aligarh, Chandauli, Faizabad, Etawah, G. B Nagar and Bahraich.
22% (n -17) participants were not able to mention correctly about the benefit of deworming that it helps improve work potential which improved to 90% (n-69) score in the post-test.	Information on benefits of deworming was disseminated across all district trainings.	Information on benefits of deworming was disseminated across all block trainings.

3. Monitoring and Evaluation

Monitoring, learning, and evaluation is a key component of Evidence Action's technical assistance to the government and enables an understanding of the extent to which schools, *anganwadis,* and the health system are prepared to implement the NDD.

3.1 Process Monitoring

Evidence Action conducts process monitoring through telephone monitoring and cross verification, as well as physical verification through field visits by its staff and trained independent monitors.

Tele-calling and Follow- up Actions: Evidence Action assessed program preparedness prior to NDD through tele-callers who tracked the status of training, delivery and availability of drugs and IEC materials at the district, block, school and *anganwadi*-levels. The tele-callers used pre-designed and standardized tracking sheets to capture the gaps in field implementation, as gathered from the telephonic follow ups. The compiled tele calling sheets were shared with the state government on a daily basis to enable them to take corrective actions as necessary, such as issuing departmental directives, sending communication electronically to private schools for increasing coverage and reiterating particular action points at the video conference. For example, the state nodal officer took immediate remedial measures to ensure sufficient drugs in Ballia district by rerouting from the Kanpur depot.

Evidence Action's district and regional coordinators made field visits to facilitate some of these corrective actions at the district and block-level. Of 40,599 phone calls including follow up calls, 31,429 calls (77%) were successful from June 19, to September 19. The success rate has improved from the February 2017 round wherein 70% of the calls were successful. Although the success rate has improved in this round, there is scope of further improvement. The insights from SMS delivery reports show that while more than 94% SMS were delivered, the challenge with the contact database is the frequent changes of the contact number by the functionary. So while the contact number is valid and operational, it may not be still retained by the functionary themselves. Thus, updating of the contact database quarterly, and after cycles of transfers of government teachers, district and block officials need to be ensured to enhance program effectiveness.

Snapshot of M&E Activities
I. Telephone Monitoring and Cross Verification
• Telecalling conducted across 606 blocks in 51 districts of the state • 31,429 successful calls made during June 19-September 19, 2017 • 15,592 calls to health functionaries incluidng district and block level officals and ANMs • 3,629calls to WCD department (district, block offcials and AWW) • 9,654 calls to education department (district, block officials, government and private schools)
II. Training Quality Assesment
• Pre-post test was administred during master trainer's training at state-level • A total of 51 district and 150 block level training quality assesment was done using standard format
III. Field Monitoring Visits
• Total 1014 monitoring visits by Evidence Action staff were made in selected schools and *anganwadis* • NDD monitoring checklist given in NDD operational guideline was administered • Real time findings on key indicators were shared with the stakeholders on NDD and mop-up day
IV. Process Monitoring by Independent Monitors
• Process monitoring was conducted in all 51 districts on NDD & mop-up day on different dates • 150 trained independent monitors from an independent survey agency, hired by Evidence Action, visited 300 schools and 288 *anganwadis* • Data was collected electronically using Tablet PC (CAPI) as per tools developed by Evidence Action
V. Coverage Validation by Independent Monitors
• Coverage Validation was conducted in all 51 NDD districts post mop-up day during August 23-28, 2017 • 150 trained independent monitors, hired by Evidence Action, visited 754 schools and 746 *anganwadis*

Monitoring by Independent Agency: Evidence Action with approvals from the government assessed the processes and performance of the program by hiring Academy of Management Studies (AMS) whose 150 trained monitors observed implementation on NDD and mop-up day. The findings were shared in real-time with state government officials on the day of visits to enable immediate corrective actions.

Monitoring visits by Evidence Action: In total 1014 visits were made by Evidence Action team to government, private schools and *anganwadis* on NDD and mop-up day. The detail note is placed in (Annexure H).

3.2 Assessing Treatment Coverage

Coverage Validation: Coverage validation is an ex-post check of the accuracy of the reporting data and coverage estimates. In this exercise conducted during NDD February 2017 round, a total of 754 randomly selected schools and 746 *anganwadis* were visited. Coverage validation data was gathered through interviews with *anganwadi* workers, headmasters/teachers, and a sample of three students from three randomly selected classes in each school. Additional data was gathered by checking registers and reporting forms in the schools and *anganwadis*. These activities provided a framework to validate coverage reported by schools and *anganwadis* and to estimate the level of accuracy in the data by comparing the recounted numbers (based on the documentation available in schools and *anganwadis*) with numbers in reporting forms).

Coverage Reporting: From block-level onwards, NDD coverage reporting was done using the NDD mobile/ web application. GoI provided the state with 657 [25] user IDs and passwords for NDD mobile/ web application to all blocks and districts for the purpose of coverage reporting. While reporting coverage, it was found that districts reduced the targets from a total of **5,64,93,876** children to **3,80,55,568** children. In the previous round as well, a reduction in program target was observed. This may be because of erroneous data entry and incomplete reporting by schools and *anganwadis* at blocks. As setting targets is crucial for gauging program performance, the state must ensure covering all children aged 1-19 years, as aligned per the census target and also ensure no revisions are made in targets at districts while reporting through NDD app post the round.

Community Evaluation survey: The CES is a WHO tool[26], implemented in Uttar Pradesh with approvals from NHM in September 2017. A total of 1800 children were targeted to be interviewed by monitors of AMS, in 30 villages of 5 districts. Detailed analysis and findings would be shared by end of November 2017.

3.3 Key Findings

Process Monitoring findings highlight that 46% schools and 76% *anganwadis* received training for the recent round of NDD and around 63% of schools and 90% of *anganwadis* conducted deworming either on NDD or mop-up day. This is drop from the previous round wherein 56% schools and 83% *anganwadis* received training for NDD and around 72% of schools and 95% of *anganwadis* conducted deworming either on NDD or mop-up day. This is attributed to the fact that clusters of *anganwadi* workers in select districts and *Shiksha Mitras* were on strike leading to their limited involvement in the NDD round. Findings from coverage validation also reflected that 65% of schools and 95% of *anganwadis* dewormed children during NDD or mop-up day. The low percentage for schools which dewormed children can be ascribed to the limited involvement of teachers during training which consequently affected their participation in the program.

[25] The NDD App passwords were issued to the 606 NDD implementing blocks and 51 districts for this round
[26] WHO recommended tool for assessing the performance of the NDD round while measuring coverage in specific populations (sex, rural vs. urban) and identify reasons for non-compliance to drug consumption and gaps in drug administration

Around 50% of *anganwadis* and 74% of schools received NDD posters and banners in this round, which is almost equivalent to the trend in the February round. However, integrated distribution of NDD kits[27] was comparatively low for both schools (26%) and *anganwadis* (45%) during August 2017 round. This shows that more than one third of the schools and more than half of the *anganwadis* received all materials (Albendazole, banner/poster and handout/reporting forms) in the trainings, which clearly indicates lack of integrated distribution in all the trainings. This can be attributed to delayed drug procurement, delay in the release of financial guidelines which impacted the schedule of trainings and differed the placement of the print order. The materials were distributed individually to remaining schools and *anganwadis*, which is not as per the bundling plan and results in increased costs incurred on the program.

Only 33% of schools and 38% of *anganwadis* received training reinforcement messages through SMS, indicating lack of updated database of functionaries. The reasons for the stark contrast have been elucidated in the sections above. The percentage of teachers and *anganwadi* workers who were aware of the correct dosage of the tablet was high. However, only 16% of teachers and 6% of *anganwadi* workers were able to list down all the possible adverse events among children after administration of albendazole tablets. Further, awareness about the age-specific dosage and administration (2-3 years) was only 48% among *anganwadi* workers. It was observed that awareness about processes for management of adverse events like laying down the child in also low. **(Annexure I Table 6).**

Private School Engagement: Around 20% of sampled private schools (N=78) reported being trained for NDD. 89% had sufficient drugs for deworming, 24% received a banner/poster, and 24% received handouts/reporting forms. SMS related to NDD were received by 17% of private schools teachers/headmasters. This shows that while drugs were made available to a majority of schools, more than half of the private schools did not attend trainings, which is crucial for developing program understanding, for receiving necessary knowledge and materials through integrated distribution. This can be attributed to the limited availability of contact database of private schools which hindered dissemination of important information on program dates and details, training dates via tele calling and SMS. Thus, efforts need to be made to enhance private schools engagement through greater engagement of District Magistrates and updating of contact database. A directive from state to all District Magistrates seeking their active support in the program must be sent to all districts at least two months prior to the start of district-level trainings. It is also crucial to initiate a state-level orientation for private schools for generating awareness and increasing acceptability of the program. As per the 'Guidance Note for State for Private School' shared with states, it is critical to invite private school association/ bodies at the SCCM and district-level meetings to increase coverage under this category.

Table 5: Key Findings from Process Monitoring and Coverage Validation

Indicator	School (%)	*N*	*Anganwadi* (%)	*N*
Received SMS for current NDD round	33	300	38	288
Attended training for NDD	46	300	76	288
Integrated Distribution of Albendazole tablets and IEC materials	26	300	45	288
Schools/*anganwadis* conducting deworming	65	754	95	746
Children consumed tablet	99	1436	N/A	N/A
Copy of reporting form was available for	47	489	52	706

[9]Integrated distribution of NDD kits includes Albendazole, banner/poster and handout/reporting forms and provided to schools and AWC during the trainings.

verification				
Followed correct recording protocol	33	489	44	706
State-level verification factor[28]	0.70	27678	1.09	35165
Estimated NDD coverage[29]	49		83	

Coverage Validation data revealed that 33% of schools and 44% of *anganwadis* followed correct protocols for recording the number of children dewormed. This has declined from the February round where 41% of the schools and 46% of the *anganwadis* followed the correct recording protocol, implying that the quality of the training was not as high as it was in the previous round. At the same time, around 55% of schools and 29% of *anganwadis* did not adhere to any recording protocol. This is an increase from the previous round, wherein only 45% of the schools and 27% of the *anganwadis* did not adhere to any recording protocol. Despite given information during training, a substantial proportion of *anganwadi* workers did not have a list of unregistered preschool-age children (19%) and out-of-school children (25%). Only 47% of schools and 52% of *anganwadis* had a copy of their reporting form post submission, though they were instructed to retain a copy as per NDD guidelines. This indicator has shown a substantial increase from the previous round where 37% of schools and 42% of the *anganwadis* had a copy of the reporting form. This substantial increase of 10 percent points can be attributed to state's decision to print the new handout under the NDD resource kit by GoI which had an additional copy of reporting format attached which ensured retention of counterfoils of school/*anganwadi* reporting format. Findings from coverage validation revealed that 90% ASHAs reported having shared the list of unregistered and out-of-school children with *anganwadi* teachers. 83% of ASHAs reported that they have conducted meetings with parents to inform them about NDD, efforts should be made to enhance and monitor their mobilization activities.

Further, interviews with children indicate that 98% of them received a deworming tablet, indicating that despite challenges in reporting and documentation of coverage data, majority of the children present on NDD or mop-up day received Albendazole tablet.

The state government reported 85% coverage in school and 85% in *anganwadis.* Through coverage validation, attempts were made to understand the maximum number of children that could have been dewormed in the schools and *anganwadis*. Coverage validation findings suggest that on an average, independent monitors could verify 70% of treatment figures reported by schools and 98% for 1-5 years children registered in *anganwadis*. Applying these verification factors to respective government reported coverage, it is estimated that 60% (70% of 85%) children could have been dewormed at schools and 83% (98% of 85%) at *anganwadis*.

Further, we also estimate NDD treatment coverage in schools considering maximum attendance of children on NDD dates. Coverage validation data showed that 65% of schools conducted deworming on either NDD or mop-up day, maximum of 84% of children were in attendance, 98% of children received Albendazole tablet and 92% of them reported to consume Albendazole tablet under supervision. Taking these factors into account, 49% (0.62*0.84*0.98*0.92) of enrolled children could have been dewormed in the schools.

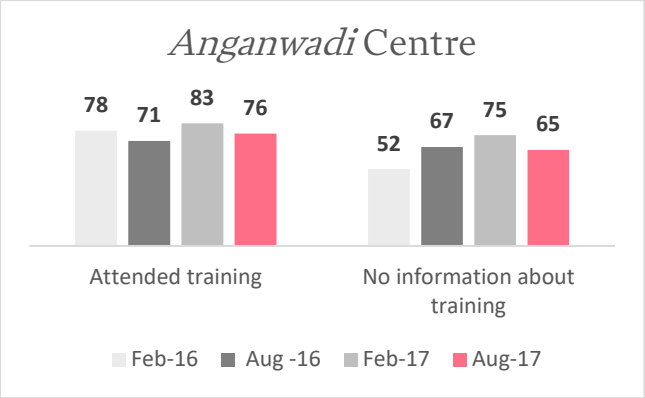
[28] Ratio of recounted value of the dewormed children to the reported value

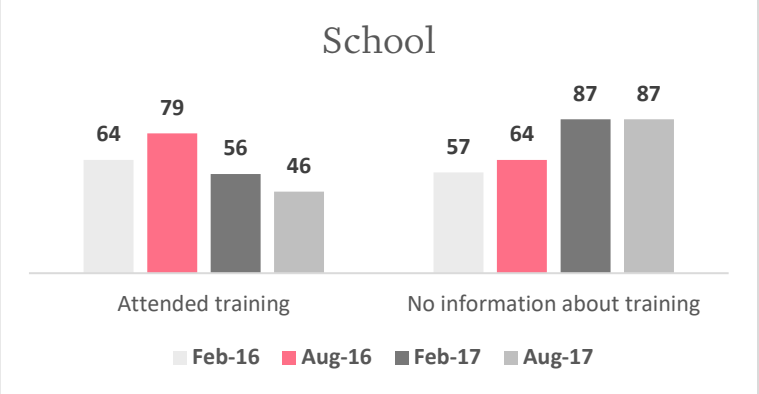
[29] This was estimated on the basis of NDD implementation status, attendance on NDD and mop-up day, whether child received albendazole and its supervised administration. Since no child interview is conducted at *anganwadis*; this has not been estimated for *anganwadis*. Estimated NDD coverage was estimated by implying state-level verification factor on government reported coverage for schools and AWC.

3.4 Trend of Key Indicators over Rounds

Trend of select indicators from over the NDD rounds are presented in graphical form below.

Fig 6: Percentage Comparison of Training Indicators for School/*Anganwadi* February 2016, September 2016, February 2017 and August 2017 Rounds.





Data comparison in Figure 6 shows substantial decline for August round in comparison to NDD February 2017 round in percentage of schools and *anganwadis* where headmaster/teacher/ *anganwadi* workers attended training, respectively. In February 2017 round, while 83% of headmaster/ teacher attended NDD training, in August 2017 round this declined to 76%. The percentage of *anganwadis* workers also decreased from 56% to 46% during the same period. Lack on information about NDD training was the main reported reason for teachers and *anganwadis* to not attend trainings. Moreover, training sessions were also delayed as highlighted in the report above, no communication on same would have also impacted training attendance.

Fig 7: Percentage Comparison of Key Indicators in Schools during February 2016, September 2016 and February 2017 and August 2017 Rounds

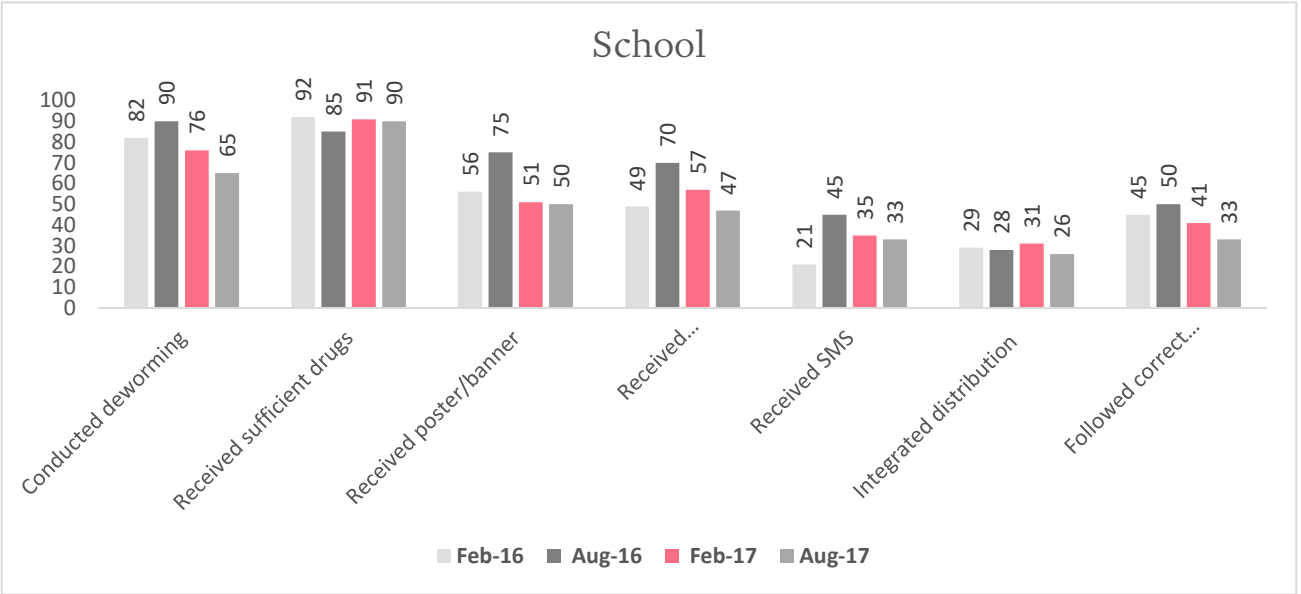
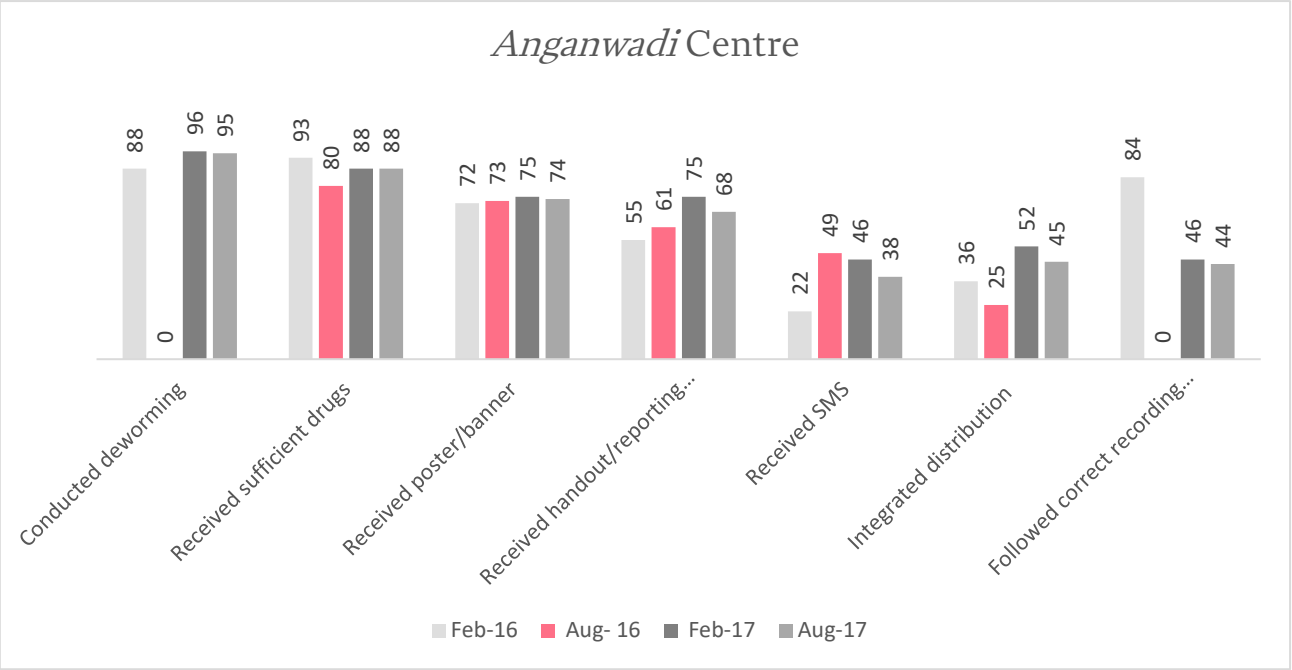


Fig 8: Trend of Key Indicators in *Anganwadis* during February 2016, September 2016 and February 2017 and August 2017 Rounds



The trends in Fig.7 and 8 exhibit a decline in all indicators from the February round to the August round. While percentage of schools conducted NDD declined by 11 percentage points for the August round; it has remained almost the same for *anganwadis*. The decline in percentage points for schools could be attributed to the strikes of *Shiksha Mitras* as explained in the sections above. Integrated distribution has also declined marginally by five percentage points for schools and seven percent points for *anganwadis* during August round in comparison to NDD February 2017 round (Figure 7 and 8). Since the block level trainings were delayed as per its original schedule to an extent of being completed one day prior to NDD; this could have impacted attendance and integrated distribution for the August round. It is crucial that all block level trainings are completed as per the schedule and minimum a week in advance to the NDD date leaving sufficient time for the teachers to train other teachers in the schools and also for teachers and *anganwadi* workers to mobilize community and spread awareness on the program. Though training reinforcement SMS were sent for alerting training dates at district and block level, accurate contact database continues to be challenge impacting the overall delivery of the SMS. This is also evident from declining trend of SMS received for August round by two and eight percentage points for schools and *anganwadis* in comparison to February round (Fig. 7 and 8), indicating that efforts to update contact databases has not resulted into the improvement.

The trend for indicator received handout and reporting form in (Fig. 7 and 8) depicts a substantial decline by 10 percentage points for schools and marginal decline by 7 percentage points for *anganwadis* in comparison to February round. This could be because of shortage of printing of these critical materials and low training attendance.

Trend in Figure 7 and 8 shows that percentage of schools and *anganwadis* that received sufficient drugs remained the same for this round which was high (88% for *anganwadis* and 90-91% for schools). This shows that consistent efforts have been in the past two rounds for ensuring sufficient drugs for a successful program and the same has to continue for the next round as well, along with other program components.

The trend of following correct reporting protocol dropped marginally by two percentage points for *anganwadis* and moderately by eight percentage points for schools in comparison to the previous round in February. This shows lack of proper data management of children dewormed. The drop-in percentage of schools and *anganwadis* followed correct recording protocol, could be partly attributed to delayed and rushed block level trainings thereby impacting the quality of sessions being conducted and limiting the dissemination of key training messages.

4. Recommendations

It is critical to consistently conduct high coverage program every six months in all 75 districts of the state to bring down prevalence and to slow the reinfection rates. Therefore, continued efforts need to be made to reach all children with deworming. This also involves alignment with the LF program.

1. Procurement and availability of drugs must be ensured by mid-December 2017 for the upcoming NDD February 2018 round to ensure that drug availability is aligned for integrated distribution during block training. The state must direct districts to procure locally with clear timelines set during the procurement.
2. Better coordination with the LF Department will lead to better program planning in terms of drug procurement and optimum use of resources, and decision on number of districts that will conduct the LF MDA with NDD.
3. For a high-quality, high-coverage program, setting targets as per census and reporting coverage against the targets set prior to the NDD round is important. It is imperative for the target setting to be aligned to census population so that every child is dewormed with access to better quality of life. This can be increased through coordinated efforts between all stakeholders to target and cover all children 1-19 years.
4. Joint directive must be issued latest by the first week of December, within one week after SCCM and disseminated by second week to the districts for effective coordination, planning and execution of all program activities in time at all levels.
5. Efforts are required to improve training attendance of teachers and *anganwadi* workers in future rounds through clear and timely communication on training dates and venues to frontline functionaries. This will involve updating the contact database of functionaries so that they can receive timely alerts on training schedules. Coordinating with the stakeholder departments and education department in particular will help avoid issues like lack of participation in trainings by teachers/headmasters in forthcoming round.
6. Block trainings should be planned and communicated in advance to all functionaries. It should be tracked and monitored by the respective departments at the district and block levels. Delays/ or rescheduling to be avoided at all counts by effective planning. Further, quality of the block trainings should also be monitored for implementing a quality program.
7. Improvement in integrated distribution of drugs, IEC, and reporting forms through the training cascade should be improved for coming rounds. The state needs to ensure timely initiation of drug procurement and printing of IEC and training materials so that it is available at blocks prior to scheduled training dates. State should sensitize district officials through videoconferences and other planning platforms like SCCM on criticality of NDD kit detailing its cost efficiency if it is distributed during block trainings.
8. To extend deworming benefits to unregistered children of community, regular orientation of ASHAs on their specific role in community mobilization through existing platforms would be vital for implementing future rounds. ASHAS should be orientated for proper and timely preparation of list of out-of-school children for ensuring the maximum coverage of the program.

9. Functionaries should be orientated on criticality of the reporting protocols during block trainings and availability of ample reporting forms should be ensured at schools and *anganwadis*. Featuring the criticality of following reporting protocol should be ensured during each Block trainings as it directly impacts the program coverage. Updated contact database should be used to send training reinforcement messages pertaining to reporting protocols.
10. Department of Health and other stakeholder departments should periodically update contact database of their respective field level functionaries through their district level officials. The improved database will help in timely dissemination of critical program information like training dates and other training reinforcement messages (bulk SMSs) to functionaries.
11. As the program continues to be strengthened and systems of financing, procurement, trainings, community mobilization are streamlined, it is important to focus on prevention strategies more for all future NDD rounds. Active collaboration with other key stakeholder's departments like *Swach Bharat Abhiyan* should be pursued through one- to-one meetings with these departments, release of directives on NDD and linkages/ synergies between two programs be released from NHM to the departments and also their participation at the SCCM.

5. List of Annexures

Annexure A	NDD Coverage Report
Annexure B	NDD Operational Plan
Annexure C	Drug Bundling Plan
Annexure D	Drug Recall Status
Annexure E	Community Mobilization Collateral
Annexure F	Training Cascade
Annexure G	Training Quality Assurance
Annexure H	Monitoring Visit Note
Annexure I	Process Monitoring and Coverage Validation Tables

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