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ACRONYMS

ANM:	Auxiliary Nurse Midwife
AWC:	<i>Anganwadi</i> Centre
AWW:	<i>Anganwadi</i> Worker
BMO:	Block Medical Officer
BPM:	Block Program Manager
BRP:	Block Resource Person
CAPI:	Computer Assisted Personal Interview
CHC:	Community Health Centre
CIFF:	Children's Investment Fund Foundation
CMHO:	Chief Medical and Health Officer
CS:	Civil Surgeon
DC:	District Coordinator
DEO:	District Education Officer
DIO:	District Immunization Officer
DPM:	District Program Manager
DPO:	District Program Officer (WCD)
DWCD:	Department of Women and Child Development
GoI:	Government of India
ICDS:	Integrated Child Development Services
IEC:	Information, Education and Communication
MD:	Mission Director
MCTS:	Mother and Child Tracking System
M&E:	Monitoring & Evaluation
NHM:	National Health Mission
NDD:	National Deworming Day
PIP:	Program Implementation Plan
RBSK:	Rashtriya Bal Swasthya Karyakarm
RC:	Regional Coordinators
STH:	Soil Transmitted Helminths
UT:	Union Territories
WHO:	World Health Organization

Executive Summary

Contributing to the Government of India's National Deworming Day (NDD) efforts, the state of Jharkhand implemented round three of NDD on February 9¹, followed by mop-up day on February 15, 2017. In this round, the state dewormed 77,10,575 children in the age group of 1-19 years across 19² of 24 districts of the State. This achievement is an outcome of exemplary leadership from the Health, Medical Education and Family Welfare Department in coordination with School Education and Literacy Development Department, and Women, Child Development and Social Security Department. Evidence Action provided technical assistance for program planning, implementation and monitoring, through funding support received from the Children's Investment Fund Foundation (CIFF) and Dubai Cares. A Memorandum of Understanding with the State National Health Mission and Evidence Action represented through its in country technical assistance partner Pramanit Karya India Private Limited was signed in December 2016 to guide the technical assistance efforts.

Table 1: Key Achievements of National Deworming Day February 2017

Indicators		Census target	Program Target	Coverage
Number of schools reporting coverage		NA	32,286	30,970
Number of <i>anganwadis</i> reporting coverage		NA	28,187	27,238
Number of enrolled children (classes 1-12) who were administered albendazole on NDD and Mop up Day	Govt. Schools	48,86,101	41,02,555	38,64,320
	Private Schools	13,58,342	13,69,036	12,11,839
Number of registered children dewormed (1-5 years) at AWCs on NDD and Mop up Day		29,37,275	21,34,008	19,29,434
Number of unregistered children dewormed (1-5 years) at AWCs on NDD and Mop up Day		NA*	2,29,106	1,94,198
Number of out-of-school children dewormed on NDD and Mop up Day		23,30,886	5,69,707	5,10,784
Total number of children dewormed (1-19 years)		1,15,12,604	84,04,412	71,10,575

* Source: Report submitted by NHM Jharkhand to Government of India on, 19th April, 2017 (**Annexure A**)

Evidence Action provided comprehensive technical assistance for the successful implementation of NDD in February 2017, incorporating learnings from the previous rounds to guide program planning. The state's commitment towards the program was reflected in the efforts to scale up private school inclusion in NDD Feb 2017 round.

¹ The state observed NDD on Feb 09, 2017 as February 10, 2017 was decided as state holiday in lieu of Saint Ravidas Jayanti

² 5 LF endemic districts viz. Sahebganj, Deoghar, Giridih, West Singhbhum and Hazaribagh were excluded from NDD implementation

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 deworming³ in places where prevalence of soil-transmitted helminths (STH) is 20% or higher⁴ using existing platforms of schools and preschools. Worm infections pose a serious threat to children’s health, education, and productivity. Some of the benefits of deworming are shown in Figure 1.

Figure 1: Benefits of Deworming



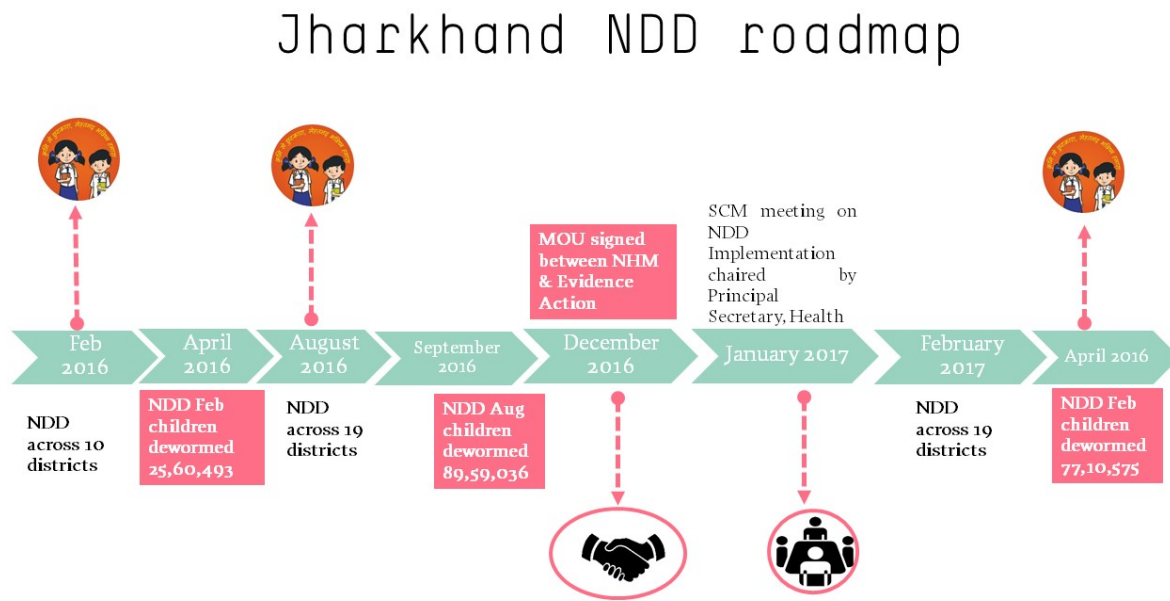
1.2 State Program Background-Jharkhand

Jharkhand implements the *anganwadi* and school-based NDD program by following the Government of India’s (GoI) NDD operational guidelines. Key milestones are stated in Figure 2 below, and more information about NDD is provided in Section 2.

³ <http://www.povertyactionlab.org/publication/deworming-best-buy-development>

⁴ “Helminth control in school-age children- A guide for managers of control programmes”: WHO, 2011

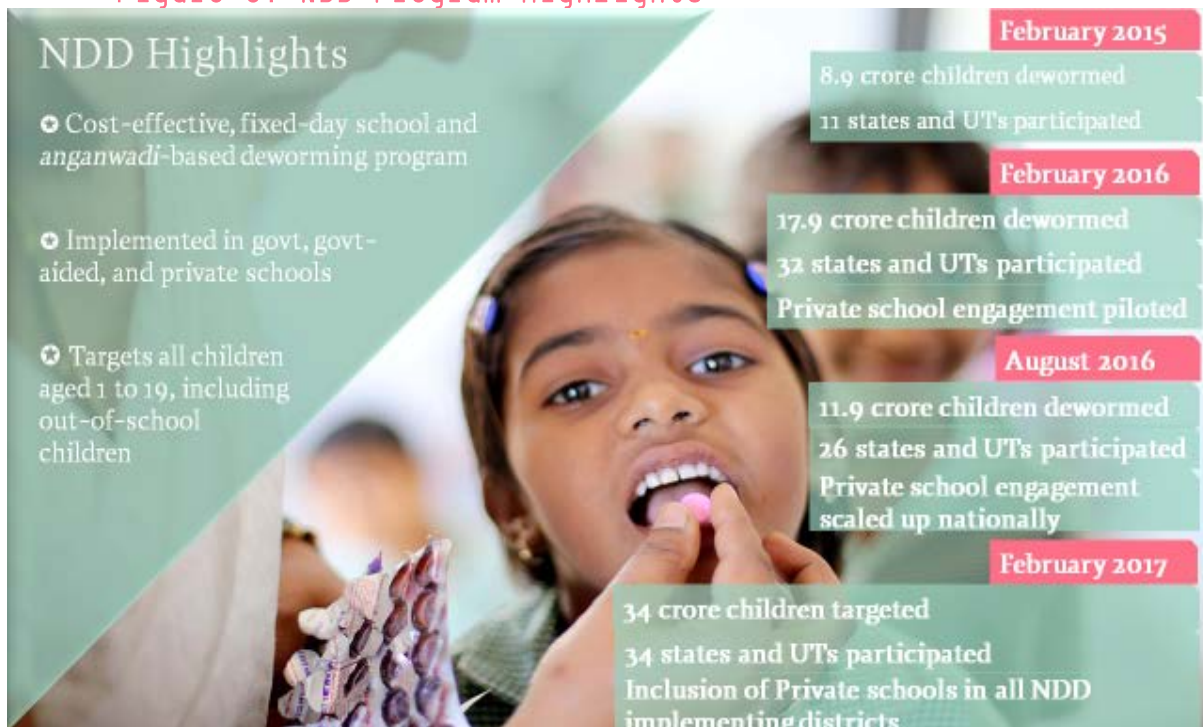
Figure 2: Jharkhand NDD Roadmap



The Lymphatic Filariasis –Mass Drug Administration program was conducted in five of the 24 districts in August 2016 round.

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. Based on national level STH mapping⁵, and WHO treatment guidelines, the GoI issued a notification to states recommending the appropriate treatment frequency based on prevalence data. Jharkhand is required to conduct biannual deworming due to high prevalence of more than 43%⁶.

3. State Program Implementation

3.1 Policy and Advocacy:

Successful implementation of the NDD program at such scale requires a high degree of stakeholder collaboration at each administrative and implementation level. The Department of Health, Medical Education and Family Welfare led coordination with the Departments of Education and Women and Child Development and Social Security to achieve coordinated program planning and implementation. The main points of inter-departmental collaboration are displayed in Figure 4 below.

Figure 4: Efforts Towards Stakeholder Collaboration

December 23, National review meeting, Delhi	January 9, State Steering Committee Meeting	January 31, State Joint directives	January 19 & February 14, State Video Conference
<ul style="list-style-type: none"> • Review of NDD preparations • Assessment of state's preparedness for February round • Decision on NDD dates • Focus on comprehensive target setting • Reaching children in all private schools 	<ul style="list-style-type: none"> • Conducted for the first time at state level for NDD, under chairmanship of Principal Secretary Health, attended by officials of Department of WCD & Education • Review of NDD preparations 	<ul style="list-style-type: none"> • Signed by Principal Secretary -Health, Education and WCD, directives issued to all implementing districts 	<ul style="list-style-type: none"> • Conducted with District Nodal Officer to assess drug availability and mitigate program gaps. • Other preparations included adverse event management

State Nodal Officer for NDD participated in the national level review meeting held on December 23, 2017. Following the same, a dedicated State Level Coordination Committee meeting for NDD was held for the first time on January 9, 2017 under the chairmanship of Additional Chief Secretary (ACS) cum Mission Director, NHM. The key participants were senior officials from Department of Education and Department of Women and Child Development and Social Security to take critical decisions for NDD February 2017 and facilitate convergence between the three stakeholder departments. The decisions at the meeting included agreement on targets for NDD Feb 2017, inclusion of all private schools and drug testing prior to distribution. In spite of initiatives undertaken for private school's participation at SCCM, limited inclusion at districts and blocks was observed. Representation of private schools was observed in only eleven district coordination committee meetings.

Jharkhand implemented NDD in 19 out of its 24 districts while aligning with the LF MDA program in the state. Though delayed, a joint directive was signed by Principal Secretaries of three stakeholder departments for the first time and shared with all concerned state and district officials on January 31, 2017. All 19 NDD districts conducted District Coordination Committee Meetings between January 10 and 28, under the chairmanship of

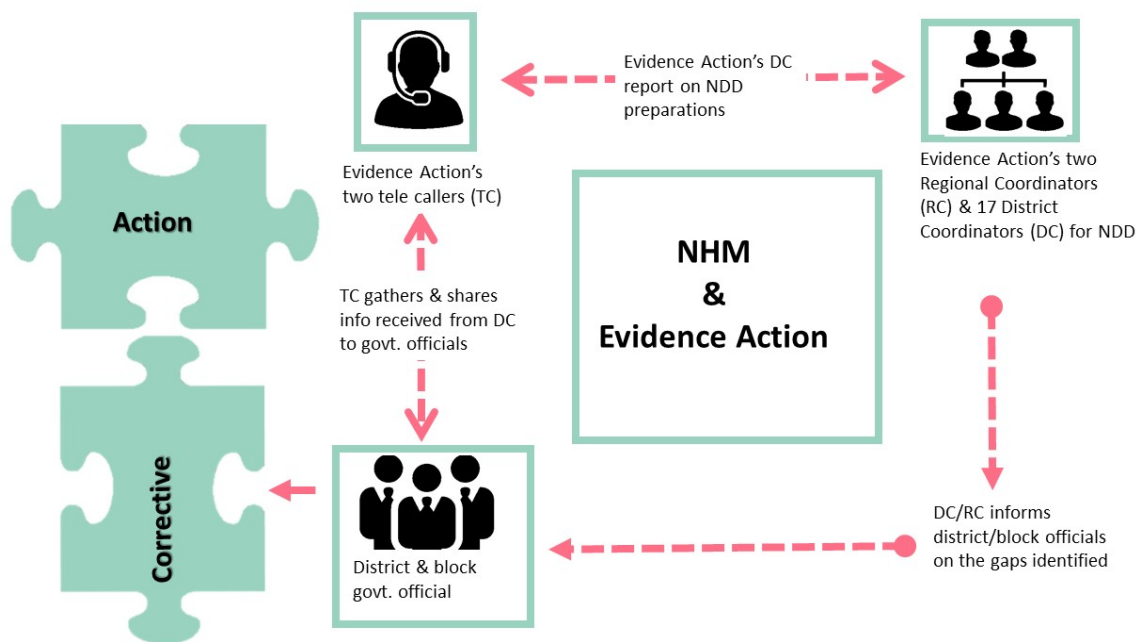
⁶ 6 Prevalence mapping was led by the National for Disease Control (NCDC) and partners

the Deputy Commissioners, or represented by Civil Surgeons to finalize the training plan, procurement, and distribution of IEC and finalise strategy to include private schools in NDD. To measure program preparedness, two video conferences with districts officials were held: on January 19 to review NDD preparedness and on February 14 for program improvements before mop-up day.

3.2 Program Management :

Evidence Action drafted a detailed operational plan for NDD February 2017, which was later finalized with the Department of Health and shared with the stakeholder departments. Evidence Action’s technical assistance was extended through a state-based team including field-based regional coordinators and 19 short-term district coordinators and two tele-callers. The state team assisted with program planning and coordinated with stakeholder departments to share real time updates on program implementation and to facilitate corrective actions from the respective government departments. The state government prepared and disseminated NDD program and financial guidelines to respective stakeholders across all districts (Annexure B) Figure. 5 gives an overview of the information flow between the Evidence Action team and district and block officials.

Figure 5: Evidence Action Facilitates Corrective Actions



3.3 Drug Procurement, Storage, and Transportation

a) Drug Procurement: The Ministry of Health and Family Welfare (MoHFW) provided a total of 1,47,47,000 albendazole (400 mg) tablets from the WHO Global Drug Donation Program to deworm all children aged 1-19 years across 19 NDD districts for the February 2017 round. The state coordinated with the Kolkata-based medical store organisation (GMSD) for timely supply of drugs to the state so that further testing and supply to the districts could be ensured on time. The department of health facilitated drug testing at state-approved laboratories prior to its distribution to Districts.

b) Drug Logistics and Distribution: The Department of Health managed the entire drug logistics and distribution at all levels of the cascade. Evidence Action supported the state with a district and block-wise drug bundling and distribution plan to streamline distribution of drugs till the last level- schools and *anganwadis* (**Annexure C**). The Department of Health ensured bundling of the NDD kits⁷ at district level, which included drugs and all program materials, such as training and IEC materials, and reporting forms. The kits were distributed to district health functionaries for onward distribution to Education and WCD functionaries at the block training. The state could ensure distribution of NDD kits in limited block trainings because of delay in district printing and lack of coordination among stakeholder departments on training dates. To align drug distribution with block-level trainings as part of the integrated distribution and in accordance with NDD operational guidelines, Evidence Action supported the state department by tracking drug availability at districts and blocks through providing daily updates to officials to undertake corrective actions.

c) Adverse Event Management: In order to effectively manage any adverse events, the state adapted adverse event management protocol from the NDD operational guidelines. For both NDD and mop-up day, the state set up an adverse event management system engaging *Rashtriya Bal Swasthya Karyakarm*⁸ teams to effectively respond to any reported adverse event. Additionally, emergency helpline numbers such as 104 (Medical Health service) were put on alert to facilitate appropriate emergency response action by coordinating medical assistance from the nearest primary health centre. To provide guidance on functionary’s roles and responsibilities to handle and report adverse events, the training cascade focused on disseminating customised information at all administrative levels. No serious adverse event was reported during implementation NDD February 2017, as per NDD coverage report submitted to GoI.

d) Drug Recall: Evidence Action supported NHM in tracking leftover albendazole tablets from the round. By mid-May, in spite of directives from NHM the drug recall status is available only for 3 out of 19 districts, presented in the table below:

Table 2: Drug Recall Status in Jharkhand

Total albendazole tablet available sealed jar and loose	3,93,556
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The department of health will be directing districts to use the packed boxes in the upcoming August 2017 round as per drug safety recommendation.

3.4 Public Awareness and Community Sensitization

The state adapted and printed the NDD resource kit developed by Evidence Action at the national level, and approved and uploaded on the [NHM website](#) by the GoI. All 19 NDD districts printed IEC and training materials at district level and ensured its distribution to functionaries at block level trainings. However, as some of the districts could not ensure timely printing of IEC and training materials, the distribution of NDD kits during block

⁷ NDD kits includes drugs, IEC materials such as posters and handbills and reporting formats

⁸ 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.

trainings was impacted. The state also faced challenges in ensuring uniform printing of materials across all NDD implementing districts as per the national printing guidelines.

On February 7, the Health, Medical Education, and Family Welfare Department organized a press sensitization meeting at the conference hall of the Sadar Hospital in Ranchi chaired by civil surgeon, Ranchi and state nodal officer. The meeting was



Figure 1: State launch, Ranchi

attended by eight media personnel (print and electronic media) who were oriented on the importance of the program; benefits of deworming; reasons for adverse events; and other key points. Evidence Action provided all participants with media kits that included a presentation of the details of the program, fact sheets, NDD brief, and state specific program information. There was detailed media coverage in leading newspapers after this workshop, which contributed to larger awareness about the program.

The Department of Health, Medical Education and Family Welfare reiterated commitment for NDD through social media engagement to raise awareness about the program. This happened for the first time in the state for NDD. Between February 1 and 9, the NHM posted NDD content 26 times on [Facebook](#). Evidence Action provided the detailed social media plan and content, which state NHM used. This included field photos, launch photos, countdown videos, and teaser videos. These state-led efforts, in addition to the national level campaign, helped create enhanced community awareness and greater program impact.

Additionally, at the national level, there was extensive engagement on the media campaign wherein GoI spent INR 5,65,56,800. Additionally, GoI also actively uploaded content on the MoHFW Twitter handle.

The political commitment to the program was evident with state and district launches held on February 8 and 9, 2017 respectively. The chief guests at the state launch event were the State Health Minister; Additional Chief Secretary – Health Department, and other senior officials. 10 media personnel attended the launch event as a result of which 10 articles were published about the event in leading English and Hindi language newspapers in the state.

Figure 6: NDD 2017 IEC Campaign Activities



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 H.

3.5 Training Cascade

a) Training and Distribution Cascade: A state level training of trainers was held on January 6, 2017 where 69 district level officials were trained for NDD implementation. As per the state coverage report, 24,448 teachers from government, government-aided schools, 2,812 from private schools, 25,298 *anganwadi* workers and 25,873 Sahiyas were trained. This is 85% of total government schools, 83% of private schools, and 90% of *anganwadis*. Broadly, there is definite scope of improvement in terms of training all teachers and *anganwadi* workers as well as ensuring robust planning for integrated distribution of drugs, print materials for a cost-effective program in a timely manner.

A training cascade was implemented starting from district to block level in all 19 NDD districts, across 142 blocks between January 16 and 31, 2017. Overall, training 29,271 teachers, 212,44 *anganwadi* workers, 35,000 *sahiyas* and 6,962 ANMs. Block trainings had limited functionary attendance because of lack of delay in timely dissemination of training dates to functionaries.

b) Training Resources: Department of Health printed training resources including flipcharts, handouts for teachers and *anganwadi* workers, and training leaflets for *sahiyas*. Evidence Action supported in drafting the training and IEC material bundling plan and quantifying block requirements, enabling materials to be efficiently transported to all districts before trainings commenced.

c) Training Reinforcement: Evidence Action supported the reinforcement of key messages from the training sessions by delivering bulk SMS to program functionaries, as shown in table 3. The SMS plan was adapted as per national guidelines and approved by state health department. Additionally, NHM Jharkhand used their mother and child tracking system platform to send 1,47,733 SMS to health functionaries such as ANMs, *sahiyas*, and others. The details are in a table below:

Table 3: Details of SMS Training Reinforcement Messages Sent

SMS sent by	Number of SMS
Evidence Action	22,41,188
NHM ⁹	1,47,733

75% of SMS sent by Evidence Action were delivered. It is critical that stakeholder departments build an updated contact database to have better outreach to functionaries for timely dissemination of key information. It is important that government stakeholders leverage their existing platforms for sending SMS for greater program impact and sustainability.

d) Training Support: For training quality assurance, Evidence Action administered a pre-post-test to participants at the state-level orientation to measure knowledge retention on key training messages. Based on the assessment, real-time recommendations, highlighting key NDD messages which needed to be reinforced at district, block trainings were shared with NHM.

Thereafter, using a standardized training monitoring checklist, Evidence Action’s district coordinators attended and provided supportive supervision to 11 district trainings and 31 block trainings to ascertain that key messages were covered, as per NDD guidelines. Detailed findings from trainings are covered under the Monitoring and Evaluation section.

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

4.1 Process Monitoring

Evidence Action conducts process monitoring through telephone monitoring and cross verification, including physical verification through field visits by its staff and trained independent monitors (**Annexure K**).

⁹ Information provided by NHM; all SMS were sent by MCTS platform

Snapshot of M&E Activities

I. Telephone Monitoring and Cross Verification

- Telecalling conducted across 142 blocks in 19 districts of the state
- 5,986 successful calls made during December, 2016-March, 2017
- 3,026 calls to health functionaries including district and block level officials and ANMs
- 834 calls to *anganwadi* workers
- 2,126 calls to government and private schools

II. Training Quality Assessment

- Pre-post test was administered during master trainer's at state level
- A total of 33 block level training quality assessment was done using standard format

II. Field Monitoring Visits

- Total 398 monitoring visits by Evidence Action staff were made in selected schools and *anganwadis*
- NDD monitoring checklist given in NDD implementation guideline was administered ([Annexure...](#))
- Real time findings on key indicators were shared with the stakeholders on NDD and mop-up day

III. Process Monitoring by Independent Monitors

- Process monitoring was conducted in all 19 districts on NDD & mop-up day
- 100 trained independent monitors, hired by Evidence Action, visited 199 schools and 199 *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

IV Coverage Validation by Independent Monitors

- Coverage Validation was conducted in all 19 districts post mop-up day during February 21-28, 2017
- 100 trained independent monitors, hired by Evidence Action, visited 500 schools and 500 *anganwadis*

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. Evidence Action shared these tracking sheets with the state government on a daily basis to enable them to take rapid corrective actions as necessary, such as issuing departmental directives, holding 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 9,406 phone calls including follow up calls, 5,986 calls (68%) were successful from December 2016 to March 31, 2017. The existing contact database was a drawback while following up on NDD implementation, particularly with field functionaries such as teachers and *anganwadi* workers, which resulted in unsuccessful calls. The insights from SMS delivery reports show that while more than 75% SMS were delivered, the challenge with the contact database is the frequent changes of the contact number. So while the contact number is valid and operational, it may not still be retained by the functionary themselves. Thus, regular updating of the contact database need to be ensured to enhance program effectiveness by respective departments.

Training Quality Assessment: For quality assurance of training sessions, Evidence Action administered pre and post-tests to participants at state level master trainer's training to measure knowledge retention of key messages. Training monitoring at districts and blocks, was conducted as per the NDD training cascade to assess the quality of messages imparted during the training using a standardized training monitoring checklist through regional coordinators and district coordinators, who were trained on its administration. Pre-post-test was administered at block level to assess the quality of NDD trainings. Real time recommendations based on these assessments were shared with the stakeholders to improve remaining scheduled block level trainings. Findings of state and Block pre-post-test is shared as **Annexure D**.

Monitoring by Independent Agency: Evidence Action with approvals from the Government of Jharkhand assessed the processes and performance of the program by hiring an independent survey agency, Karvy Insights Private Limited, whose 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, 398 visits were made by Evidence Action team to government and private schools and *anganwadis* on NDD and mop-up day. State government officials from health department also visited all 19 NDD districts to monitor implementation of NDD and mop-up day. The detail note from Evidence Action visits is annexed as **Annexure E**.

4.2 Assessing Treatment Coverage

Evidence Action undertook coverage validation in NDD districts to gauge the accuracy of reported treatment coverage during the February 2017 round in Jharkhand

Coverage Validation: Coverage validation is an ex-post check of the accuracy of the reporting data and coverage estimates. 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 of 500 sampled schools. 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: Government of India provided the state with 221 user IDs and passwords for NDD mobile/web application to all blocks and districts for coverage reporting purposes. All blocks submitted coverage report and all districts approved the data on NDD app, reporting a coverage of 71, 10,575 children dewormed. The state had a pre-decided target of 1,16,61,985 children, which was revised to 84,04,412 at the time of coverage reporting because of erroneous data entry at blocks. The other possible reason could be districts approved the block data with reduced/ revised targets, probably to show an increase in the coverage percentage. 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 the district level post the NDD round.

The state took cognizance of the issue and released a letter for correction of entries at blocks. The letter was delayed and by that time reported data by blocks had been approved by the districts. State should sensitize the district officials on functioning of NDD application as the data once approved by districts cannot be changed.

4.3 Key Findings

Process monitoring findings highlight that 64% schools and 78% *anganwadis* attended training for the recent round of NDD and around 74% of schools and 86% of *anganwadis* conducted deworming either on NDD or mop-up day. Findings from coverage validation show that 84% of schools and 92% of *anganwadis* dewormed children during NDD or mop-up day. Around 54% of schools and 62% of *anganwadis* received NDD posters and banners. However, integrated distribution of NDD kits¹⁰ was lower for both schools (38%) and *anganwadis* (45%). This shows that only half of the schools and *anganwadis* who participated in the trainings, received a complete NDD kit with all materials (albendazole, banner/poster and handout/reporting forms) at the trainings which clearly indicates that integrated distribution did not happen at all trainings. The materials were either distributed individually to remaining schools and *anganwadis*, thus increasing the costs and resources of time while posing a risk on the availability of the materials prior to the round. These can be attribute to the fact that there was limited interdepartmental coordination on training dates and delay in printing of IEC and training materials at districts. Around 49% of schools and 39% of *anganwadis* received training reinforcement messages through SMS, indicating lack of an updated database of functionaries. Awareness on the way of child can get worm infection, possible adverse events, and adverse event management practices (**Annexure F-Table 5**) were good among teachers and *anganwadi* workers. Around 50% of teachers and 48% of *anganwadi* workers reported the possibility of any adverse event among children after administration of albendazole tablets. Out of the total sampled schools and *anganwadis* more than half of the teachers and *anganwadi* workers out of the sampled sites were aware about processes for management of adverse events like laying down the child in open/shaded place.

Private School Engagement: Around 42% of sampled private schools visited (N=12¹¹) reported being trained for NDD. These schools (72%) had sufficient deworming drugs, however only 4% received a banner/poster, and 17% of them received handouts and reporting forms.

This shows that while drugs were made available to the schools, majority of schools did not attend training, which clearly indicates the lack of integrated distribution in all the trainings. The drugs and materials were distributed individually to remaining schools and *anganwadis*, thus increasing the costs incurred on logistics and also posing a risk on the availability of the materials prior to the round. Limited participation of private schools can be attributed to their minimal engagement in coordination committee meetings, having more information and details about the NDD program and its benefits, and efforts to dispel any myths and misconceptions regarding the program. Further, limited availability of contact database of private schools hindered dissemination of important information on program dates and details, training dates and reporting timelines. 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

¹⁰Integrated distribution of NDD kits includes albendazole, banner/poster and handout/reporting forms and provided to schools and AWC during the trainings.

¹¹ These indicators are based on small samples, therefore, precautions should be taken while interpreting the results as these are not representative of all private schools in the state

Magistrates seeking their active support in the program must be sent to all districts at least two months prior to start of district level trainings.

Table 2: Key Findings from Process Monitoring and Coverage Validation

Indicator	Schools		Anganwadis	
	%	N	N	%
Received SMS for current NDD round	49	199	199	39
Attended training for NDD	64	199	199	78
Integrated Distribution of albendazole tablets and IEC materials	38	199	199	45
Schools/ <i>anganwadis</i> conducting deworming	500	84	500	92
Children consumed tablet	100	1,233	Not Applicable	Not Applicable
Followed correct recording ¹² protocol	49	418	458	51
Copy of reporting form was available for verification	52	418	458	44
State level verification ¹³ factor	53	29,482	17,882	82
State level inflation ¹⁴ rate	87	15,760	14,600	22
Estimated NDD coverage based on government coverage data	49	-	-	74
Estimated NDD coverage based on school attendance	69	-	Not Applicable	Not Applicable

Coverage validation data revealed that 42% of schools and 51% of *anganwadis* followed correct protocols for recording the number of children dewormed. However, around 49% of schools and 34% of *anganwadis* did not adhere to any recording protocol. A substantial proportion of *anganwadi* workers did not have a list of unregistered preschool-age children (69%) and out-of-school children (72%). Out of total schools and *anganwadis* conducted NDD, only 52% of schools and 44% of *anganwadis* had a copy of their reporting form post submission, though they were instructed to retain a copy as per NDD guidelines and covered at trainings. In addition, the findings indicate high inflation (87%; verification factor of 0.53) for enrolled children against the treatment figures. Similarly, the state level inflation rate was 27% (Verification Factor=0.79) for *anganwadi* registered children and 36% (Verification Factor =0.73) for out-of-school children. The high inflation rate indicates poor documentation of children dewormed at schools.

Further, interviews of children (N=1,253) at schools indicate that 98% received albendazole tablet and out of all children who received the tablet, 98% reported to consume the tablets under teachers' supervision. This indicates that despite challenges in reporting and documentation of NDD coverage data, majority of the children present on NDD or mop-up day at the schools consumed the albendazole tablet.

¹² Correct recording protocol includes schools where all the classes put single tick (✓) on NDD and double tick (✓✓) on mop-up day to record the information of dewormed children

¹³ Ratio of recounted value of the dewormed children to the reported value. This calculation is based on only those schools (n=218) and *anganwadis* (n=200) where deworming was conducted and copy of reporting form was available for verification.

¹⁴ Proportion of over reported dewormed children against total verified children in schools and *anganwadis*.

The state government reported 93% coverage in school and 90% 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 53% of treatment figures reported by schools and 82% for *anganwadis*. Applying these verification factors to respective government reported coverage, it is estimated that 49% (0.53 of 0.93) children could have been dewormed in the schools and 74% (0.82 of 0.90) in *anganwadis*.

Further, we also estimated NDD treatment coverage in schools considering maximum attendance of children on NDD dates. Coverage validation data showed that 84% of schools conducted deworming on either NDD or mop-up day, maximum of 86% of children were in attendance, 98% of children received albendazole tablet and 98% of them reported to consume albendazole tablet under supervision. Taking these factors into account, 69% ($0.84 \times 0.86 \times 0.98 \times 0.98$) of enrolled children could have been dewormed in the schools.

The detailed tables with process monitoring results and coverage validations are attached herewith (Annexure F).

4.4. Trend of Key Indicators Over Rounds

To understand the changes in selected indicators from NDD August 2016 to NDD Feb 2017 round, selected key indicators are presented in graphical form below. Data comparison shows improvements from NDD August 2016 round by 12 and 16 percentage points respectively for schools and *anganwadi* where headmaster/teacher and *anganwadis* attended training. Program insights show that, unlike previous round, more robust tracking and training reinforcements were made for the February 2017 round, which must be sustained in future rounds.

Participation of teachers and *anganwadi* workers at trainings continue to be less than 80% during this NDD round with lack of information about NDD training dates continued to be cited to be the main reason among teachers/*anganwadi* workers for not attending NDD trainings (Figure: 8). 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 *anganwadi* workers to mobilise community and spread awareness on the program. It is recommended for high participation of functionaries, that block training dates once fixed should not be changed without timely intimation to participants. Training reinforcement SMS were sent to functionaries for alerting training dates for district and block level trainings. However, contact database continues to be a challenge affecting the overall delivery of the SMS to the teachers (49%), *anganwadis* (39%). Though, the SMS delivery rate has improved in comparison to the last round because of availability of updated database but indicators are still low and it will require periodic upgradation.

Fig 8: Comparison of Training Indicators for School/Anganwadi August 2016 and February 2017 Round

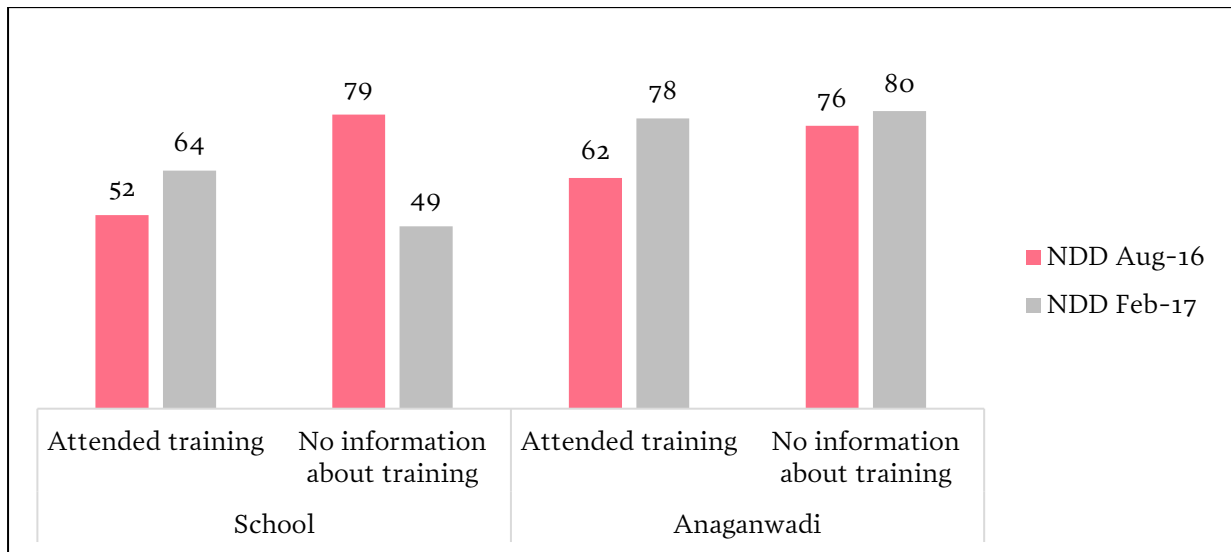


Fig 9: Comparison of Key Indicators in Schools during August 2016 and February 2017 Round

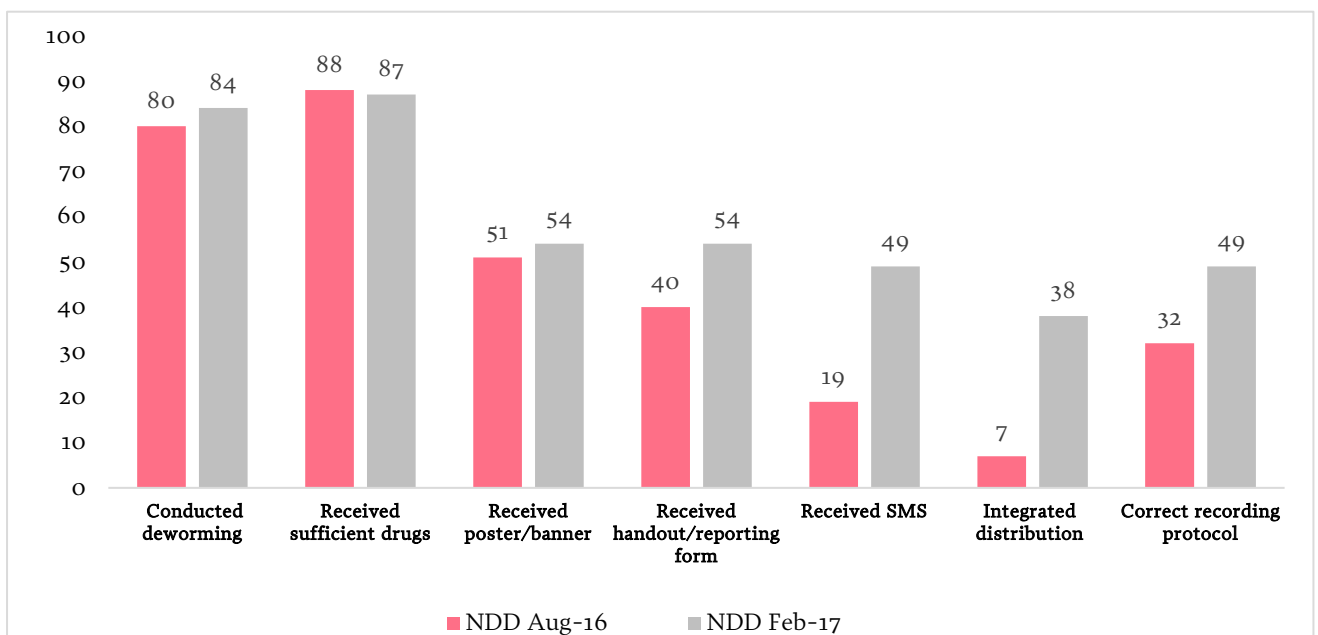
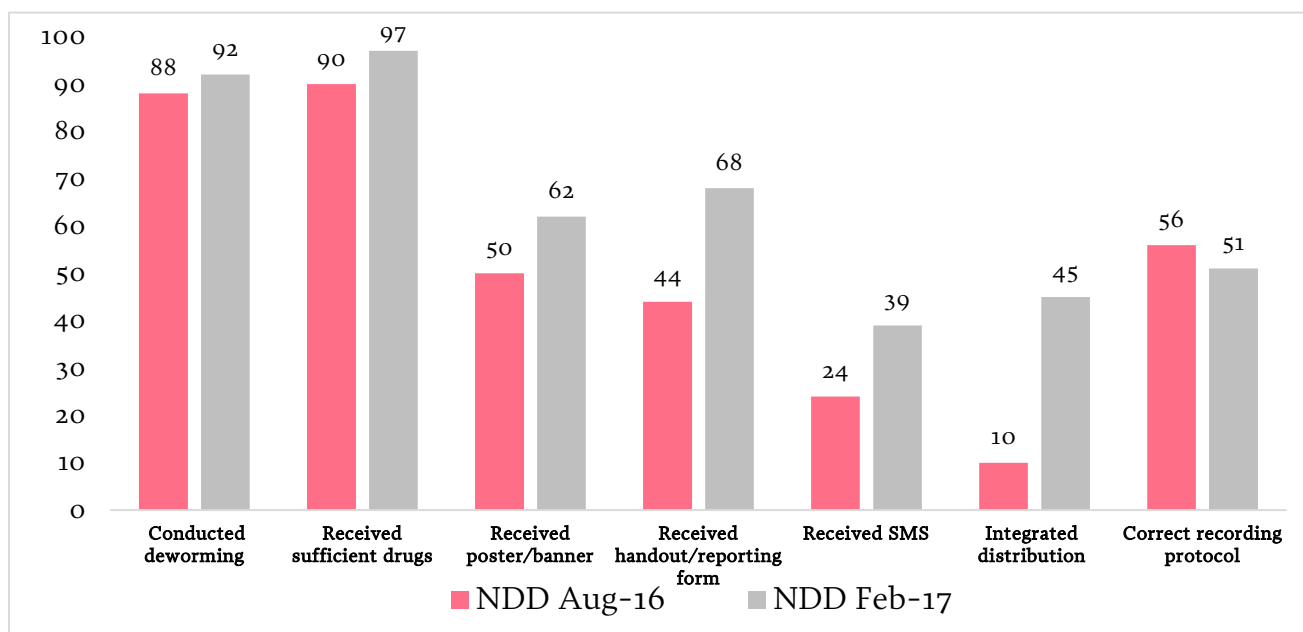


Fig 10: Trend of Key Indicators in *Anganwadis* during August 2016 and February 2017 Round



Trends in figure 9 and 10 shows improvements for most of the indicators in the most recent round. Significant increment is visible in received SMS and integrated distribution in NDD February 2017, possibly because of improved database and better logistical planning and tracking in comparison to the August 2016 round.

Moreover another possible reason for increase in most of the indicators is the continued efforts of government of Jharkhand in facilitating timely communication to districts with assistance from Evidence Action which has extensive experience of this assistance from other states over the years.

Percentage of following correct reporting protocol declined in *anganwadis*, probably because of limited reinforcement on criticality of following reporting protocol during block trainings. Additionally, process monitoring findings demonstrate that focus of frontline workers is more on albendazole administration rather than recording the numbers as per recommended guideline.

5. Recommendations:

It is critical to conduct consistent high coverage program every six months in all 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. Below are few recommendations to be implemented in forthcoming rounds:

1. Department of health in coordination with Education and Women, Child Development and Social Security Department should initiate exercise on target determination as per the census in coordination with districts.
2. Department of health should take lead in orienting district and block officials through trainings and video conferencing on importance of adhering to pre decided census targets while reporting coverage. The exercise should begin three months prior to the round.

3. Attendance on NDD and mop-up day could be improved through mobilisation efforts of teachers through classroom discussions and sensitizing parents on benefits of deworming much in advance of the NDD round. Department of education could facilitate a directive to schools detailing the use of existing platforms for maximum attendance on NDD.
4. Department of health should develop and implement a structured monitoring mechanism at districts to ensure uniform printing of IEC and training materials, which should comply with timelines of block trainings of stakeholder departments to ensure its distribution during trainings
5. Department of health should lead timely initiation of inter and intra departmental communication on critical aspects of program implementation like training schedule at district & blocks, which will contribute in aligning integrated distribution at block level. All communications should start 3 months prior to the round.
6. Training attendance was 64% for school and 78% for *anganwadi* functionaries. The mentioned findings from process monitoring can be improved through timely communication on training dates to frontline functionaries and an updated contact database of functionaries will complement in effective dissemination of any such information. Further, effectively monitored training sessions at blocks would ensure knowledge transformation of critical awareness messages among functionaries and ensure informed participation from them in overall program implementation

Findings of process monitoring shows integrated distribution are limited to 38% in schools and 45% in *anganwadi* respectively. Improvement in integrated distribution of drugs, IEC, and reporting forms through the training cascade should be improved for coming rounds. For that, state needs to ensure timely communication on printing and coordination at lower administrative levels for smooth logistical movement. State should sensitize district officials through VCs on criticality of NDD kit detailing its cost efficiency if it is distributed during block trainings

Findings from coverage validation indicates only 49% of schools and 51% of *anganwadis* followed correct protocols for recording the number of children dewormed as per the NDD guidelines. Functionaries should be orientated on criticality of the reporting protocols during block trainings and availability of reporting forms should be ensured at schools and *anganwadis*. Additionally, the number of SMS on criticality of reporting protocol can be increased in existing SMS plan and updated data base of functionaries would complement in reinforcing this critical information.

Out of total schools and *anganwadis* that conducted NDD, only 49% of schools and 39% of *anganwadis* received training reinforcement SMS. Additionally, during tele-calling only 68% of calls successfully tracked program preparedness. Department of Health and other stakeholder departments should periodically update contact database of their respective block functionaries through their district level officials.

Private schools should be encouraged to participate in coordination committee meetings at each level and attend block trainings as distribution of NDD kit is scheduled during trainings. Department of Health, in coordination with Department of Education should proactively identify and engage private school associations at all administrative levels. The state should initiate this by ensuring presence of association's representative during state Steering Committee Meeting and similar initiatives should be facilitated at other administrative levels. Furthermore, it is also important to explore possibilities to include kindergartens and preschool sections of private schools in coming rounds.

A substantial number of *anganwadi* workers did not have a list of unregistered preschool-age children (69%) and out-of-school children (72%). To extend deworming benefits to

unregistered children of community, regular orientation of *sahiyas* on their specific role in community mobilisation through existing platforms would be vital for implementing future rounds. Child health cell should engage *sahiya* cell from initial planning stage of the program implementation. Efforts would yield concrete result when district officials would be sensitized on *sahiya's* role and timely disburse their incentives to motivate *sahiyas*. A detailed directive listing down role and responsibilities of *sahiyas* with timelines should be issued from state to districts. The status of *sahiya* incentives should be a part of routine VC discussions and district officials should keep a close track of status through regular follow ups with District Program Manager.

Platforms of existing programs like *Swachh Bharat Abhiyan* etc. should be explored to disseminate key messages on hygiene and sanitation practices, which will induce a long term behavioural change in community and prevent spreading of STH infections. An invitation from department of health to lead of these programs should be sent for their participation in SCM for discussions and forging alliance to create a long term impact

Department of Health should initiate communication with Panchayati Raj Institution to include deworming and its benefits as one of the agenda item in its all-regular public meetings at least two weeks prior to NDD. This could strengthen program coverage as a result of raised awareness about the program in the community. Panchyati raj department should issue letters down the hierarchy detailing the roles of its office bearers in community mobilization.

Departments of Education and Health should continue dialogues with Department of Drinking Water and Sanitation to ensure availability of clean drinking water and maintain sanitation facilities in schools, which will create a long term impact on the worm infection cycle and contribute in reducing prevalence of STH infections in the state.

6. List of Annexures

Annexure A	Report submitted by National Health Mission (NHM) Jharkhand to Government of India
Annexure B	Letter from Government of India guiding states on treatment frequency for National Deworming Day
Annexure C	Joint letter signed by Department of Health, Education, technical Education and Women and Child Development conforming dates of NDD
Annexure D	Drug bundling plan for block wise requirement of albendazole
Annexure E.1	Letter of training cascade for NDD
Annexure E.2	Photos from the field for training
Annexure E.3	Training Quality Assurance
Annexure F	Independent Monitoring findings