Chhattisgarh

Anganwadi and School-Based Mass Deworming Program



Photo Credit: Evidence Action

National Deworming Day-August 2016

December 2016

CONTENTS

ACRONYMS

ANM:	Auxiliary Nurse Midwife
AWC:	*Anganwadi* Centre
AWW:	*Anganwadi* Worker
BMO:	Block Medical Officer
BPM:	Block Program Manager
BRP:	Block Resource Person
CMHO:	Chief Medical and Health Officer
CS:	Civil Surgeon
DC:	District Coordinator (*Mitanin* Program)
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
NHM:	National Health Mission
NDD:	National Deworming Day
PIP:	Program Implementation Plan
RBSK:	Rashtriya Bal Swasthya Karyakarm
WHO:	World Health Organization

Executive Summary

Contributing to the Government of India's National Deworming Day (NDD), the state of Chhattisgarh implemented the third round of *anganwadi* and school-based mass deworming on August 31, followed by mop-up day on September 7, 2016. In this round, the state dewormed 55,74,411 children in the age group of 1-19 years. This achievement is an outcome of exemplary leadership from the Department of Health and Family Welfare in coordination with Department of Education (DoE), & Women and Child Development (WCD). In addition, the Department of Technical Education also supported in the implementation of NDD. Evidence Action provided key technical assistance for program implementation, through funding support received from the United States Agency for International Development (USAID).

Table 1: Key Achievements of National Deworming Day August 2016

Indicators		Result (in figures)	Coverage (in %)
Total number of children targeted		64,25,787	
Number of schools reporting coverage		43259	98
Number of *anganwadis* reporting coverage		39522	99
Number of enrolled children (classes 1-12) who were administered albendazole on NDD and mop up day	Government Schools	3122290	92
	Private Schools	734737	88
Number of registered children dewormed (1 to 5 years) at *anganwadis* on NDD and mop up day		1202204	79
Number of unregistered children dewormed (1 to 5 years) at *anganwadis* on NDD and mop up day		109920	81
Number of out-of-school children (6-19 years) dewormed on NDD and mop up day		405260	76
Total number of children dewormed (1-19 years)		55,74,411	86.7

*Source: on November 24, 2016

For NDD August 2016, out of 27 districts, in 7[1] LF endemic districts, albendazole was administered in these districts to 1-19 years children, under the National Filaria Control Program (NFCP) on August 10 to August 12 (Mop up till August 17, 2016) at schools, *anganwadis,* and in communities. 5 districts[2] initially planned to undertake NDD but did not implement NDD due to non-availability of drugs. The state submitted the program coverage data from 22 districts, including albendazole administration in the 7 LF endemic districts. (Annexure A)

Evidence Action provided comprehensive technical assistance for the successful implementation of NDD in August 2016, incorporating learnings from the previous round to guide program planning. This included support to the LF-MDA program, through sending training reinforcement SMSs and conducting process monitoring in the LF endemic districts.

In line with guidance from the Government of India (GOI) and to facilitate program planning and implementation, the state government modified the deworming strategy from the biannual month-long intervention of *Shishu Sanrakshan Mah* for preschool children to a biannual fixed day National Deworming Day for all children aged 1-19 years. Beginning in August 2016, the state conducted a comprehensive biannual treatment round covering all

[1] 7 LF endemic districts are Surajpur, Balrampur, Bilaspur, Mungeli, Sarguja, Raigarh, Dhamtari.

[2] 5 districts which couldn't conduct NDD in August 2016 due to drug unavailability are Balodabazar, Raipur,Gariyaband,Kanker, Mahasamund

preschool and school age children, aligned with deworming of children under the LF-MDA program.
In the February 2016 round of NDD, the state dewormed 23,21,789 children against a target of 25,14,424 children aged 6-19 years across 16 districts; in the August round the state dewormed 55,74,411 children against 64,25,787 targeted children aged 1-19 years. In August, the state's commitment towards the program was reflected in efforts to scale up private school inclusion, from one district in February to all districts in the most recent round as well as program's expansion to include preschool-age children.

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[3] in places where prevalence of soil-transmitted helminths (STH) is 20% or higher[4]. 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

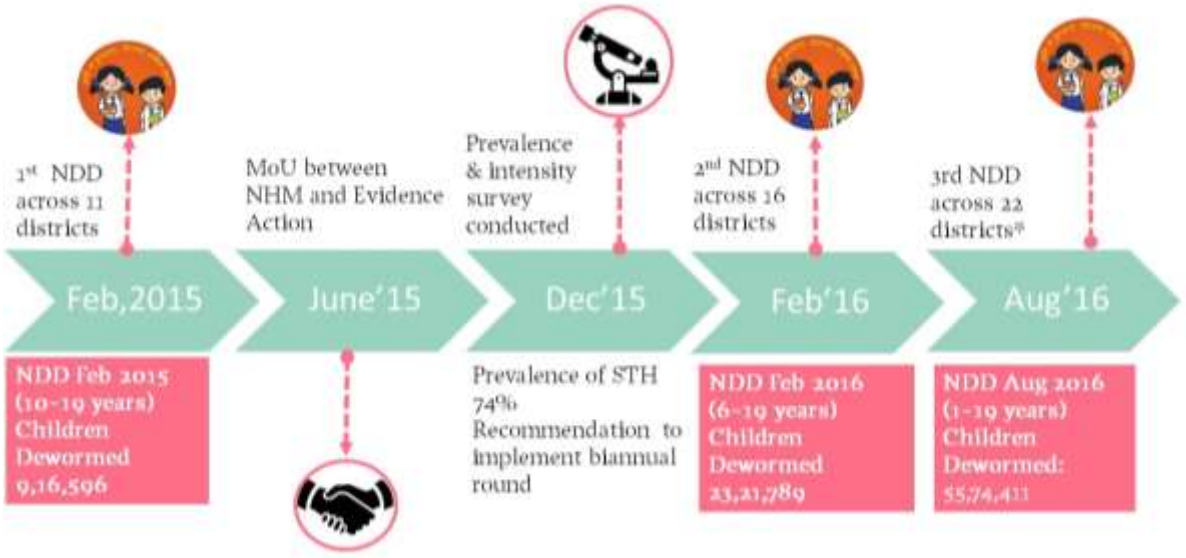
1.2 State Program Background-Chhattisgarh

Deworming activities in Chhattisgarh are implemented under GoI's National Deworming Day program. The program is based on national and global guidelines, and is customized to fit the state's context. On the first nationally coordinated NDD, Chhattisgarh achieved 94% coverage of targeted children. When a prevalence survey in early 2016 revealed high prevalence of STH in Chhattisgarh, the state updated its treatment strategy to plan for twice annual treatment in alignment with global best practices and recommendations. Key milestones are shown in Figure 2 below, and more information about NDD is provided in Section 2.

[3] http://www.povertyactionlab.org/publication/deworming-best-buy-development

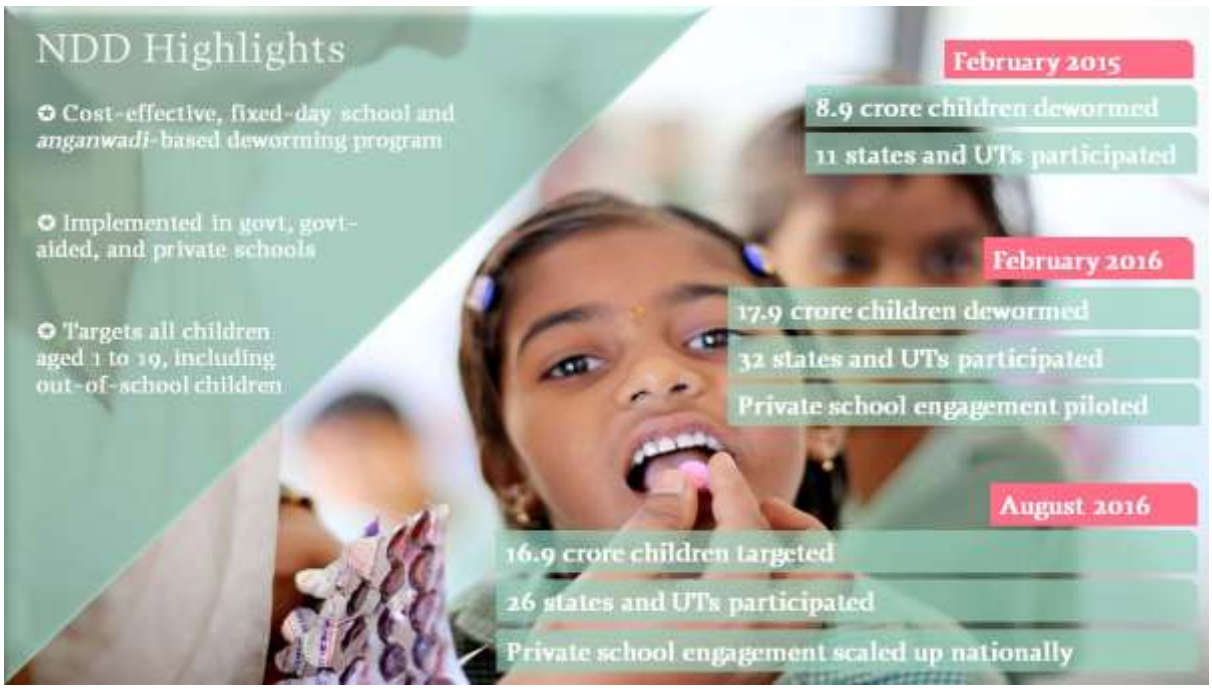
[4] "Helminth control in school-age children- A guide for managers of control programmes": WHO, 2011

Figure 2: Chhattisgarh deworming program milestones



2. About National Deworming Day

Figure 3: NDD program highlights



The Government of India (GoI) implemented its first NDD in February 2015 and the program has achieved high coverage at large scale since its inception. Based on national level STH mapping[5], as well as WHO treatment guidelines, the GoI issued a notification to states to recommend the appropriate frequency of deworming. Prevalence data and global best-practice guidelines indicated that 27 states and UTs, including Chhattisgarh, should deworm children twice per year. Thus, the state prepared for biannual treatment round in August 2016 **(Annexure B).**

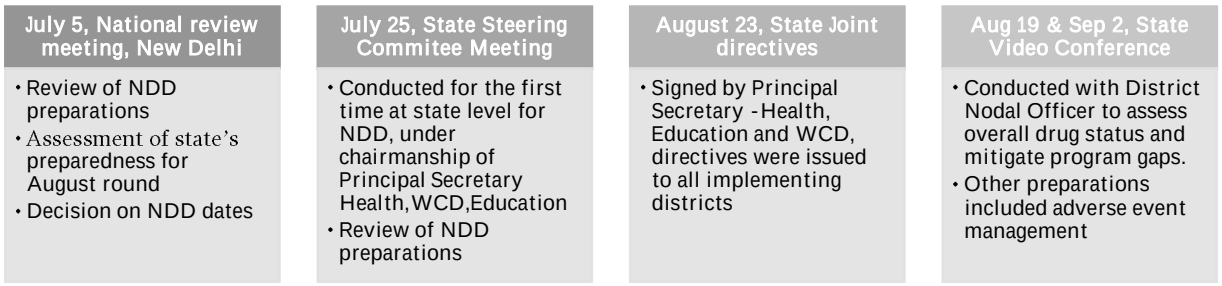
5 Prevalence mapping was led by the National Centre for Disease Control (NCDC) and partners

4. State Program Implementation

4.1 Policy and Advocacy

Successfully implementing a program of such scale required stakeholder collaboration at each administrative and implementation level. The Department of Health led coordination with the Departments of Education and Women & Child Development 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



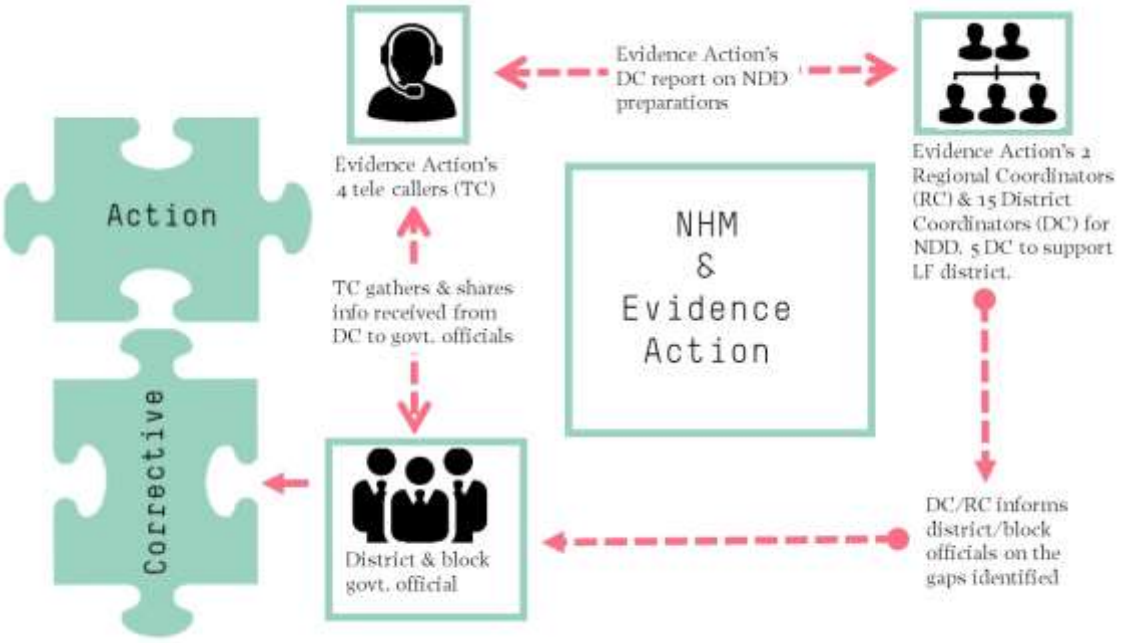
The Department of Health led enhanced engagement in planning for the August treatment round, with the first NDD Steering Committee Meeting held at state level in July, wherein the decision to implement NDD in the month of August was inked. Prior to the steering committee meeting, the state had already begun preparations for state level trainings and other cascade activities, given that the date initially suggested for NDD was August 10, 2016. At the meeting, the state government demonstrated a strong commitment towards maximising program outreach to all children aged 1-19 years, including children enrolled in polytechnics, vocational courses, or other non-traditional school settings **(Annexure C)**. After the meeting, based on the targets finalised for the round and the drug availability, the government decided to conduct NDD on August 31, 2016. With this all districts, including 7 LF endemic districts, launched into preparations for the program. However, with a continued delay in drug availability in 5 out of 20 districts where NDD was planned, the Department of Health took a decision in the month of August to implement NDD in only 15 of the 20 districts on August 31. These 15 districts conducted mop up day on September 7, 2016.

Prior to the NDD round, all 15 districts conducted District Coordination Committee Meetings (DCCM) under the chairmanship of District Collector/District officials during which stakeholders reviewed preparations for the program and clarified roles for improved inter-departmental coordination. Key decisions for program implementation were disseminated along with meeting minutes circulated in the 15 districts. Additionally, 76 Block Coordination Committee meetings were also observed across the 15 districts with participation of block level officials from stakeholder departments. The state referred to the NDD 2016 financial guidelines to plan budgets and implementation of activities.

4.2 Program Management

Evidence Action provided technical assistance through a state based team, including field-based regional coordinators and short-term hires such as district coordinators and tele-callers. The state team assisted with program planning and also coordinated with stakeholder departments to share real time updates on program implementation and facilitate corrective actions from the respective government departments. Figure 5 gives an overview of the information flow between the Evidence Action team and district or block officials.

Figure 5: Evidence Action's corrective action mechanism



4.3 Drug Procurement, Storage and Transportation

a) Drug Procurement: All school and preschool-age children were treated with a single albendazole tablet (400 mg) during NDD August 2016. The state planned to procure 77,28,332 albendazole tablets to cover all children aged 1-19 years across 20 districts of the state. In April 2016, the Department of Health had procured 41,80,000 albendazole tablets which were made available at regional warehouses and subsequently supplied to districts and blocks as part of regular supply for use in health centres instead of being retained at the block-level , for the NDD August round which resulted in shortage of albendazole tablet for the NDD August 2016. To assess the drug availability across districts, Evidence Action, along with the state's 104 Helpline,[6] made calls to blocks and ANM's . The state had approximately 64,06,685 total albendazole tablets available in regional, district, and block inventories, out of the required 77,28,332 tablets for observing NDD in 20 districts. To supply the remaining quantity of drugs, Department of Health made additional

6 Health Information Helpline (HIHL) is a health contact center that aims to reduce the minor ailment load on the public health system; in Chhattisgarh this helpline is managed by Piramal Swasthya healthcare.

procurement of 15,00,000 tablets through Chhattisgarh Medical Services Corporation (CGMSC); however, the supply could not be met on time which overall led to the decision from Department of Health to implement NDD in 15 of the initially planned 20 districts, where the drugs were available. The Department of Health conducted drug testing prior to distribution to ensure quality.

b) Drug Logistics and Distribution: The Department of Health managed the entire drug logistics and distribution at all levels. With support from Evidence Action, the state had developed district and block wise drug bundling and distribution plans to streamline distribution of drugs to schools and *anganwadis* **(Annexure D.1)**. The Department of Health ensured bundling of these NDD kits that included drugs and all program materials, such as training handouts, IEC materials, and reporting forms. The kits were distributed to health functionaries at the district level for onward distribution to Education and WCD functionaries at the block level training. To align drug distribution with block-level training in accordance with NDD operational guidelines, Evidence Action supported the department by tracking drug availability at district and lower levels, and providing timely updates to allow officials to undertake corrective actions.

c) Adverse Event Management: The state also set up an adverse event management system engaging *Rashtriya Bal Swasthya Karyakarm*[7] teams, to effectively respond to any adverse events in the field. Additionally, emergency helpline numbers such as 104 (Medical Health service) and 108 and 102 (ambulance service) were put on alert to facilitate appropriate emergency response action by coordinating medical assistance from the nearest primary health center. To provide guidance on functionaries' roles and responsibilities to handle and report adverse events, the training cascade provided focused and customized information at all administrative levels. 7384 severe adverse events were reported in the NDD August 2016 round.

4.4 Public Awareness and Community Sensitization

The state adapted and translated the NDD resource kit developed by Evidence Action for the Government of India, which is also available online[8]. IEC materials included in the kit were designed to increase community awareness on the benefits of deworming, and were disseminated based on the plan and target audiences specified by the NDD operational guidelines. For instance, the Department of Health printed posters for display in schools and *Anganwadis in* August 2016. This was essential as sensitization of children and families helps to build their trust toward deworming, alleviate worries related to adverse events, and leads to greater program acceptance and coverage.

[7] 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.

[8] http://nrhm.gov.in/nrhm-components/rmnch-a/child-health-immunization/national-deworming-day-august-2016.html

Figure 6: NDD 2016 IEC campaign activities

4.5 Training Cascade

As per NDD Operational Guidelines, a training cascade was implemented reaching from the state level to all participating districts, 77 clusters, and 2812 sub-centers between July 2and August 27, 2016. Evidence Action supported the state-level training, while NHM led the cascade.

Training Cascade: Through the cascade, the state trained 30996 teachers from government and government-aided schools, 3059 private school teachers, 34,333 AWWs, and 48896 *Mitanin*.[9] District and block level officials from all nodal departments implementing the program were also trained. The details on training dates have been annexed. **(Annexure E)**

Training Resources: Department of Health printed training resources including 40,000 handouts for schools, 35,000 handouts for *anganwadis,* and 47,000 leaflets for *Mitanin*. Working towards integrated distribution of these resources during trainings, Evidence Action supported in drafting the bundling plan and quantifying block requirements, enabling materials to be efficiently transported to all districts before trainings commenced. As the round was initially planned for implementation in 20 districts on August 10, the trainings at state and district level were held in July. After some of the districts had completed the trainings, the Department of Health sent a revised training schedule to districts, based on the drug delivery schedule at the block level. This lack of clarity and delay in communication of revised dates may have impacted the alignment between the distribution cascade and block level trainings. Evidence Action field coordinators facilitated district and block health officials to confirm the revised training schedules and further coordinate with block level officials for communication to schools and *anganwadis* to ensure trainings were completed before NDD.

[9] NDD coverage report submitted by state to GOI.

Training Reinforcement:

Evidence Action supported the reinforcement of key messages from the training sessions by delivering bulk SMS to the program functionaries, as shown in the table. In addition, Evidence Action sent approximately 800,000 SMS to district and block officials, frontline functionaries, *anganwadi* workers, and *Mitanins* for albendaozle distribution happening concurrently through the LF program.

Table 2:Details of text messages sent

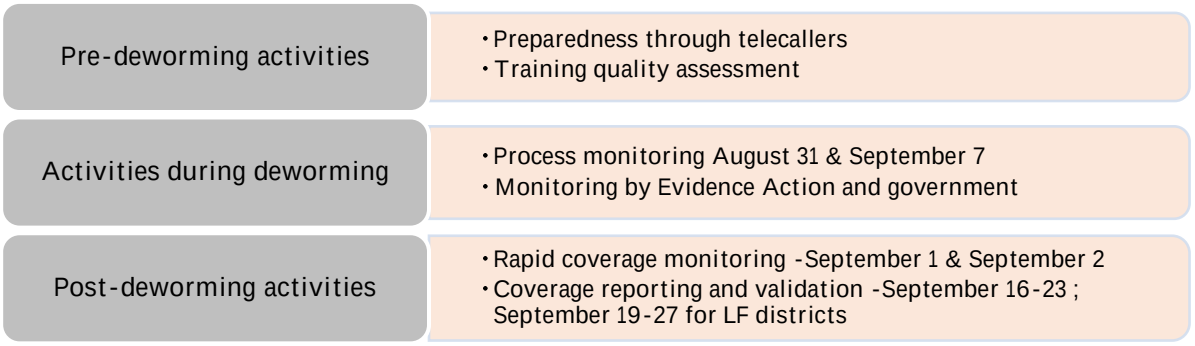
Department	Number of text messages sent
Health	6,73,978
Education	17,44,271
WCD	3,05,482
Total text messages	27,23,731

Training Support: For quality assurance of training sessions, Evidence Action administered pre- and post-tests to participants at state level orientation 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 checklist, Evidence Action's district coordinators attended and provided supportive supervision to all 15 district trainings in 81 block trainings to ascertain key messages were covered as per NDD guidelines. The detailed analysis is included in Annexure E.3.

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 program and providing feedback during its preparation stage, while activities are ongoing, and after completion of the program processes to guide mid-course correction and to improve performance based on the learnings.

Figure 8: Monitoring activities before, during, and after NDD



5.1 Process Monitoring

The aim of process monitoring is to assess the preparedness of schools, *anganwadis*, and health systems to implement mass deworming and the extent to which they have followed correct processes. Being prepared and adhering to best practices can ensure a high-quality deworming program. Evidence Action conducts process monitoring through telephone monitoring and cross verification, as well as physical verification through field visits.

Tele-calling and follow up actions: Evidence Action assessed program preparedness prior to NDD through tele-callers who tracked the status of training as well as the delivery and availability of drugs and IEC materials at the district, block, school and *anganwadi* levels.

Key activities in Process monitoring
I. Telephone Monitoring and Cross Verification
• 12,116 successful calls made during July-September 2016 • 3,212 calls to health functionaries like ANMs • 8,610 calls to government/government-aided schools including private schools • 8,092 calls to *anganwadi* workers across 107 blocks in 20 districts • 1,834 calls to district and block level officials
II. Field Monitoring Visits
• Total of 382 monitoring visits by Evidence Action state staff were made in selected schools and *anganwadis across* 15 NDD districts and additional 137 visits in 7 LF districts • NDD monitoring checklist given in GOI's NDD guideline was administered
III. Process Monitoring by Independent Monitors
• Process monitoring was conducted in 15 districts on NDD & Mop Up Day • 73 trained independent monitors from a third party agency, hired by Evidence Action, visited 259 schools and 132 *anganwadis* • Data was collected electronically using Tablet PC as per the tools developed by Evidence Action

The tele-callers used pre-designed and standardized electronic tracking sheets to outline issues identified and addressed during calls. These tracking sheets were shared with the state government regularly 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 level or lower.

Monitoring by independent agency: Evidence Action also assessed the processes and performance of the program by hiring an independent research agency 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.

Sample size: For process monitoring, a total of 259 randomly schools (government and private schools) and 132 nearby *anganwadis* were covered on NDD and mop-up day. For coverage validation, a total of 337 randomly selected schools and 343 randomly selected *anganwadis* were sampled. During LF survey, a total of 189 schools and 191 anganwadis were covered.

5.2 Assessing treatment coverage

Three activities carried out during the August 2016 round of NDD in Chhattisgarh were aimed at assessing treatment coverage. These included a rapid coverage assessment to estimate whether coverage was sufficient in potential problem areas, coverage validation in NDD districts to gauge the accuracy of reported treatment figures, and a school and *anganwadi* based survey in Lymphatic Filariasis districts to get insights on implementation and coverage of LF program .

Rapid Monitoring of Treatment Coverage: In partnership with the state government, Evidence Action conducted a rapid treatment coverage exercise using the Coverage Supervision Tool developed by the World Health Organization (WHO). This exercise was carried out during the August round of NDD to understand performance in areas with a history of poor coverage during the previous round in February, with the aim to develop an immediate action plan to improve coverage on mop-up day. The areas of focus included three districts of the state: Balod, Bastar and Bemetara. In each district, 20 children aged 1-19 years from 20 villages/enumeration areas were interviewed as per WHO guidelines[10]. The results revealed that two districts (Balod, Bastar) had good coverage, likely achieving or surpassing the WHO's recommended coverage target of 75%. However, one district had inadequate coverage (Bemetra) in terms of drugs received and compliance with treatment, likely falling below the 75% target. Thus, Evidence Action recommended that the state government conduct additional departmental coordination in advance of mop-up day to ensure that the children in Bemetra who had not received albendazole during NDD were reached on mop-up day. The rapid monitoring exercise is identified as simple to use, easy to administer, and is an effective concurrent monitoring tool to assess the performance status of the program.

School and *anganwadi* based survey in Lymphatic Filariasis (LF) districts: The broad objective of this school and *anganwadi* based survey in LF districts was to get insights on implementation of the LF program to help stakeholders, including the state health department and development partners, to understand the accuracy of reported coverage data.

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 (in three randomly selected classes) in each of the 337 sampled schools or 343 sampled *anganwadis.* Additional data was gathered by checking registers and reporting forms in the schools. 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 that are aggregated at the block and district levels.

5.3 Key Findings

Process monitoring findings highlight that 75% of schools and *anganwadis* received training for the recent round of NDD and around 96% of schools and 89% of *anganwadis* reported conducting deworming on the day of the monitors' visit. However, coverage validation demonstrated that 97% of schools and *anganwadis* had dewormed children during deworming or mop-up day.

Around 82% of schools and 73% of *anganwadis* received NDD posters and banners. However, integrated distribution of NDD kits[11] was comparatively lower for both schools (72%) and *anganwadis* (64%). Around 73% of schools and 51% of *anganwadis* received training reinforcement messages through SMS. Awareness of the causes of worm infection (Annexure F-Table 1), possible adverse events, and adverse event management practices (Annexure F-Table 5) was high among teachers and *anganwadi* workers. Nevertheless, only

[10]Rapid Monitoring of Treatment Coverage in Neglected Tropical Disease Programmes, Coverage Supervision Tool, World Health Organization Working Draft, February 2016.

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

31% of teachers and 26% of *anganwadi* workers reported the possibility of any adverse event among children after consuming albendazole tablets. Around half of the teachers and *anganwadi workers* were aware about processes for management of adverse events.

Around 75% of sampled private schools (N=20) reported being trained for NDD, which was consistent with 75% of government schools. Among private schools 100% had sufficient drugs for deworming, 55% received a banner/poster, and 80% received handouts and reporting forms. SMSs related to NDD were received by 40% of private schools teachers/principals.

Table 3 : Key Findings from Process Monitoring and Coverage Validation

Indicator	School (%)	*Anganwadi* (%)
Attended training for NDD	74.9	75.0
Schools/*anganwadis* conducting deworming	96.5	96.7*
Received SMS for current NDD round	73.4	50.8
Integrated Distribution of albendazole tablets and IEC materials	72.2	63.6
Adverse events reported	10.7	10.9
Copy of reporting form was available for verification	50.0	35.2
Followed correct recording protocol	80.6	58.5
Overall verification	0.74	0.69
Overall inflation rate	34.8	45.1
Children consumed tablet	99	NA
Estimated NDD coverage	67-86	54

* Reported reason for not conducted deworming at schools was drug unavailability, lack of information and already conducted deworming on one of the deworming days.

LF survey data showed that only 15% of schools and 22% of *anganwadis* received training in LF districts and around 20% of schools and *anganwadis* received SMS on training reinforcement. Around 63% schools and 54% of *anganwadis* did not receive albendazole and around 71% of schools and 57% of *anganwadi* did not receive DEC tablet. However, amongst those who received both DEC and albendazole, 98% of schools and 88% of *anganwadis* administered the drug. LF data also exhibited that only 39% of schools and 42% of *anganwadis* followed any protocol for recording the number of children treated. Out of these 37% of schools and 26% of *anganwadis* followed single/double tick recording protocols. There was sufficient albendazole available in 96% of schools and 91% of *anganwadis*, and DEC tablets were sufficient for 93% of schools and 94% of *anganwadis.* Data for school enrolled children revealed high inflation[12] (80%; verification factor[13] of 0.56) in reporting of treatment figures at schools however state level inflation rates for *anganwadis* was also high (148%; verification factor of 0.40) where children received both DEC and albendazole. Lastly, interviews with children indicated that 87% of them received the tablets and out of that, 59% consumed the tablets under supervision.

Coverage validation data revealed that 81% of schools and 59% of *anganwadis* followed correct protocols for recording the number of children dewormed. However, around 13% of schools and 27% 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 (75%) and did not have list of out-of-school children (67%), which they were instructed to gather in order to estimate the target for this group of children. Only 51% of schools and 35% of *anganwadis* had a copy of their reporting form post submission, though they were instructed to retain a copy as per NDD guidelines. Coverage validation data for enrolled

[12] Proportion of over reported dewormed children against total verified children in schools and *anganwadis*
[13] Ratio of recounted value of the dewormed children to the reported value.

children exhibited high inflation (35%; verification factor of 0.74) of treatment figures. Similarly, the state level inflation rates for *anganwadi* registered children, unregistered, and out-of-school children were 41%, 46% and 55 % respectively with corresponding verification factors of 0.71, 0.69 and 0.64[14] respectively. Nevertheless, interviews with children indicated that 97% of them received a deworming tablet, indicating that despite challenges in reporting and documentation of coverage data, almost all the children present on NDD or Mop Up Day received albendazole tablets.

Attempts were also made to understand the maximum number of enrolled children that could have been dewormed in the schools. School data suggests that on an average, we could verify 74% of treatment figures reported by schools. Applying this verification factor to government reported coverage, it is estimated that 67% children could have been dewormed in the schools. Further, coverage validation data showed that 97% of schools did deworming on either NDD or mop-up day and a maximum of 94% of the total school enrolled children were in attendance. Moreover, 97% children who were interviewed reported to have received the albendazole and 98% of them reported to consume it under supervision. Based on these factors, 86% of school enrolled children could have been dewormed in the schools. This indicates that NDD coverage most likely lies between 67-86 percent in the state of Chhattisgarh.

In the case of *anganwadis,* data suggests that on an average, we could verify 69% of treatment figures reported by *anganwadi* workers. Applying this verification factor on government reported coverage, we estimated that approximately 54% children could have been dewormed in the *anganwadis*. The detailed tables with process monitoring results and coverage validations are attached herewith **(Annexure F Appendix I).**

6. Recommendations

1. While children in 15 districts were dewormed during the August round of NDD, challenges with timely drug procurement and management resulted in 5 districts of the state being deprived of the deworming benefits. For all future rounds, timely drug procurement is crucial for the success of the program. Additionally, clarity needs to be provided to the drug warehouses to emphasize that drugs procured for NDD should not be used for any other purpose.
2. Key insights from the integration of NDD and LF program in Chhattisgarh conducted through the platforms of schools and *anganwadis* and community based drug administration, highlighted the need to strengthen training attendance with timely intimation to the functionaries. Best practices of NDD, i.e integrated distribution mechanism of drugs, IEC, and reporting forms through the training cascade may be explored for greater reach of resources to field implementers.
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 with updating the contact database of functionaries so that they can receive timely alerts on training schedules. As about 60% of teachers and *anganwadi* workers didn't know that open defecation contributes to worm infestation, suggest greater need to improve

the quality of training with focus on the importance of sharing prevention messages on deworming and dosage through the trainings/reinforcement messages as well as administering quality assurance tools like training monitoring.

4 As findings suggest that majority of *anganwadi* could not implement NDD due to lack of awareness on NDD suggest emphasis needs to be made on strengthening mass-media IEC strategy recommended under NDD operational guidelines which are targeting larger community for disseminating benefits of deworming.

5 Since this was the first round for the state to scale the private school engagement, participation was low and can be increased in the future. In order to broaden the reach of the program, it is critical to strengthen engagement with private schools in every aspect of future rounds. 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.

6 Although the findings from this round suggest an improvement in integrated distribution of drugs, IEC, and reporting forms through the training cascade, the state needs to continue the practice for further improvement to ensure that bundling and proper distribution is done at all levels down to the blocks, where the ultimate implementers receive materials.

7 Coverage validation data suggest that a greater emphasis on recording protocols during the training is likely to improve the quality of coverage data in the next round. 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.

7. List of Annexure and annexures

Annexure A	Report submitted by National Health Mission (NHM) Chhattisgarh 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

Annexure 1 : Deworming coverage Report submitted by National Health Mission (NHM) Chhattisgarh to Government of India

NATIONAL DEWORMING DAY AUGUST 2016

COMMON REPORTING FORMAT (For Block, District and State)

* Please fill in all the details below and write 'NA' wherever it is not applicable.

State: **Chhattisgarh**	District: **22**			Block : 120
No. of Govt/Govt. Aided schools	39314	No. of Govt/Govt aided schools reporting coverage		38851
No. of targeted private schools	4881	No. of private Schools reporting coverage		4408
No. of Anganwadi Center (AWCs):	39897	No. of AWCs reporting coverage		39522
No. of ASHAs oriented / trained on NDD (National Deworming Day)			48896	
No. of Govt/Govt aided schools who attended training on NDD			30996	
No. of private schools who attended training on NDD			3059	
No. of Anganwadi workers oriented/trained on NDD			34333	
Coverage Details				
		Girls	**Boys**	**Total**
Total children out of school		284055	249013	**(A) 533068**
Total children unregistered in AWCs		63104	72568	**(B) 135672**
Total children registered in AWCs		751667	763731	**(C) 1515398**
Total children enrolled in the schools	Govt. School	1702867	1703128	**(D) 3405995**
	Pvt. School	402902	432752	**(E) 835654**
Total number of children targeted				**(Z)=(A)+(B)+(C)+(D)+(E) 6425787**
No. of enrolled children (class 1-5) who were administered Albendazole on NDD and MUD (Mop Up Day)	Govt. School	697351	698675	**1(a) 1396026**
	Pvt. School	169988	176436	**1(b) 346424**
No. of enrolled children (class 6-12) who were administered Albendazole on NDD and MUD	Govt. School	861625	864639	**2(a) 1726264**
	Pvt. School	187581	200732	**2(b) 388313**
No. of registered children in AWCs (1-5 years) who were administered Albendazole on NDD and MUD		599941	602263	**(3) 1202204**
No. of unregistered children (1-5 years) who were administered Albendazole on NDD and MUD		50169	59751	**(4) 109920**
No. of out of school children (6-10 years) who were administered Albendazole on NDD and MUD		70090	64770	**(5) 134860**
No. of out of school adolescent (10-19 years)who were administered Albendazole on NDD and MUD		150265	120135	**(6) 270400**
GRAND TOTAL of number of children who were administered Albendazole (T=1a+1b+2a+2b+3+4+5+6)				**(T) 5574411**
Percent coverage		**(T) X 100 / (Z)= 86.75**		
No. of severe adverse events reported from schools and AWCs		7384		
Logistic Details: Block / District / State (tick as applicable)		**Govt. Schools**	**Private Schools**	**AWCs**
Total no of Albendazole tablets given		3807081	819493	1809025
Total no of Albendazole tablets administered		3146544	719299	1498305
Stock of Albendazole tablets left		452860	105193	293765
Feedback(if any)				

Annexure B: Letter from Government of India guiding states on treatment frequency for National Deworming Day

भानु प्रताप शर्मा
सचिव
B.P. SHARMA
Secretary

भारत सरकार
स्वास्थ्य एवं परिवार कल्याण विभाग
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
Government of India
Department of Health and Family Welfare
Ministry of Health & Family Welfare

D.O.No. Z-28020/237/2013-CH-II
Dated : 9th May, 2016

Dear Principal Secretary,

At the outset, I would like to congratulate all the States/UTs towards the unprecedented success of the National Deworming Day (NDD) 2016. During NDD 2016, we were able to cover more than 20 crore children with soil-transmitted helminths (STH) treatment across the country in a single day, evolving into world's largest single day public health program. It is also encouraging to note the contributions of all stakeholders in effective implementation of NDD 2016 especially the Department of School Education & Literacy and the Department of Women and Child Development.

As you are aware, Ministry of Health and Family Welfare had appointed NCDC as the nodal agency to conduct STH prevalence surveys across the country to formulate evidence based strategy for the National Deworming program. With the objective of developing a national STH prevalence map, STH Mapping has been completed in 19 States to date. Hence, it has been decided that the treatment frequency of deworming will be determined based on the combined information from STH prevalence survey results for 19 States, and for remaining States the predictive maps developed by the World Health Organization (WHO) will be used. Moreover, WHO treatment thresholds recommended for control of STH infections in school-age children will be applied.

Against this backdrop, it is recommended to perform annual deworming in the states/UTs of: Delhi, Chandigarh, Haryana, Himachal Pradesh, Jammu and Kashmir, Madhya Pradesh, Punjab, Rajasthan and Uttarakhand in view of their low STH prevalence. Bi-annual deworming is recommended in the remaining 27 states/UTs of India (statewise STH prevalence is enclosed).

All states will observe an annual round of deworming under the aegis of NDD on 10 February, 2017, while those states that are eligible for bi-annual round of deworming will take up this activity on 10th August, 2016.

कमरा न 156, ए--स्कंग, निर्माण भवन, नई दिल्ली--110011
Room No. 156, A-Wing, Nirman Bhawan, New Delhi-110011
Tele : (O) 011-23061863, Fax : 011-23061252, E-mail : secyhfw@gmail.com

Snapshot of STH prevalence in India

S.No.	States	STH prevalence (%)	Predictive Maps from WHO	Annual/Biannual
1.	A&N ISLANDS	NA	High	Bi Annual
2.	ANDHRA PRADESH	NA	High	Bi Annual
3.	ARUNACHAL PR.	NA	High	Bi Annual
4.	ASSAM	NA	High	Bi Annual
5.	BIHAR	35		Bi Annual
6.	CHANDIGARH	NA	Moderate	Annual
7.	CHHATTISGARH	73		Bi Annual
8.	D&N HAVELI	63.8		Bi Annual
9.	DAMAN & DIU	56.4		Bi Annual
10.	DELHI	15.80		Annual
11.	GOA	42.4		Bi Annual
12.	GUJARAT	31.8		Bi Annual
13.	HARYANA	NA	Moderate	Annual
14.	HIMACHAL PRADESH	NA	Moderate	Annual
15.	JAMMU & KASHMIR	NA	Moderate	Annual
16.	JHARKHAND	40.6		Bi Annual
17.	KARNATAKA	48.37		Bi Annual
18.	KERALA	47.4		Bi Annual
19.	LAKSHADWEEP	NA	High	Bi Annual
20.	MADHYA PRADESH	12.20		Annual
21.	MAHARASHTRA	27.55		Bi Annual
22.	MANIPUR	NA	High	Bi Annual
23.	MEGHALAYA	NA	High	Bi Annual
24.	MIZORAM	NA	High	Bi Annual
25.	NAGALAND	NA	High	Bi Annual
26.	ODISHA	36		Bi Annual
27.	PONDICHERRY	NA	High	Bi Annual
28.	PUNJAB	NA	Moderate	Annual
29.	RAJASTHAN	21.10		Annual
30.	SIKKIM	83		Bi Annual
31.	TAMIL NADU	NA	High	Bi Annual
32.	TELANGANA	59.6		Bi Annual
33.	TRIPURA	43		Bi Annual
34.	UTTAR PRADESH	75.6		Bi Annual
35.	UTTARAKHAND	NA	Moderate	Annual
36.	WEST BENGAL	42		Bi Annual

Annexure C Joint letter signed by Department of Health, Education, technical Education and Women and Child Development conforming dates of NDD

संचालनालय स्वास्थ्य सेवाएं
तृतीय तल, इन्द्रावती भवन, नया रायपुर छ0ग0

क्रमांक/डी.एम.एस./NDD/2016/236 रायपुर दिनांक 23/08/2016

प्रति,

1) मुख्य चिकित्सा एवं स्वास्थ्य अधिकारी
जिला – बस्तर, बीजापुर, दंतेवाड़ा, कोण्डागांव, कवर्धा, कांकेर, कोरिया, कोरबा, नारायणपुर, राजनांदगांव, सुकमा, जांजगीर–चांपा, बालोद, बेमेतरा, दुर्ग, जशपुर, रायपुर, बलौदाबाजार, गरियाबंद एवं महासमुंद छत्तीसगढ़

2) जिला कार्यक्रम अधिकारी
महिला एवं बाल विकास विभाग

3) जिला शिक्षा अधिकारी,
शिक्षा विभाग,

4) प्राचार्य/संस्था प्रमुख
तकनीकी शिक्षण संस्थाएं

विषय– 31 अगस्त 2016 एवं मॉप अप दिवस 7 सितम्बर 2016 को 1 से 19 वर्षीय बच्चों में कृमि मुक्ति हेतु 20 जिलों में राष्ट्रीय कृमि मुक्ति दिवस (NDD अगस्त राउंड) का आयोजन किये जाने के संबंध में।

संदर्भ–राष्ट्रीय कृमि मुक्ति दिवस के संबंध में भारत सरकार द्वारा जारी पत्र क्रमांक Z-28020/237/2013–CH-II दिनांक 9 मई 2016

विषयान्तर्गत लेख है कि राज्य में राष्ट्रीय कृमिमुक्ति दिवस का आयोजन भारत सरकार के दिशा निर्देशानुसार तथा राज्य स्टीयरिंग समिति बैठक अनुसार एक निश्चित दिवस पर (Fix Day Approach) 31 अगस्त 2016 को 20 जिलों के आंगनबाड़ी केन्द्रों एवं सरकारीय/सरकारीय अनुदान प्राप्त शालाओं केन्द्रीय विद्यालय/नवोदय विद्यालय/मदरसा /निजी स्कूलों/अनुदान प्राप्त निजी स्कूलों/पॉलिटेक्निक इंस्टिट्यूट आई टी आई तथा कॉलेज के माध्यम से 1 से 19 वर्षीय बच्चों का कृमिनाशक दवा दिया जायेगा. राज्य द्वारा राष्ट्रीय कृमिमुक्ति दिवस का आयोजन 31 अगस्त 2016 एवं मॉप अप दिवस 7 सितम्बर 2016को किये जाने हेतु निर्णय किया गया है। जिससे सभी बच्चों के सम्पूर्ण स्वास्थ्य का पोषण स्तर, शैक्षिक विकास स्तर तथा शालाओं में उपस्थिति में सुधार हो सके। कार्यक्रम में 19 वर्ष तक के छात्रों को भी सम्मिलित किया जावेगा।

राष्ट्रीय कृमिमुक्ति दिवस 2016 के सफल आयोजन हेतु जिले के विभागीय अमलों को प्रशिक्षण, तथा क्रियान्वयन हेतु समन्वय सुनिश्चित करावें।

संचालक स्वास्थ्य सेवाएं छत्तीसगढ़	संचालक महिला एवं बाल विकास विभाग छत्तीसगढ़	मिशन संचालक लोक शिक्षण छत्तीसगढ़	संचालक तकनीकी शिक्षा छत्तीसगढ़

Annexure D.1: Drug bundling plan for block wise requirement of albendazole

Block wise Drug bundling Plan for National Deworming Day 2016					
Name of the Districts	Name of the Blocks	Drugs for Anganwadi centres	Drugs for schools	Drugs for Polytechniques , ITI and college students upto 19 years	Total Albendazole 400 mg tablets required
Balod	Balod	18607	26901	14155	59663
	Dondi	30183	30491	28311	88985
	Dondi Lohara	33961	42037	29311	105309
	Gunderdehi	28366	41731	22002	92100
	Gurur	22304	29434	18079	69817
Balodabazar	Baloda Bazar	35730	69967	28186	133883
	Bhatapara	24205	52112	19800	96118
	Bilaigarh	28772	56823	23683	109278
	Kasdol	34403	56523	27410	118336
	Pallari	25105	51815	19490	96410
	Simga	25691	52988	18636	97314
Bastar	Bakawand	17096	33441	14207	64744
	Bastanar	6647	9212	5385	21245
	Bastar	37126	92493	26111	155730
	Darbha	11295	14210	7369	32874
	Lohandiguda	11288	14861	9708	35857
	Tokapal	8707	16267	6519	31493
Bemetara	Bemetara	26810	57763	19864	104437
	Berla	24849	44543	23441	92833
	Nawagarh	30285	53401	23139	106844
	Saja	23600	48101	23253	94954
Bijapur	Bhairamgarh	12590	19398	7736	39723
	Bhopal patnam	4779	10634	4610	20023
	Bijapur	8944	15673	4743	29361
	Usoor	8911	11277	6672	26860
Dantewada	Dantewada	10653	19519	7799	37970
	Geedam	9229	19844	6850	35923
	Katekalyan	6079	7196	5138	18413
	Kuakonda	7611	12049	7087	26747
Durg	Dhamdha	24653	61233	15199	101085
	Durg	53474	224502	31026	309002
	Patan	19593	63716	20221	103530
Gariaband	Chhura	33706	27257	28300	89263
	Deobhog	23462	19252	15637	58351
	Fingeswar	32553	38213	26260	97026

	Gariaband	23642	20705	18612	62959
	Mainpur	33997	24310	25665	83972
Janjgir	Akaltara	19708	44494	15828	80030
	Baloda	15915	40919	13931	70766
	Bamhnidih	19044	45871	13408	78323
	Dabhara	12841	35229	13604	61674
	Jaijaipur	20831	46971	14847	82649
	Malkharoda	14938	36947	13670	65555
	Nawagarh	29666	77903	24658	132227
	Pamgarh	21089	52274	16678	90042
	Sakti	14712	35490	13697	63899
Jashpur	Bagicha	21063	36739	10813	68615
	Duldula	5308	10568	4147	20023
	Jashpur	9256	25796	6470	41522
	Kansabel	7497	16308	5188	28993
	Kunkuri	8273	24401	10647	43321
	Manora	7988	15112	7902	31003
	Patthalgaon	19124	44096	9833	73052
	Farsabahar	11501	21919	9727	43147
Kanker	Antagarh	9145	18398	7866	35409
	Bhanupratappur	8637	22356	6872	37864
	Charama	8222	21277	6024	35522
	Durgukondal	8126	15111	7934	31191
	Kanker	9064	26298	7837	43199
	Koylibeda	21360	40429	15030	76819
	Narharpur	9083	23307	8363	40753
Kawardha	Bodla	25395	47599	21174	94168
	Kawardha	25698	61350	16842	103890
	Lohara	19216	36184	10830	66230
	Pandaria	34915	66179	22279	123373
Kondagaon	Badersjpur	8103	21005	5941	35049
	Keshkal	9115	21685	6101	36901
	Kondagaon	26869	47725	21969	96563
	Makadi	11301	24644	6984	42930
	Pharasgaon	11563	25500	8028	45091
Korba	Pali	26888	47966	22706	97560
	Kartala	17390	34454	14853	66697
	Katghora	15307	65087	10599	90992
	Korba	39779	79029	22628	141436
	Pondi-uprora	28228	41329	28237	97794
Koria	Baikunthpur	18433	45148	14219	77799
	Bharatpur	12510	22002	9550	44062
	Khadgawan	18227	37415	14646	70288
	Manendragarh	14949	35693	10100	60742

	Sonhat	6679	12206	5614	24499
Mahasamund	Bagbahara	21877	46828	17756	86460
	Basna	18440	38013	12178	68631
	Mahasamund	27372	63307	19905	110584
	Pithora	21021	49581	17398	87999
	Saraipali	16465	42828	16323	75616
Narayanpur	Narayanpur	12232	27001	8481	47714
	Orcha	5435	7317	4723	17475
Raipur	Abhanpur	23471	60801	15807	100079
	Aarang	31738	82476	20113	134327
	Dharsiwa	79534	309364	42086	430984
	Tilda	22376	54181	12724	89280
Rajnandgaon	Chhuria	17799	39175	15281	72255
	Chouki	10274	25376	12734	48384
	Chhuikhadan	21027	42838	13569	77434
	Dongarhgaon	11202	32219	10539	53960
	Dongargarh	19410	48486	14359	82255
	Khairagarh	29118	49267	13261	91646
	Manpur	10836	19576	13788	44200
	Mohala	8954	18674	11461	39089
	Rajnandgaon	26140	82714	21253	130107
Sukma	Chhindgarh	11503	15767	7483	34753
	Konta	14004	14170	7409	35582
	Sukma	7588	14626	5211	27425
	Grand Total	**1989677**	**4224890**	**1513765**	**7728333**

Annexure E.1: Letter of training cascade for NDD

संचालनालय स्वास्थ्य सेवाएं
तृतीय तल, इन्द्रावती भवन, नया रायपुर छ0ग0

क्रमांक/डी.एच.एस./NDD/2016/228 रायपुर दिनांक /2./08/ 2016

प्रति,

मुख्य चिकित्सा एवंस्वास्थ्य अधिकारी,
जिला – बस्तर, बीजापुर, दंतेवाड़ा, कोण्डागांव, कवर्धा, कांकेर, कोरिया, कोरबा,
नारायणपुर, राजनांदगांव, सुकमा, जांजगीर–चांपा, बालोद, बेमेतरा, दुर्ग, जशपुर
रायपुर,बलौदाबाजार,गरियाबंद, महासमुंद

विषय : **31 अगस्त 2016 को 1 से 19 वर्षीय बच्चों में कृमिमुक्ति हेतु 20 जिलों में राष्ट्रीय कृमिमुक्ति दिवस (NDD2016) प्रशिक्षण का आयोजन किये जाने के संबंध में।**

संदर्भ: राष्ट्रीय कृमि मुक्ति दिवस के संबंध में भारत सरकार द्वारा जारी पत्र क्र. Z-28020/237/2013-CH-II, दिनांक 9 मई 2016।

राज्य में राष्ट्रीय कृमिमुक्ति दिवस का आयोजन भारत सरकार के दिशा–निर्देशानुसार तथा राज्य स्टीयरिंग समिति बैठक अनुसारएक निश्चित दिवस पर (Fix Day Approach) 31 अगस्त 2016 को 20 जिलों के आंगनवाड़ी केन्द्रों एवं शासकीय,/शासकीय अनुदान प्राप्त शालाओं,/केन्द्रीय विद्यालय,/नवोदय विद्यालय,/मदरसा,/निजी स्कूलों,/अनुदान प्राप्त निजी स्कूलों,/पॉलिटेक्निक इंस्टिट्यूट,/आई टी आई तथा कॉलेज (प्रथम वर्ष) के माध्यम से 1 से 19 वर्षीय बच्चों का कृमिनाशक किया जावेगा । राज्य द्वारा राष्ट्रीय कृमिमुक्ति दिवस का आयोजन **31 अगस्त 2016 एवं मॉप अप दिवस 7 सितम्बर 2016** तय किया गया है।

इस संदर्भ में प्रशिक्षण निम्नानुसार किया जावे :–

क्र.	प्रशिक्षण स्तर	विवरण (प्रशिक्षार्थी)	निर्धारित समय–सीमा	प्रशिक्षक	दायित्व
1	राज्य	जिला नोडल अधिकारी 102, 108 एवं 104 प्रतिनिधि।	2 जुलाई 2016	राज्य नोडल अधिकारी	राज्य नोडल अधिकारी
2	जिला	तीनों विभागों के जिला स्तरीय प्रभारी अधिकारी एवं विकासखण्ड हेतु मास्टर ट्रेनर तीनों विभागों के विकासखण्ड स्तरीय प्रभारी अधिकारी	16–20 अगस्त 2016	जिला नोडल अधिकारी	जिला नोडल अधिकारी
3	विकासखण्ड /सी एच सी/बी. आर सी.	प्रत्येक सी आर सी केंद्र से प्रभारी शिक्षक विकासखंड/ सी एच सी स्तर पर संचालित शासकीय/ अर्धशासकीय /अनुदान प्राप्त प्राईवेट विद्यालय/ प्राईवेट विद्यालय तथा केन्द्रीय विद्यालय/नवोदय विद्यालय/ मदरसा से एक हेडमास्टर/ प्रिंशपल/ शिक्षक का प्रशिक्षण * विकासखंड मुख्यालय में संचालित संस्थाओं को (आई ई सी, दवाईया, ब्रपत्र) खंडचिकित्सा अधिकारी द्वारा की जावेगी।	22–25 अगस्त 2016	खंडचिकित्सा अधिकारी/ विकासखण्ड मास्टर ट्रेनर	खंडचिकित्सा अधिकारी

4	सेक्टर स्तर पर प्राथमिक स्वस्थ्य केंद्र / सी आर सी)	प्राथमिक स्वस्थ्य केंद्र / सी आर सी स्तर पर संचालित स्कूलों सी एक हेड मास्टर / शिक्षक एवम सुपरवाइजर का प्रशिक्षण **(आई ई सी, दवाईया, प्रपत्र का वितरण प्रशिक्षण दिनांकको किया जायेगा)**	25–30 अगस्त 2016	सेक्टर चिकित्सा अधिकारी / डा मीण चिकित्सा सहायक / शिक्षक (मास्टर ट्रेनर)	सेक्टर चिकित्सा अधिकारी
5	उप स्वास्थ्य केंद्र स्तर पर	मितानिन, आंगनवाडी कार्यकर्ता एवं ए.एन.एम. का प्रशिक्षण **(आई ई सी, दवाईया, प्रपत्र का वितरण प्रशिक्षण दिनांक को किया जायेगा)**	25–27 अगस्त 2016	ग्रामीण चिकित्सा सहायक / सुपरवाइजर	ग्रामीण चिकित्सा सहायक

संचालक
स्वास्थ्य सेवाएं
छत्तीसगढ़

क्रमांक / डी.एच.एस. / NDD / 2016 / 2293 रायपुर दिनांक 12- / 08 / 2016

प्रतिलिपि :–

1. सचिव, छत्तीसगढ़ शासन, स्वास्थ्य एवं परिवार कल्याण विभाग, मंत्रालय महानदी भवन नया रायपुर छ.ग. को सूचनार्थ।
2. आयुक्त, स्वास्थ्य सेवायें तृतीय तल इन्द्रावती भवन नया रायपुर छ.ग. को सूचनार्थ।
3. मिशन संचालक राष्ट्रीय स्वास्थ्य मिशन सेक्टर 27 नया रायपुर छ.ग.।
4. राज्य नोडल अधिकारी, राष्ट्रीय स्वास्थ्य मिशन सेक्टर 27 नया रायपुर छ.ग को सूचनार्थ एवं आवश्यक कार्यवाही हेतु।
5. कार्यकारी संचालक, राज्य स्वास्थ्य संसाधन केन्द्र, कालीबाड़ी, रायपुर छ.ग.।
6. संभागीय संयुक्त संचालक, स्वास्थ्य सेवाएं संभाग – सभी छ.ग.।
7. राज्य वित्त प्रबंधक, राष्ट्रीय स्वास्थ्य मिशन सेक्टर 27 नया रायपुर छ.ग.।
8. उप संचालक (IEC) राष्ट्रीय स्वास्थ्य मिशन सेक्टर 27 नया रायपुर छ.ग.।
9. प्रबंधक, 108, 104 एवं 102 रायपुर छ.ग.।
10. राज्य कार्यक्रम प्रबंधक, एविडेन्स एक्शन, रायपुर छ.ग.।
11. कार्यालयीन प्रति।

संचालक
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छत्तीसगढ़

Annexure E.2 Photos of District and block level training

Annexure E.3: Training Quality Assurance

Quality Assurance for Training

To assess the quality of training imparted at all levels and knowledge gain post trainings, training monitoring assessment and pre-post tests were conducted with support from Evidence Action filed based teams in Chhattisgarh. Training quality assessment was conducted across all district level trainings and sampled block level trainings which were attended by district coordinators to ensure that key messages on deworming are shared during training. Pre-post analysis of knowledge gain during state level trainings was conducted are explained below in the report. Based on the analysis of results for district level pre-post trainings and other criteria like absence of blocks in district level trainings, sampled block level trainings were selected for training assessment.

Participant's Description				
STATE	TOTAL PARTICIPANTS	PRE-TEST PARTICIPANTS	POST-TEST PARTICIPANTS	COMMON PARTICIPANTS IN BOTH
Chhattisgarh	27	27	27	27

There has been substantial knowledge gain by the participants during trainings. Following are the findings from the post test. Districts with incorrect responses has been mentioned alongside to reinforce correct messaging at the next level of cascade:

- 26 out of 27 participants had correct knowledge about mop-up day (District Durg)

- 26 out of 27 participants had correct knowledge about doses of Albendazole (400mg) to be administered to children in schools (District Raipur)
- All the 27 participants were aware about the recording / reporting the information of dewormed children on NDD
- 24 out of 27 participants did not have knowledge about whether a child should be give Albendazole in case of sickness or any other medication (Districts Kondagaon, Kanker & Sukma)
- 2 out of 27 Participants were relatively less aware about role of Mitanni in National Deworming program (Districts Rajnandgaon, Kabirdham)
- 2 out of 27 participants were not aware about retention of one copy of the reporting form (Districts Dantewada & Narayanpur)
- 4 out of 27 participants were not aware of reporting dates for submission of reporting form from ANM to BMO (Districts Kanker, Dantewada, Durg & Raipur), about 3 out 27 participants did not have the correct knowledge about BMO to CMHO (District Kanker, Bilaspur and Durg).
- Submission date of district common reporting to state nodal was responded incorrectly by 10 out of 27 participants (Districts Rajnandgaon, Kanker, Janjgir Champa, Dantewada, Gariyaband, Bastar, Narayanpur, Sarguja, Durg & Raipur)

Following is a glimpse on the findings and reinforcements undertaken based on training monitoring data from district and block levels:

- All trainers had flipcharts available with them and in majority of training (99%) these were used.
- Information regarding role of Mitanins to mobilize out of school children to anganwadi centres before NDD was reinforced at all block level trainings.
- In 95% of district trainings, information on reporting dates at all levels was reinforced to participants.
- Information regarding reporting coverage through NDD App was reinforced in 90% of district trainings.

Annexure F: Independent Monitoring findings

Table PM1: Training, awareness and source of information about National Deworming Day among respondents (teacher/headmaster/*anganwadi* worker), August, 2016

Indicators	School			*Anganwadi*		
	D[15]	N[16]	%	D	N	%
Attended training for current round of NDD	259	194	74.9	132	99	75.0
Reasons for not attending official training						
Location was too far away	65	3	4.6	33	1	3.0
Did not know the date/timings/venue	65	35	53.9	33	18	54.6
Busy in other official/personal work	65	11	16.9	33	8	24.2
Attended deworming training in the past	65	11	16.9	33	5	15.2
Not necessary	65	5	7.7	33	2	6.1

[15] Denominator of indicator.
[16] Numerator of indicator.

No incentives/no financial support	65	3	4.6	33	1	3.0
Trained teacher provided training to						
All other teachers	194	115	59.2	NA	NA	NA
Few teachers	194	45	23.2	NA	NA	NA
No (himself/herself only teacher)	194	15	9.7	NA	NA	NA
No, did not train other teachers	194	19	7.7	NA	NA	NA
Awareness about the ways a child can get worm infection	259	226	87.3	132	113	85.6
Different ways a child can get worm infection						
Not using sanitary latrine	226	136	57.5	113	59	52.2
Having unclean surroundings	226	169	74.8	113	95	84.1
Consume vegetables and fruits without washing	226	170	75.2	113	75	66.4
Having uncovered food and drinking dirty water	226	155	68.6	113	81	71.7
Having long and dirty nails	226	158	69.9	113	84	74.3
Moving in bare feet	226	156	69.0	113	81	71.7
Having food without washing hands	226	175	77.4	113	86	76.1
Not washing hands after using toilets	226	137	60.6	113	69	61.1
Awareness about all the possible ways a child can get worm infection[17]	259	73	28.2	132	34	25.8
Perceive that health education should be provided to children	259	255	98.5	132	129	97.7
Knowledge about correct dose of albendazole tablet						
1-2 years of children	NA	NA	NA	132	124	93.9
6-19 years of children	259	255	98.5	132	130	98.5
Awareness about non-administration of albendazole tablet to sick child						
Will give albendazole tablet to the child	259	4	4.3	132	124	5.3
Will not give the albendazole tablet to the child	259	247	95.7	132	130	94.7
Awareness about consuming albendazole tablet						
Chew before swallowing	259	255	98.5	132	129	97.7
Swallow it directly	259	4	1.5	132	3	2.3
Awareness about consuming albendazole in school/*anganwadi*	259	246	95.0	132	125	94.7
Awareness about the last date for submitting the reporting form	259	126	48.7	132	65	49.2
Aware that completed reporting form should be submitted to ANM	259	201	77.6	132	92	69.7
Awareness to retain a copy of the reporting form post submission	259	238	91.9	132	120	90.9
Source of information about current NDD round						
Television	259	41	15.8	132	15	11.4
Radio	259	20	7.7	132	10	7.6
Newspaper	259	41	15.8	132	8	6.1
Banner	259	72	27.8	132	32	24.2
SMS	259	148	57.1	132	52	39.4

[17] Includes those who were aware that a child can get worm infection if she/he does not use sanitary latrine, have unclean surroundings, consume vegetable and fruits without washing, have uncovered food and drinking dirty water, have long and dirty nails, moves in bare fee, have food without washing hands and not washing hands after using toilets.

Other school/teacher/*anganwadi* worker	259	58	22.4	132	55	41.7
Training	259	164	63.3	132	73	55.3
Receive SMS for current NDD round	259	190	73.4	132	67	50.8

Table PM2: Deworming activity, availability of albendazole tablet and list of unregister out-of-school children, August, 2016

Indicators	School			*Anganwadi*		
	D	N	%	D	N	%
Albendazole tablet administered on the day of visit						
Yes, ongoing	259	77	29.7	132	38	28.8
Yes, already done	259	100	38.6	132	54	40.9
Yes, after sometime	259	71	27.4	132	25	18.9
No, will not administer today	259	11	4.3	132	15	11.4
Schools/*anganwadis* conducted deworming on either of the day	259	253	97.7	132	120	90.9
Schools/*anganwadis* conducted deworming on NDD[18]	110	106	96.4	57	53	93.0
Schools/*anganwadis* conducted deworming on mop-up day[19]	149	142	95.3	75	64	85.3
Reasons for not conducting deworming						
No information	11	1	9.1	15	6	40.0
Albendazole tablet not received	11	3	27.3	15	5	33.3
Apprehension of adverse events	11	0	0.0	15	0	0.0
Already dewormed all children on deworming day[20]	11	5	45.5	15	4	26.7
Others[21]	11	2	18.2	15	0	0.0
***Anganwadis* having list of unregistered/out-of-school children**	NA	NA	NA	132	57	43.2
Out-of-school children given albendazole tablet	NA	NA	NA	117	90	76.9
Unregistered children given albendazole tablet	NA	NA	NA	117	85	72.7
Sufficient quantity of albendazole tablet[22]	253	244	96.4	124	103	83.1

Table PM3: Integrated distribution of albendazole tablets and IEC materials, August, 2016

Items	Schools					*Anganwadi*		
	Received (N=259)	D*	Received in training	Verified	Received (N=132)	D*	Received in training	Verified
Albendazole tablet	97.7 (253)	253	92.9 (235)	99.6 (252)	93.9 (124)	124	96.0 (119)	100.0 (124)
Poster/banner	81.9 (212)	212	93.9 (199)	98.1 (208)	72.7 (96)	96	93.8 (90)	96.9 (93)
Handouts/ reporting form	87.6 (227)	227	94.7 (215)	96.9 (220)	79.6 (105)	105	93.3 (98)	98.1 (103)

[18]Based on the samples visited on National Deworming Day.
[19]Based on the samples visited on mop-up day.
[20]Based on the samples that did not conduct deworming on mop-up day.
[21]School will administer the tablet after mid-day meal and one private school waiting for the verification of MO on albendazole tablet.
22 This indicator is based on the sample that received albendazole tablet.

Others[23]	5.0 (13)	13	92.3 (12)	100.0 (13)	4.6 (6)	6	83.3 (5)	66.7 (4)
Received all material	78.0 (202)	202	92.6 (202)	96.0 (202)	67.4 (89)	89	94.4 (84)	98.9 (88)
Integrated distribution[24]	72.2 (187)				63.6 (84)			

Note: The denominator for item "Received" is 259 for schools and 132 for *anganwadis*.
Numerators for "Received in training" and "Verified" are given in parentheses.
*Indicates common denominator for "Received in training" and "Verified"

Table PM4: Implementation of deworming activity and observation of monitor's, August, 2016

Indicators	Schools			*Anganwadi*		
	D	N	%	D	N	%
Deworming activity was taking place	259	96	37.1	132	49	37.1
Albendazole tablet were administered by						
Teacher/headmaster	77	72	93.5	NA	NA	NA
Anganwadi worker	77	1	1.3	38	33	86.8
Mitanin	77	1	1.3	38	1	2.6
ANM	77	3	3.9	38	1	2.6
Followed any recording protocol	177	161	91.0	92	67	72.8
Protocol followed						
Putting single/double tick	161	133	82.6	67	50	74.6
Put different symbols	161	5	3.1	67	4	6.0
Prepare the separate list for dewormed	161	23	14.3	67	13	19.4
Visibility of poster/banner during NDD/MUD	212	157	74.1	96	68	70.8

Table PM5: Adverse event knowledge and management among respondents, August, 2016

Indicators	Schools			*Anganwadi*		
	D	N	%	D	N	%
Opinion of occurrence of an adverse event after taking albendazole tablet	259	81	31.3	132	34	25.8
Opinion of occurrence of possible adverse events						
Mild abdominal pain	81	69	85.2	34	30	88.2
Nausea	81	49	60.5	34	18	52.9
Vomiting	81	60	74.1	34	26	76.5
Diarrhea	81	24	29.6	34	13	38.2
Fatigue	81	26	32.1	34	9	26.5
All possible adverse event[25]	259	13	5.0	132	6	4.6
Awareness about mild adverse event management						

[23]Includes pamphlet
[24] Integrated distribution of NDD kits includes albendazole tablet , banner/poster and handout-reporting forms and provided to schools and AWC during the trainings at block or PHC level
[25]Includes those who have knowledge that a mild abdominal pain and nausea and vomiting and diarrhea and fatigue can be reported by a child after taking albendazole tablet

Make the child lie down in open and shade/shaded place	259	198	76.5	132	93	70.5
Give ORS/water	259	138	53.3	132	75	56.8
Observe the child at least for 2 hours in the school	259	110	42.5	132	61	46.2
Don't know/don't remember	259	27	10.4	132	12	9.1
Awareness about sever adverse event management						
Call PHC or emergency number	259	201	77.6	132	97	73.5
Take the child to the hospital /call doctor to school	259	160	61.8	132	82	62.1
Don't know/don't remember	259	3	1.2	132	5	3.8
Occurrence of **cases of any adverse event**	177	19	10.7	92	10	10.9
Available contact numbers of the nearest ANM or MO-PHC	259	198	76.5	132	111	84.1

Table PM6: Selected Indicators of Process Monitoring in Private Schools, August, 2016

Indicators[26]	D	N	%
Attended training for current round of NDD	20	15	75.0
Received albendazole tablet	20	18	90.0
Sufficient quantity of albendazole tablet	18	18	100.0
Received poster/banner	20	11	55.0
Received handouts/ reporting form	20	16	80.0
Received SMS for current NDD round	20	8	40.0
Albendazole administered to children	20	16	80.0
Reasons for not conducting deworming			
No information	4	1	25.0
Albendazole tablet not received	4	1	25.0
Already dewormed all children on deworming day(based on mop-up day sample)	4	1	25.0
Others[27]	4	1	25.0
Albendazole tablet administered to children by teacher/headmaster[28]	4	4	100.0
Perceive that health education should be provided t o children	20	20	100.0
Knowledge about correct dose of albendazole tablet	20	20	100.0
Awareness about non-administration of albendazole tablet to sick child	20	17	85.0
Opinion of occurrence of an adverse event after taking albendazole tablet	20	4	20.0
Opinion of occurrence of possible adverse events			

[26]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
[27]School informed that they will administer albendazole tablet on September 7, 2016 after the verification with MO.
[28] This indicator is based on samples where deworming was ongoing.

Mild abdominal pain	4	4	100.0
Nausea	4	2	50.0
Vomiting	4	3	75.0
Diarrhea	4	1	25.0
Fatigue	4	2	50.0
Occurrence of cases of any adverse event	20	2	20.0
Awareness about mild adverse event management			
Let the child rest in an open and shaded place	20	13	65.0
Provide clean water to drink/ORS	20	4	20.0
Contact the ANM/nearby PHC	20	8	40.0
Available contact numbers of the nearest ANM or MO-PHC	20	15	75.0
Followed correct reporting protocol	9	9	77.8

Table CV1: Findings from School and *Anganwadi* Coverage Validation Data

Indicators[29]		School		*Anganwadi*		
	D	N	%	D	N	%
Conducted deworming [30]	337	325	96.5	343	332	96.7
Day of albendazole administration[31]						
National Deworming Day	326	308	94.6	331	299	90.2
Mop-up day	326	239	73.3	331	226	68.3
Between NDD and mop-up day	326	13	4.0	331	16	4.7
Reasons for not conducting deworming						
No information	11	9	81.8	12	7	64.2
Drugs not received	11	2	18.2	12	3	23.1
Apprehension of adverse events	11	0	0.0	12	1	12.7
Albendazole left after deworming	326	196	60.2	331	163	49.2
Number of albendazole left						
Less than 50	199	182	91.4	167	161	96.3
50-100	199	14	7.2	167	5	3.3
More than 100	199	3	1.4	167	1	0.4

[29] Weighted percentages and numbers are presented against each indicator in all the coverage validation tables. In some indicators denominators may vary because of this.

[30] Schools and *anganwadis* that conducted deworming on during NDD or mop-up day

[31] Total percentage may add to more than 100 as multiple responses are allowed.

Copy of reporting form was available for verification	326	163	50.0	331	117	35.2
Reasons for non-availability of copy of reporting form						
Did not received	167	15	8.8	222	29	13.0
Submitted to ANM	167	138	82.8	222	173	78.0
Unable to locate	167	3	2.0	222	7	3.0
Others[32]	167	11	6.5	222	13	5.9
***Anganwadis* having list of unregistered children**	NA	NA	NA	331	83	24.9
***Anganwadis* having list of out-of-school children**	NA	NA	NA	331	107	32.5
Reported cases of adverse event	326	15	4.6	331	9	2.6

Table CV2: Recording protocol, verification, inflation and attendance in schools and *anganwadis*

	Schools			*Anganwadis*		
Indicators	**D**	**N**	**(%)**	**D**	**N**	***(%)***
Followed correct[33] recording protocol	326	263	80.6	331	194	58.5
Followed partial[34] recording protocol	326	23	6.9	331	48	14.4
Followed no[35] recording protocol	326	41	12.5	331	90	27.2
State level verification factor[36]	19,033	14,110	0.74	8,477	5,842	0.69
Anganwadi registered children	NA	NA	NA	4,746	3,362	0.71
Anganwadi unregistered children	NA	NA	NA	1,842	1,262	0.69
Out-of-school children	NA	NA	NA	1,890	1,218	0.64
Distribution of schools by verification factor						
State level inflation rate[37]	14,110	4,924	34.8	5,842	2,635	45.1

[32] Others include headmaster was not available at school and teacher were not aware about reporting form, submitted to senior school ,no information and AWW submitted to respective supervisors.

[33] 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

[34] Partial recording protocol includes schools where all the classes did not follow correct protocol, put different symbols and prepared separate list to record the information of dewormed children

[35] No protocol includes all those schools where none of the classes followed any protocol to record the information of dewormed children

[36] Ratio of recounted value of the dewormed children to the reported value. This calculation is based on only those schools (n=159) and *anganwadis* (n=109) where copy of reporting forms were available for verification.

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

Anganwadi registered children	NA	NA	NA	3,362	1,384	41.1
Anganwadi unregistered children	NA	NA	NA	1,262	580	45.9
Out-of-school children	NA	NA	NA	1,218	672	55.2
Attendance on pre-NDD[38]	24,662	20,066	81.4	NA	NA	NA
Average attendance on NDD	24,662	21,274	86.3	NA	NA	NA
Average attendance on mop-up day	24,662	20,008	81.1	NA	NA	NA
Average common attendance (Children who attended on both NDD and mop-up day)	24,662	18,181	73.7	NA	NA	NA
Maximum average attendance of children on deworming day and mop-up Day	24,662	23,101	93.7	NA	NA	NA
School level inflation rate for schools that followed the correct recording protocol	13,613	3,232	23.7	NA	NA	NA
Estimated NDD coverage[39]	67-86			54		

Table CV3: Indicators based on interview of children during coverage validation

Indicators	D	N	%
Children received deworming tablets	978	951	97.3
Children consumed tablet	954	945	99.1
Children aware about the deworming tablets	954	845	88.5
Source of information for deworming			
Teacher / school	854	847	99.2
Television	854	58	6.8
Radio	854	54	6.3
Newspaper	854	53	6.2
Poster/Banner	854	154	18
Parents/siblings	854	39	4.6
Friends / neighbors	854	20	2.3
Way children consumed the tablet			
-Chewed tablet before swallowing	948	924	97.5
-Swallowed tablet directly	948	24	2.5
Supervised administration of tablets	948	931	98.2

[38]This is attendance of previous day of NDD.

[39] Coverage was estimated by implying state level verification factor on government reported coverage for schools and AWC. To provide additional insight, school coverage was also estimated on the basis of NDD implementation status, attendance and supervised administration in the school. We assume that same level of documentation and accuracy in coverage data reporting is prevalent in the schools and AWCs where copy of reporting forms was not available for verification. Further, estimated coverage based on attendance data in schools includes attendance on only NDD and mop-up day.

Note: Three children were interviewed from all those schools (326) who reported to observe deworming during NDD and mop-up day out of total 337 schools visited during coverage validation.