Uttar Pradesh

National Deworming Day

February 2017

Photo Credit: Evidence Action

Contents

Acronyms

ANM:	Auxiliary Nurse Midwife
CIFF:	Children Investment Fund Foundation
SIFPSA:	State Innovations Family Planning Services Project Agency
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

Contributing to the Government of India's (GoI) National Deworming Day (NDD), the state of Uttar Pradesh implemented the round three of NDD in 57 districts[1], across two phases due to the state assembly elections coinciding with the NDD schedule. NDD phase one was conducted in 43 districts on February 28, 2017, followed by mop-up day on March 4, 2017. Phase two was conducted in 14 districts on March 18, with a mop-up day on Mach 22, 2017. In this round, the state dewormed 4,16,43,478 children in the age group of 1-19 years. 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, Women and Child Development (WCD). Evidence Action provided technical assistance for program planning, implementation and monitoring through funding support from the Children Investment Fund Foundation and Dubai Cares.

Table 1: Key Achievements of National Deworming Day February 2017

Indicators		Census based target	Targets finalized for NDD	Target (in figures)*	Coverage*
Total number of districts implemented NDD		57	57	57	57
Total number of blocks implemented NDD		-	595	595	595
Number of schools reporting coverage		-	1,95,389#	1,58,094	1,47,211
Number of *anganwadis* reporting coverage		-	1,24,574#	1,33,454	1,29,165
Number of enrolled children (classes 1-12) who were administered albendazole on NDD and mop- up day	Government Schools	55,39,7702**	1,22,52,228	1,43,08,049	1,26,35,726
	Private Schools		2,29,80,759	83,18,615	68,54,440
Number of registered children dewormed (1 to 5 years) at *anganwadis* on NDD and mop- up day		1,54,95,376	1,62,88,205	1,45,34,792	1,22,91,335
Number of unregistered children dewormed (1 to 5 years) at *anganwadis* on NDD and mop- up day				14,22,497	10,35,248
Number of out-of-school children (6-19 years) dewormed on NDD and mop-up day		-	56,68,830	30,59,525	23,66,904
Total number of children dewormed (1-19 years)		7,08,93,077**	5,71,90,022	4,16,43,478	3,51,83,655

* NDD February 2017 coverage report submitted by NHM to GoI (Annexure A)

** Census data of 57 districts extrapolated for year 2016 including out-of-school children population as well

as per IEC/ Training materials/ drug bundling plan finalized by state NHM and sent to districts

[1] 18 out of 75 districts were scheduled for Lymphatic Filariasis Mass Drug Administration of which seven were unable to do so. i.e. Azamgarh, Ballia, Shahajanpur, Basti, Chitrakoot, Baharaich, Balrampur, Ambedakar nagar, Faizabad, Sultanpur, Maharajganj, Jalaun, Auriya, Lakhimpur Khiri, Sitapur, Mirzapur, St. Ravidas Nagar & Gazipur

Evidence Action provided comprehensive technical assistance for the successful implementation of NDD in February 2017, at both the state and national-level. At the national-level, 34 states conducted NDD in February 2017, targeting 340 million children. In line with the national guidelines, the state government committed to deworming all children aged 1-19 years and included the crucial segment of children enrolled in private schools for the first time under NDD. Taking the learning from the last NDD round in September 2016, where 21 districts couldn't conduct the NDD round due to delay in drug unavailability, the Department of Health ensured availability of required quantity of drugs for 57 districts and its availability to all districts well ahead to the NDD round for onward distribution to all schools and *anganwadi* centers, through robust program planning. All private schools were targeted for the first time, thus reflecting on the commitment to expand program coverage. With the ongoing phase wise state assembly elections, the implementation of NDD round in phases was designed and executed by meticulous planning and dedicated efforts made by all stakeholders at all levels (state, district and block) across the 57 NDD implementing districts.

1. Program Background

1.1 Benefits of Deworming

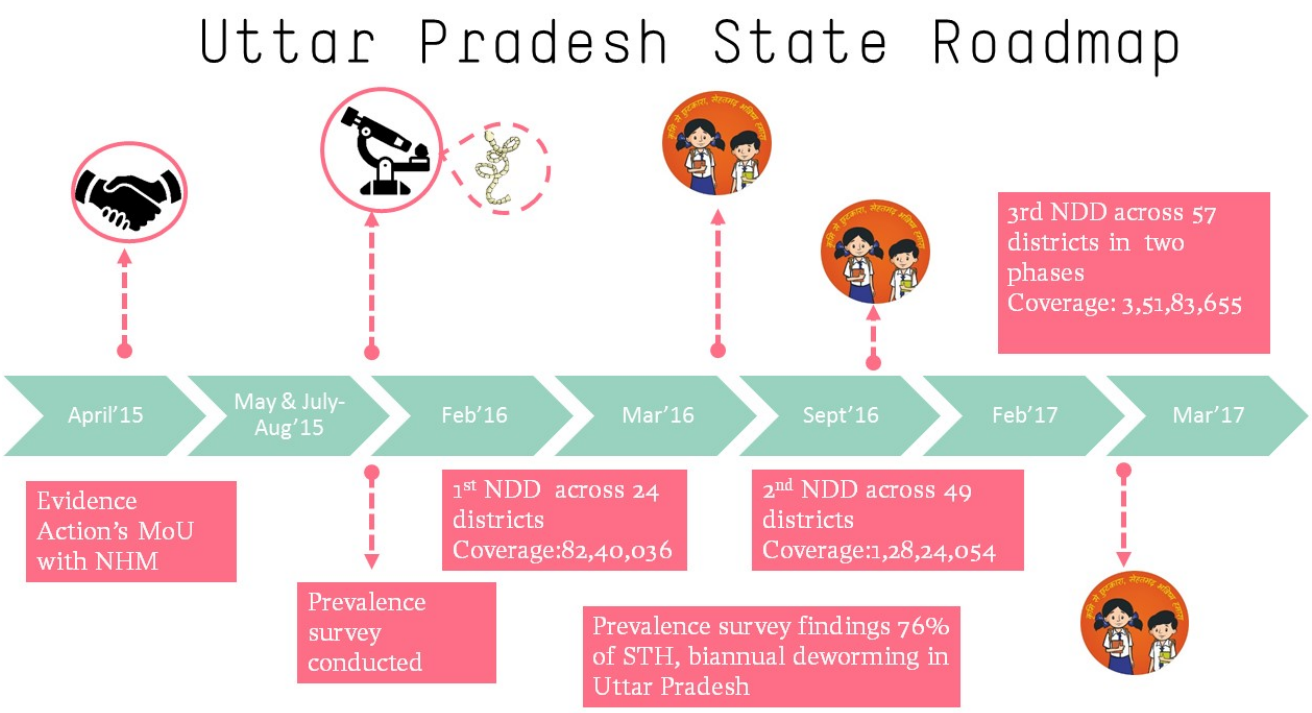
A large body of rigorous scientific evidence from around the world provides a strong rationale for mass deworming[2] in places where prevalence is 20% or higher[3]. Using existing platforms of schools and pre-schools for mass deworming is a cost effective way to reach high coverage in children. Worm infections pose a serious threat to children's health, education, and productivity. Some of the benefits of deworming are shown below in Figure 1.

Figure 1: Benefits of Deworming

1.2 State Program Background

School and *anganwadi* based NDD program in Uttar Pradesh is implemented in the state since February 2016, with the state following GoI's NDD operational guidelines. Below find the key milestones achieved under the program.

Figure 2: Uttar Pradesh NDD Roadmap



2. About National Deworming Day

Figure 3: NDD Program Highlights

The GoI implemented its first NDD in February 2015 and the program has achieved high coverage at scale since its inception. Based on national-level STH mapping[2], 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 bi- annual deworming due to high prevalence of 76%.

3. State Program Implementation

3.1 Policy and Advocacy

Effective implementation of a program of such scale requires stakeholder collaboration at each administrative and implementation level. The key highlights of inter-departmental collaboration are displayed in Figure 4 below.

Figure 4: Efforts towards Stakeholder Collaboration

December 13, State Steering Commitee Meeting	December 23, National review meeting, New Delhi	January 2, State Joint directives	February 22, State Video Conference
• Conducted under the chairmanship of Mission Director- NHM and key stakeholders • Review of NDD preparations • Coordination with LF program for aligning the two programs and districts	• Review of NDD preparations • Assessment of state's preparedness for February 2017 round • Discussion on drug availibility through WHO donation program	• Signed by Principal Secretary -Health, Education and WCD, directives were issued to all NDD implementing districts	• Conducted with District Nodal Officers to assess drug availability and adverse event management • Discussion held on mitigating program gaps

A State-level Steering Committee Meeting was held on December 13, 2016 chaired by the Mission Director (MD), NHM, with participation from key stakeholders including Department of Panchayati Raj, Department of Education, WCD, NVBCDP and Evidence Action. Key decisions on, alignment with Lymphatic Filariasis elimination program, aligning the program target with census population, engagement of private schools, and timely drug procurements were taken up at the meeting. The decision on date of NDD was reconsidered with the announcement of the dates for the state elections announced in the first week of January to be held across the state in seven phases. The final decision on conducting NDD in two phases and the final dates of NDD and mop-up day was taken in mid- January after consultation with Department of Education for the engagement of teachers in elections.

For the first time since the NDD program launch in the state, Joint Directive from the state on NDD was signed on January 2, 2017 and further disseminated to all districts to facilitate strengthening convergence at district level and below for planning, implementation and monitoring of the program (Annexure B). The state also participated in the National Video Conference review meeting held on February 2, 2017, chaired by Joint Secretary, Ministry of

2 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

Health and Family Welfare, (MoHFW) GoI. To assess field preparedness and ensure gaps are filled before NDD, the state conducted a video conference with districts on February 22, 2017.

Prior to the NDD round, 55 of the 57 NDD districts conducted District Coordination Committee Meetings (DCCM) under the chairmanship of District Collector/Additional District Magistrate/Chief Medical Officer during which stakeholders reviewed preparations for the program and clarified roles for improved inter-departmental coordination.

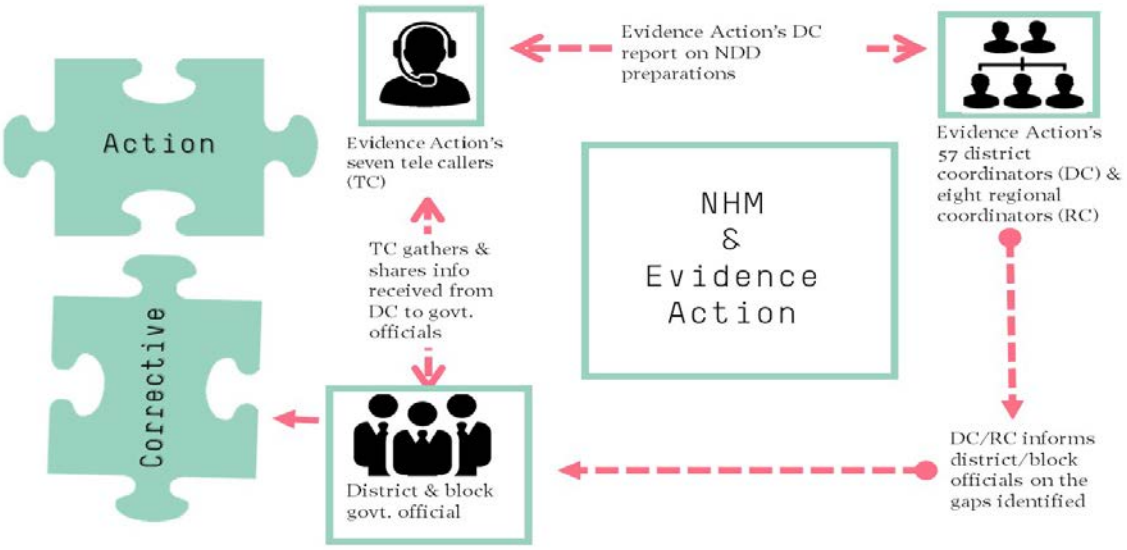
In order to engage private schools in the NDD program, dedicated efforts were made at the state-level including sending training videos, community awareness messages through various platforms from the state-level, as detailed further in the report. Additionally, private school's participation was facilitated at the district level through participation at the DCCMs. Representatives of private schools participated in 29 of the 55 DCCMs conducted.

During the last week of January 2017, state annual secondary, senior secondary board examinations/ home examinations were announced in the state posing a challenge for the complete participation from the schools under phase two of NDD, scheduled on March 18, 2017 and mop-up day on March 22, 2017. This was brought up for discussions by the health department with education officials at state and district level and the consensus was to not revise NDD schedule in second phase.

3.2 Program Management

Evidence Action's technical assistance was extended through a state based team, field-based regional coordinators and short-term hires for three and four months of district coordinators (at each NDD district) and seven tele-callers (at state-level). The state team assisted 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 5 gives an overview of the information flow between the Evidence Action team and district and block officials.

Figure 5: Evidence Action's Corrective Action Mechanism



3.3 Drug Procurement, Storage, and Transportation

a) Drug Procurement: Planning for drug availability was streamlined much in advance based on the lessons learnt from the previous round in September 2016 where the state endured challenge of procuring deworming drug (albendazole 400 mg) in the required quantity. Only 2,11,00,000 albendazole tablets against the requirement of 3,50,00,000 was made available, as a result, NDD September 21016 could not be implemented in 21 out of 70 districts[3]. In order to mitigate this situation and to make sufficient drugs available in time, the state actively reached out to GoI for support in the supply of drugs for this round. The MoHFW, GoI provided a total of 62,909,000 albendazole 400mg tablets from the WHO drug donation program for NDD February 2017 round to cover all children aged 1-19 years across all 57 districts of the state. The drugs were made available to the districts starting January 25, 2017 onwards. As there are substantial number of schools and *anganwadis* where enrollment is less than 200, therefore to avoid wastage of drugs, the state advised the districts to repackage tablets in plastic zip pouches with detailed labels, and ensure adequate hygiene and drug safety during this process. Annexure C

b) Drug Logistics and Distribution: Evidence Action developed district and block wise drug bundling and distribution plans (Annexure D) to streamline integrated distribution NDD kit[4] to schools and *anganwadis*. It was observed that integrated distribution of drugs and print material was hampered as the schedule for block level trainings were delayed till the last day of preparations for both phases (93 blocks for phase-I conducted training on February 27 and 9 blocks under phase-II conducted trainings on March 17, 2017). This was due to the ongoing state assembly elections for both phases and the board examinations in second phase districts. Additionally, printing of training and IEC materials were delayed (details covered in sections below). Evidence Action supported the state department in tracking drug availability at district and block levels, and provided timely updates to allow officials to undertake corrective actions.

c) Adverse Event Management: To effectively manage any incidence of adverse events, the state adapted adverse event management protocol from NDD operational guidelines, 2016. On both NDD and mop-up day, 104-ambulance service, block level emergency response teams and *Rashtriya Baal Suraksha Karyakram*[5] teams were kept on alert to manage any such events. The state NHM rectified misreported numbers of severe adverse events to the GoI. In total 69 mild adverse events and no severe adverse events were reported during NDD February 2017. Correct reporting on adverse event need to be improved in future rounds through focusing more on the correct understanding of the mild or severe adverse events at the school/ *anganwadi* level.

d) Drug Recall: Evidence Action supported NHM in tracking leftover albendazole tablets after the NDD round in all 57 districts. (Annexure E). The preliminary status of all 57 districts is presented in the table below. The complete status of the recalled drugs at the district is in the

[3] 5 out of 75 districts i.e. Bareilly, Faizabad, Allahabad, Barabanki and Sonbhadra were LF-MDA districts. Remaining 21 districts couldn't implement the round due to delay in drug procurement/availability

[4] NDD kits includes drugs, IEC materials such as posters and handbills and reporting formats.

[5] Rashtriya Bal 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.

process of finalization.

Table 2: Drug Recall Status in Uttar Pradesh

Total Sealed boxes leftover	96,933
Albendazole tablet inside the sealed box(12767X200)	1,93,86,600
Lose Albendazole tablets	30,39,985
Total Albendazole tablet available sealed pack and loose	2,24,26,585

The department of health will be directing districts to use the packed boxes in the upcoming August 2017 round as per drug safety recommendation.

4.3 Public Awareness and Community Sensitization

The state adapted and printed the NDD resource kit developed by Evidence Action at the national-level and approved by the Government of India and uploaded on the NHM website Based on the operational guidelines, the IEC materials were designed to increase community awareness on the benefits of deworming, and were disseminated to target audiences, such as at schools and *anganwadis*. The printing of IEC materials was delayed due to ongoing state elections. According to the preparatory checklist shared with the districts, the planned date for receiving the printed material was February, 10. However, according to the information from the district NDD nodal officers, by then only five districts had received the entire print order. The last printing order in the state was received in G.B. Nagar on February 25, 2017 for districts conducting NDD in phase-one and Chandauli and Varanasi on March 16, 2017 for districts conducting NDD in phase-two.

Mass and mid-media communication activities were included in the IEC campaign, including broadcasting radio spot, TV spots and newspapers[6]. Evidence Action supported in the content development for these audio, visuals and supported in undertaking *prabhat pheris* across 39 districts. The remaining 18 districts were unable to conduct *prabhat pheris* due to the engagement of district officials in the ongoing assembly elections and lack of participation by schools in districts conducting NDD in phase-two due to board examinations. Evidence Action developed a social media plan for the NDD February 2017 round and submitted to NHM. There was extensive use of social media platforms by the NHM, the department uploaded NDD related messages on the official NHM Facebook and Twitter page. State also used WhatsApp to create awareness on NDD among members of the community. Advocacy video, training videos/teasers were also shared over e-mails and WhatsApp with approximately 300 private schools. Furthermore, tweets, infographics, countdown videos, and pictures from the field were uploaded on available social media platforms from February 27 to March 4. At the national-level, there was extensive engagement on the media campaign,

[6] Radio spot was relayed from Feb 24,25,26,27 and 28, 2017 and TV Spot was broadcasted on February, 27, 2017. The newspaper advertisement was published by both Evidence Action and the government on February 27 and 28, 2017

wherein GOI spent INR 5,65,56,800[7] (Annexure F). Additionally, GoI also actively uploaded content on their Twitter handle.

A press sensitization workshop was conducted on February 25, chaired by MD, NHM with more than 45 media personnel (print and electronic media) to orient them on the importance of NDD, *anganwadi* and school-based deworming, the benefits of deworming, reasons for adverse events and other key points. Evidence Action provided media kits to all participants that included fact sheets, NDD brief, and state specific program information. Following this there was detailed media coverage in around 5 leading newspapers that contributed to improved awareness for the program.

Figure 7: Snapshot of Mass Media Activities in the State

IEC Assessment

In order to continue to improve awareness and community mobilization activities with each NDD round, Evidence Action carried out a NDD communications campaign assessment from May to August 2016 in Bihar, Telangana and Maharashtra. The assessment was designed to understand how target groups perceived the various components of the campaign. The findings and recommendations that emerged is helpful to guide all NDD participating states and were presented at the National Review Meeting in December 2016. Going forward, all NDD participating states can refer to these findings to gain insights on how their campaign can be more robust in future rounds to meet high program coverage goals. More details on specific findings and recommendations from the assessment can be found in Annexure G.

4.3 Training Cascade

State-level Training of Trainers (District NDD nodal officers) was held on January 20, 2017. A total of 55 out of 57 DCPM participated in the meeting. A cascade training model was adopted for trainings of all 57 districts, 595 blocks and PHCs from January 27 to March 17. Evidence Action supported through training monitoring & quality assessment of sampled block trainings. The details on training dates have been annexed. (Annexure H)

Training Cascade: As per the preparatory checklist shared by the state, (Annexure I) block level trainings were planned to be completed during February 15-20, 2017, for phase-one but due to the coinciding election schedule and delay in the print of IEC/training materials at the districts, the trainings were postponed. The block-level trainings were completed by February 27, for phase-one and March 17 for phase-two. As per the state coverage report 1,11,843 government/ government-aided schools, 29,516 private schools; 1,24,203 *anganwadi* workers; 1,00,324 ASHAs; and 15,936 ANMs were trained. This is 96.4% of total targeted government schools, 94.5% of targeted private schools' teachers and 96.1% of targeted *anganwadis*. The percentage of functionaries reported to be trained is high, however, as the trainings were delayed till the last day of NDD preparations, the quality of trainings in terms of focusing on each program aspect needs definite improvement. 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/ mobilize community prior to the round. Though program planning was robust and meticulous, effective execution of the same proved to be a challenge. Efforts must be made to strengthen integrated distribution of drugs, print materials and thus a cost-effective program.

Training Resources: Printing of training and IEC materials for NDD was done at the district level with state NHM releasing funds to districts. In this round 15 districts did not have budgets released for printing as funds were already released during September, 2016 and no NDD was observed in these districts due to unavailability of drugs. Also, funds for printing of flipcharts was given to only 4[7] out of 57 districts as these districts conducted LF-MDA in August, 2016 and were scheduled to conduct NDD in February 2017. No budget was released in the remaining districts due to limited funds availability at state NHM. As flipcharts are the only NDD trainers tool other than the training videos which has its limitations in use across all settings, Evidence Action supported in the printing of a total of 1074 flipcharts in 53 districts. Additionally, total of 15402 handouts for teachers of private schools in 15 districts that didn't receive funds were also printed by Evidence Action and further distributed to the districts. The private schools were being engaged for the first time in this round and hence Evidence Action supported in printing of the handouts for teachers of private schools

[7]5 districts were scheduled for LF MDA in August, 2016 including Allahabad, Barabanki, Faizabad, ,Sohnbhadra and Bareilly,

Training Reinforcement: Evidence Action supported the reinforcement of key messages from the training sessions by delivering bulk SMS to program functionaries of 57 districts, as shown in the table 3. This was reinforced by the NHMs commitment to send 10,11,832 messages to health workers (ASHA and ANM) reiterating crucial messages on NDD (Annexure J). To this effect, Evidence Action sent 83,82,028 out of which 83,62,770 SMS (99.7%) were delivered. It is important that government stakeholder departments leverage their existing platforms for sending SMS for greater program ownership, impact and sustainability.

Table 3: Details of SMS sent

Department	Number of SMS sent by Evidence Action	Number of SMS sent by NHM
Total text messages	83,61,076	10,11,832

The state made efforts to train private schools by sending training videos developed by Evidence Action via email for better program understanding. Further, Evidence Action filtered contact database of private schools to create WhatsApp groups of private schools, which were used for disseminating key programmatic message to a larger set of audience

Training Support: For quality assurance of training sessions, Evidence Action administered pre- and post-tests to participants at state-level training of trainers to measure knowledge retention of key messages. The findings and observations highlighting key messages, which needed to be reinforced at district trainings, were shared with the Department of Health. Thereafter, using the standardized training monitoring checklist, Evidence Action's district coordinators attended and provided supportive supervision to all 57-district trainings and179 block trainings. Pre-posttest was administered at state and 16 block level trainings across eight randomly sampled districts. Training monitoring checklist was administered across district and block level trainings to supervise the quality of NDD trainings. This critical activity helps in understanding the quality of NDD trainings conducted and provides an opportunity to share real-time feedback with government to take any mid-course program corrections. The detailed analysis is included in Annexure K.

5. 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 for NDD and able to implement the deworming activities effectively. This includes assessing the extent to which deworming processes are being followed, and the extent to which coverage has occurred as planned and to make mid-course correction to improve program performance.

5.1 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 electronic 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 rapid corrective actions as necessary, such as issuing departmental directives, reiterating at a video conference to coordinate with officials, or sending reinforcement messages through SMS. Evidence Action's district and regional coordinators made field visits to facilitate some of these corrective actions at the district and block level.

Of 43,417 phone calls including follow up calls, 30,112 calls (69.3%) were successful from December 2016 to April 31, 2017. The existing database of mobile numbers was a drawback while following up on NDD implementation, particularly with field-level functionaries such as teachers and *anganwadi* workers, which resulted in unsuccessful calls[8]. The insights from SMS delivery reports show that while more than 99% 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, regular updating of the contact database need to be ensured to enhance program effectiveness.

Snapshot of M&E Activities
I. Telephone Monitoring and Cross Verification
• Telecalling conducted across 595 blocks in 57 districts of the state • 30,112 successful calls made during December,2016-April, 2017 • 13,303 calls to health functionaries incluidng district and block level officals and ANMs • 4909 calls to WCD department (district, block level offcials and AWW) • 11,900 calls to education department (district, block level officials, government and private schools)
II. . Training Quality Assesment
• Pre-post test was administred during master trainer's tarining at state-level • A total of 57 district and 179 block level training quality assesment was done using standard format. • Pre-post test was also administred at 16 block level trainings across 8 districts
III. Field Monitoring Visits
• Total 1456 monitoring visits by Evidence Action staff were made in selected schools and *anganwadis* • NDD monitoring checklist given in NDD implementation 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 57 districtst hat conducted deworming on NDD & mop-up day • 150 trained independent monitors from an independent survey agency, hired by Evidence Action, visited 300 schools and 300 *anganwadis* • Data was collected electronically using Tablet PC (CAPI) as per the tools developed by Evidence Action • Real time findings on key indicators were shared with the stakeholders on NDD and mop-up day
V. Coverage Validation by Independent Monitors
• Coverage Validation was conducted in all 57 NDD districts post mop-up day during February 21-28, 2017 • 150 trained independent monitors, hired by Evidence Action, visited 750 schools and 750 *anganwadis*

[8] The call is termed unsuccessful for the following reasons: 1) wrong respondent 2) Did not-pick-up after multiple tries 3) defunct number/ out of service

Monitoring by Independent Agency: Evidence Action with approvals from the government assessed the processes and performance of the program by hiring an independent survey agency —Academy of Management Studies (AMS) whose trained monitors observed implementation on NDD and mop-up day. Process monitoring by independent monitors assessed the preparedness of schools, *anganwadis,* and health systems to implement NDD and the extent to which they have followed recommended processes to ensure a high-quality program. 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 1298 visits were made by Evidence Action team to government, private school and *anganwadis* on NDD and mop-up day. The detail note is placed in (Annexure L).

5.2 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 750 randomly selected schools and 750 *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. Government of India provided the state with 652 user IDs and passwords for NDD mobile/ web application to all blocks and districts for the purpose of coverage reporting.

The state set a target of 5,71, 90,022 children prior to the NDD round. The set target is not in-line with the census target of 7,08,93,077 children primarily because of reduced target of 1,37,03,055 in the category of out-of-school children, which the state was not confident of reaching as there is no information on where this group can be reached. While reporting coverage on NDD web/ mobile app, districts revised targets, from a set 5,71,90,022 children prior to NDD round to 4,16,43476 children. The state thus, reported a coverage of 3,51,83,655 against the revised target of 4,16,43476 children.

While districts were engaged in finalization of the targets prior to the NDD round, the data on NDD app showed that the districts have approved the block data with reduced/ revised targets, probably to show an increase in the coverage percentage (Annexure A). As setting accurate targets is crucial for gauging program performance, the state must ensure covering all children aged 1-19 years, as aligned per the census target while ensuring no revisions are made in targets at the district level post the NDD round. (Annexure A)

5.3 Key Findings

Process Monitoring findings highlight that 56% schools and 83% *anganwadis* received training for the recent round of NDD and around 74% of schools and 95% of *anganwadis* conducted deworming either on NDD or mop-up day. Findings from coverage validation also reflected that 76% of schools and 96% of *anganwadis* dewormed children during NDD or mop-up day.

Around 51% of schools and 75% of *anganwadis* received NDD posters and banners. However, integrated distribution of NDD kits[9] was comparatively lower for both schools (31%) and *anganwadis* (52%). This shows that only around one third of the schools and 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. The materials were distributed individually to remaining schools and *anganwadis*, thus increasing the costs incurred on the program while also posing a risk on the overall quality of the round. Around 35% of schools and 46% of *anganwadis* received training reinforcement messages through SMS, indicating lack of updated database of functionaries. Awareness on the causes of worm infection **(Annexure M-Table 1)**, were high among teachers and *anganwadi* workers. However, only 30% of teachers and 28% of *anganwadi* workers reported the possibility of any adverse event among children after administration of albendazole tablets. Further, awareness about processes for management of adverse events like laying down the child in open/shaded place and observe the child at least for 2 hours in the school/*anganwadis* were also low. However, substantial proportion of teachers (67%) and anganwadi workers (41%) reported to give ORS to child in case of any adverse event **(Annexure M-Table 5).**

Private School Engagement: Around 27% of sampled private schools (N=87) reported being trained for NDD. 82% had sufficient drugs for deworming, 37% received a banner/poster, and 37% received handouts/reporting forms. SMS related to NDD were received by 12% of private schools teachers/headmasters. This shows that while drugs were made available to a majority of the schools, more than half of the private schools did not attend training, which is a crucial for developing program understanding for receiving necessary knowledge and materials through integrated distribution. Program insights shows need for parental consent, preconceived notions about free drug supply from government being of low quality were some of the reasons for private schools not taking interest in the NDD program. Thus, efforts need to be made to enhance private schools engagement through greater engagement of District Magistrates and updating of contact database for providing timely information on program dates, training dates, dosage and reporting timelines. A directive from state to all District Magistrates seeking their active support in the program must be sent to all districts prior to start of district level trainings.

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

Table 4: Key Findings from Process Monitoring and Coverage Validation

Indicator	School (%)	*N*	*Anganwadi* (%)	*N*
Received SMS for current NDD round	35	300	46	300
Attended training for NDD	56	300	83	300
Integrated Distribution of albendazole tablets and IEC materials	31	300	52	300
Schools/*anganwadis* conducting deworming	76	300	96	300
Children consumed tablet	99	1669	NA	NA
Copy of reporting form was available for verification	37	571	42	721
Followed correct recording protocol	41	571	46	721
State-level verification factor[9]	48	24,360	83	36,308
State-level inflation rate[10]	92	11,691	20	...
Estimated NDD coverage based on government coverage data	41	-	69	_
Estimated NDD coverage based on school attendance	57	-	NA	NA

Coverage Validation data revealed that 41% of schools and 46% of *anganwadis* followed correct protocols for recording the number of children dewormed. However, around 45% of schools and 27% of *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 (17%) and out-of-school children (21%). Only 37% of schools and 42% of *anganwadis* had a copy of their reporting form post submission, though they were instructed to retain a copy as per NDD guidelines. In addition, the findings indicate high inflation (108%; verification factor of 0.48) for enrolled children against the verified figures. Similarly, the state-level inflation rate was 21% (verification factor=0.82) for *anganwadi* registered children and 61% (verification factor =0.62) for out-of-school children. A deflation of 27% (verification factor=1.4) was observed for unregistered children at *anganwadi* indicating under-reporting. High inflation and deflation rate respectively for schools and *anganwadi* indicate poor documentation of children dewormed. Similar findings on poor documentation of dewormed children had also emerged from the DQA activity undertaken in the Mirzapur and Bulandshahr districts of the state. Based on these findings it was reiterated to orient and reinforce the teachers and *anganwadi* workers on the importance of compliance to the recording protocol along with hands- on reporting form filling, during the training.

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.

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

[10] Proportion of over reported dewormed children against total verified children in schools and *anganwadis*

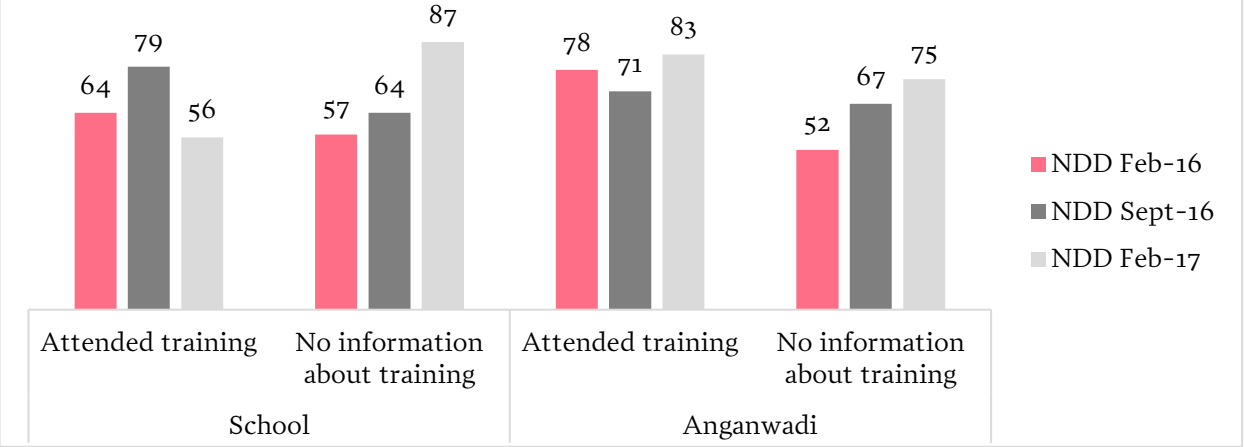
The state government reported 86% coverage in school and 83% in *anganwadis.* Through coverage validation, attempts were made to understand the maximum number of children that could have been dewormed in the schools and *anganwadis*. Coverage validation findings suggest that on an average, we could verify 48% of treatment figures reported by schools and 83% for *anganwadis*. Applying these verification factors to respective government reported coverage, it is estimated that 41% (48% of 86%) children could have been dewormed in the schools and 69% (83%*83%) in *anganwadis*.

Further, we also estimate NDD treatment coverage in schools considering maximum attendance of children on NDD dates. Coverage validation data showed that 76% of schools conducted deworming on either NDD or mop-up day, maximum of 81% of children were in attendance, 98% of children received albendazole tablet and 94% of them reported to consume albendazole tablet under supervision. Taking these factors into account, 57% (0.76*0.81*0.98*0.94) of enrolled children could have been dewormed in the schools.

5.3 Trend of Key Indicators over Rounds

To understand the trend of select indicators from over the NDD rounds, these are presented in graphical form.

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



Data comparison in Figure 6 shows substantial decline from NDD September 2016 round in percentage of schools where headmaster/teacher attended training, however this increased marginally for *anganwadis*. In September 2016 round, while 79% of headmaster/ teacher attended NDD training, in February 2017 round this declined to 56%, however, percentage of *anganwadis* workers increased from 78% to 83% during the same period. Lack on information about NDD training was the main reason for teachers not attending trainings which could be mainly because of their engagement in state assembly election and also ongoing secondary and senior secondary board examinations. Moreover training sessions were also delayed as highlighted in the report above.

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

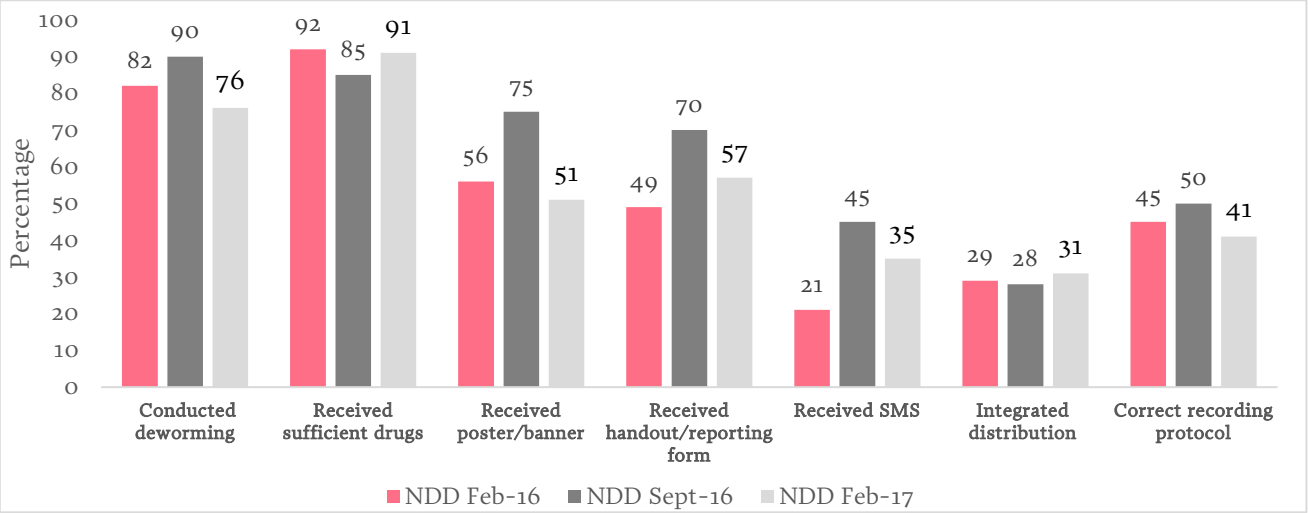
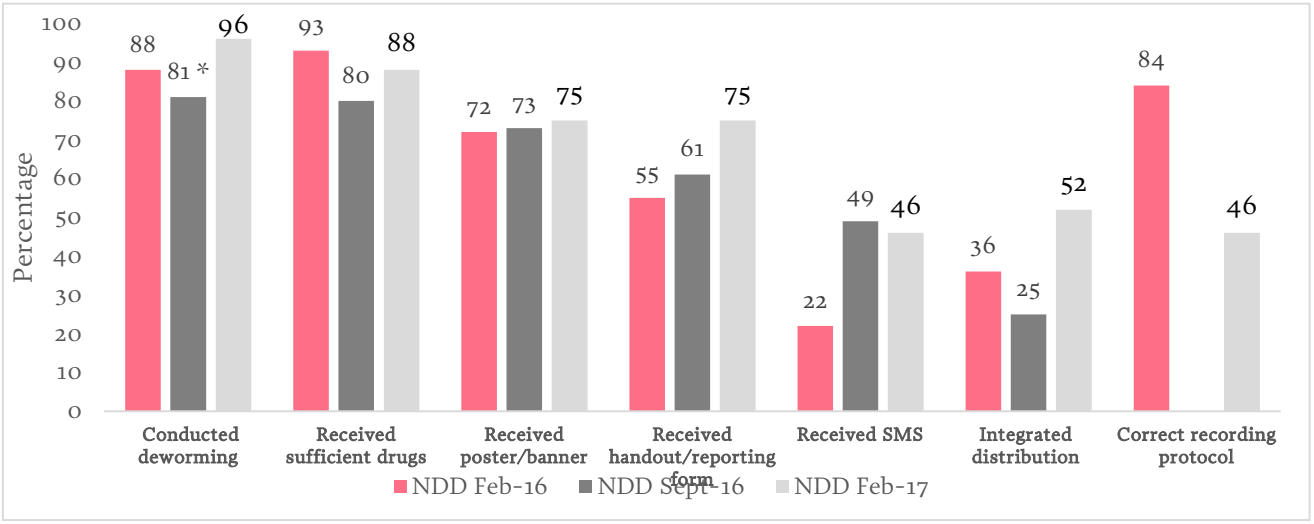


Fig 8: Trend of Key Indicators in *Anganwadis* during February 2016, September 2016 and February 2017 Rounds



Further, as per Figure 7 and 8, comparison of selected indicators do not exhibit clear pattern across the rounds for schools and *anganwadis*. While percentage of schools conducted NDD declined by 14 percentage points; it increased almost by same percentage points of *anganwadis*. The decline in percentage points for schools could be because of their involvement in state elections and board examinations. Also private schools implemented NDD for the first time in the state and is evident from findings that they require more support in future rounds. Integrated distribution increased marginally for schools and substantially for *anganwadis* from NDD September 2016 round. (Figure 7 & 8). Since the block level trainings were delayed as per it original schedule and at some blocks were completed one day prior to NDD; this could have impacted attendance and integrated distribution. It is crucial that all block level trainings are completed as per the schedule and minimum a week in advance to the NDD date (if delayed from training schedule) 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 for 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 (Figure 7 and 8), indicating that efforts to update contact databases has not resulted into the improvement.

Trend in Figure 7 and 8 shows that while percentage of schools and *anganwadis* that received sufficient drugs increased for this round, schools that received poster/banner and reporting forms declined from previous round. It is also seen that there is a drop in the percentage of schools and *anganwadis* where correct recording protocol is followed. 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.

Data Quality Assessment: Since process monitoring and coverage validation are conducted at service delivery points, and there's limited understanding of challenges on aspects such as data management, data aggregation, reporting and quality assurance at higher aggregation levels i.e. sub-center/nodal, block and district, Evidence Action with approvals from state government conducted the World Health Organization's Data Quality Assessment (DQA) Tool to verify reported data and assess data management and reporting system for NDD program in the state in the month of December 2016- January 2017. The exercise reiterates the importance of following recording protocols and keeping a copy of reporting form for verification purposes; paying emphasis on the reporting cascade during training sessions and its reiteration through SMS to concerned functionaries. It also highlights the importance of back-up documentation across all levels of reporting cascade. In addition to the NDD app based reporting system at block level, hard copy of filled-in common reporting forms should also be encouraged for submission at district level. In line with these recommendations, efforts were made to enhance program quality during NDD February 2017 round planning. While some improvements are being made like all 57 districts have submitted hard copy of the report to the state NHM, continued efforts need to be made across all recommendations to enhance program quality for future NDD rounds.

6. Recommendations

It is critical to conduct consistent 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 towards high quality program twice a year. This also involves alignment with the LF program. Reaching out to all children will be critical for program success.

1. 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. As the program targets and coverage for this NDD round was nearly half of the census population, it is imperative for the target setting to be aligned to census population so that every child is dewormed and has access to better quality of life. This can be increased

through coordinated efforts between all stakeholders to target and cover all children aged 1-19 years.

Also, undermining (or reducing the targets) post the round distorts true coverage, as the program coverage reflects higher percentage with the reduced targets. It must be ensured from the state that targets are set on census basis and no revisions during coverage reporting be allowed through strengthening coordination among the stakeholder departments at all levels. The state should issue letters to districts after fixing the target to ensure that later revisions are not made.

2. As the state will procure drugs locally for NDD August 2017 round, the district-wise procurement and availability of drugs must be ensured by mid-June to ensure that drug availability is aligned for integrated distribution. The operational plans finalized prior to NDD round should be constantly referred for specific program timelines for better program quality.
3. 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 this round. The examination calendar should be used as reference when deciding the NDD and mop-up dates.
4. Strengthen integrated distribution of drugs, IEC, training materials and reporting forms at the block level trainings through robust and timely planning for availability of drugs and print materials. Improved and integrated distribution of drug, IEC, training materials needs to be ensured down to the block levels with clear responsibilities being assigned for bundling at all levels through state released directives. Necessary supervision at all levels is required to ensure that adequate quantities get bundled and distributed in a timely manner.
5. It has been observed in NDD Feb round that there lies an impending need to strengthen NDD recording and reporting protocol in order to improve the performance and quality of NDD program. Training and reinforcement messages shared through SMS need to increase focus on the importance of correct reporting protocols and maintaining correct and complete documentation. Additionally, trainers should ensure that teachers and headmasters understand the directive to maintain a copy of reporting forms in schools so that the data available for coverage validation is more robust and thereby enhanced program verification and validation.
6. Greater involvement of ASHAs in mobilization of unregistered (1-5yrs) and out- of-school children (6-19 yrs) and spreading awareness on deworming benefits. This should be facilitated through engagement of ASHA coordination cell at state-level and also releasing a directive on engagement and roles as well as incentive to all districts and blocks at least two months in advance. Strengthening trainings of ASHA through participation in block level trainings and utilizing other channels is also essential.
7. Efforts are required for increasing school attendance to improve coverage with engagement of education department through schools engaging parents earlier on through platforms of School Management Committee Meetings; conducting thematic discussions on NDD during school morning assemblies. Schools should also be

proactively engaging with the ASHAs and *anganwadi* workers who are in the community talking to parents, children.

8. Considering it was the first time private schools were engaged in the NDD round, monitoring findings show positive strides have been made to engage these new stakeholder in the program. But in order to broaden the reach of the program, it is critical to strengthen engagement with private schools in every aspect of future rounds. This is important since the private school enrollment in the state is nearly equal or more than the enrollment of children in government schools. Also, the prevalence survey data also shows that prevalence of STH in children enrolled in private schools is also nearly equal or higher than that of government schools. Promoting strengthening of private school engagement through participation of their representatives in Steering Committee Meeting at state and district level coordination committee meetings, and special meetings called by district and block education officers is important. The State must reach out to the District Magistrates in advance- two months at least, intimating them about the program and the key support areas required from their end for the program to have better reach to all children. Engagement of Education department to write and engage with private schools and their associations at district and state-level in a timely manner will be essential.
9. Comprehensive training for teachers and other staff, along with adequate and timely information about the program, may help generate awareness and interest from private schools. For further engagement and step ahead towards strengthening private school participation, districts can ensure participation of private school association(s) or representative of private school association in the DCCMs.
10. Department of health should engage with the Panchayati Raj Institution to include NDD and its benefits on the agenda item in its meeting – two weeks prior to NDD and the period between NDD and mop-up day. It will strengthen program coverage and raise awareness and acceptance in the community. Panchayati Raj department should issue letters detailing the roles of its office bearers in community mobilization.
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 state steering committee meeting.

7. List of Annexures

Annexure A	Coverage Report Submitted by NHM-Uttar Pradesh to Government of India
Annexure B	State Joint Directive
Annexure C	Letter on Drug Repackaging
Annexure D	Drug Bundling Plan
Annexure E	Drug Recall Status
Annexure F	State IEC Plan, National Budgets Allocated On NDD IEC Plans
Annexure G	IEC Assessment Report
Annexure H	Training Cascade and Dates
Annexure I	State Preparatory Checklist
Annexure J	SMS Delivery Reports Sent by NHM
Annexure K	Compiled Block-Level Training, Pre-Posttest Analysis: Training Quality Assurance
Annexure L	Brief Report on Monitoring Visits on NDD Conducted by Evidence Action
Annexure M	Independent Monitoring Findings (PMCV)