Evidence Action

Deworm the World Initiative

Independent Monitoring of National Deworming Day in Haryana

August 2018

REPORT

October 2018

Background

During every round of National Deworming Day (NDD), Evidence Action conducts independent monitoring, which includes process monitoring on NDD and mop-up day and a coverage validation exercise post-NDD. This is conducted through an independent survey agency, to assess the planning, implementation and quality of NDD program implementation with an objective of identifying gaps and suggesting recommendations for improvements in future NDD rounds. Process monitoring is conducted to understand state government's preparedness for NDD and adherence to the program's prescribed processes; and coverage validation is an ex-post check of the accuracy of the reporting data and coverage estimates to verify government reported treatment figures.

Haryana observed the August 2018 round of NDD in two phases; the first phase in 17 districts where NDD was conducted on August 20, followed by mop-up day on August 27, 2018 and a second phase in four districts where NDD was conducted on September 10 and mop-up day on September 17. Independent monitoring was conducted in the 17 districts covered in the first phase. Fieldwork for process monitoring was conducted on August 20 and 27, while coverage validation in the state was conducted during September 6-11.

This extract is a summary of the broad findings from the surveys conducted in the state.

Survey Methodology

Using a two-stage probability sampling procedure, Evidence Action sampled 200 schools (127 government schools and 73 private schools) and 200 *anganwadis* for process monitoring visits during NDD and mop-up days; 500 schools (332 government schools, 168 private schools) and 500 *anganwadis* were sampled for coverage validation in all 17 districts of the state. Through a competitive review process, Evidence Action hired an independent survey agency to conduct process monitoring and coverage validation. Evidence Action designed and finalized survey tools with approval from Haryana's government. One combined tool was used for process monitoring at schools and *anganwadis* on NDD and mop-up day, and one each for schools and *anganwadis* for coverage validation.

Implementation

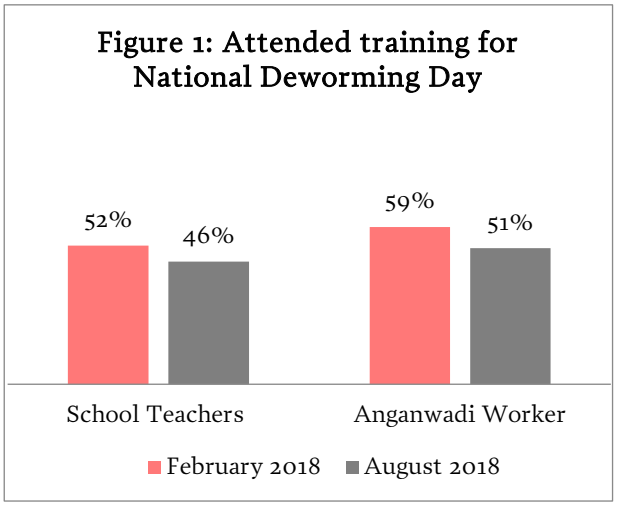
Prior to the survey, Evidence Action conducted a comprehensive training of master trainers who further conducted two-days separate training of 100 surveyors and 20 supervisors for each process monitoring and coverage validation. The training included an orientation on NDD, the importance of independent monitoring, details of the monitoring formats including CAPI (Computer Assisted Personal Interview) practices, survey protocols and practical sessions. Each surveyor was allotted one school and one *anganwadi* for process monitoring on NDD and mop-up day, and subsequently five schools and five *anganwadis* for coverage validation. Surveyors were provided with a tablet computer with the latest CAPI version downloaded, a battery charger, printed copy of monitoring formats as backup and albendazole tablets for demonstration during data collection. The details of sample schools were shared with surveyors one day before the commencement of fieldwork to ensure that they did not contact schools and *anganwadis* in advance, as this could cause bias in the results.

Appropriate quality assurance measures were taken to ensure that the data collected was accurate, consistent and authenticated. For example, teachers and *anganwadi* workers (AWW) were asked to sign a participation form with an official stamp to authenticate surveyor's visits to schools and *anganwadis*. Further, consent based thumb impression of all survey respondents in electronic mode including headmasters, teachers, AWWs, ASHAs and children were collected for verification purpose. The GPS location along with time stamp and photographs of all schools and *anganwadis* visited during data collection was also collected through CAPI to authenticate the location and time of the interview. Evidence Action reviewed all data sets and shared feedback with the agency for any inconsistency observed and ensured timely corrective actions. All analysis was performed using STATA and Microsoft Excel.

Key Findings

Training

Prior to each NDD round, teachers and *anganwadi* workers are trained on NDD related processes and protocols to facilitate effective implementation. Forty-six percent of teachers and 51% of AWWs attended training for the August 2018 NDD round; all schools and AWWs are mandated to attend training for every NDD round, irrespective of whether they attended training in earlier rounds. Compared to the February 2019 NDD round, a decrease of 6 percentage points in school trainings and 8 percentage points in *anganwadi* worker training was observed(Figure 1). Forty-seven percent of private school teachers participated in the training is (Annex- Table PM7).



Among those who did not attend the training, 48% of teachers and 44% of *anganwadis* reported having no information about the NDD training date/venue/timing as the main reason for not attending the training (Annex- Table PM1). Further, 48% of teachers provided training to other teachers at their schools (Annex- Table PM1). Forty-two percent of teachers and 49% of AWWs reported that they did not receive SMS about NDD (Annex-Table PM1). This was because contact database of frontline functionaries was not available in 13 districts.

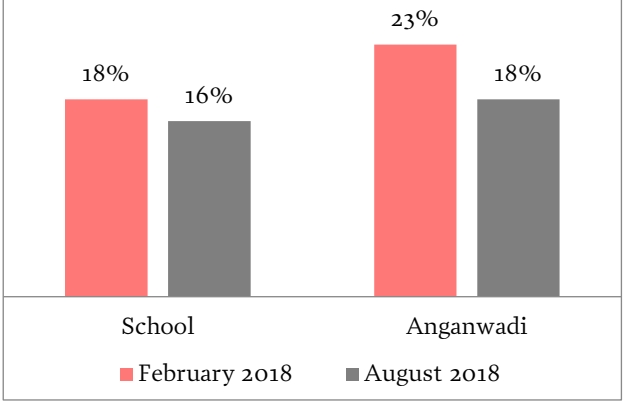
Integrated Distribution of NDD Kit at Trainings

Integrated distribution of the NDD kit was only 16% in schools and 18% in *anganwadis*, which represents a marginal decline from the previous NDD round (Figure 2). Drug availability and their distribution at schools and *anganwadis* was ensured by the district and block officials, leading to 82% of schools and 79% of *anganwadis* reporting to have received albendazole tablets (Annex-Table PM4).

Half of schools and a little more than that (55%) of *anganwadis* received posters/banners, while 54% of schools and 48% of *anganwadis* received handouts/reporting forms (Annex-Table PM4). Ninety-three percent of schools and 92% of *anganwadis* reported having received sufficient tablets for deworming (Annex-Table PM3).

Among the sampled private schools, 73% received deworming tablets and 87% of them reported to receive a sufficient quantity. Further, 41% of the private schools covered during process monitoring received posters/banners and 49% received handouts/reporting forms (Annex Table PM7).

Figure 2: Integrated Distribution



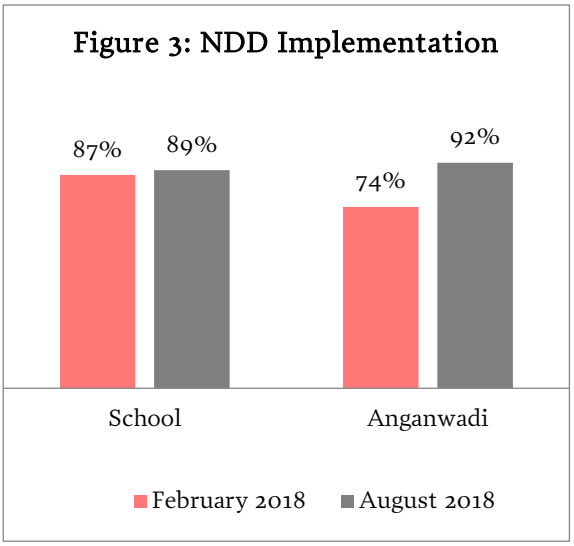
Source of Information about the Recent Round of NDD

Twenty-nine percent of schools and 34% of *anganwadis* reported to receive information about NDD from other school/teacher and *anganwadi* workers respectively. Twenty-six percent of schools and 20% of *anganwadis* reported to receive information about NDD through the newspaper. Twenty-one percent of schools and 19% of *anganwadis* reported hearing about NDD from television. Radio messages were the least effective source of information about NDD for the current round (Annex Table PM1).

NDD Implementation

As evident from Figure-3, a high proportion of schools (89%) and *anganwadis (92%)* conducted deworming in the current NDD round. This is a slight improvement in schools and an 18 percentage point surge in AWWs since the February 2018 round (Figure 3). One of the most commonly cited reasons by schools (60%) and *anganwadis* (48%) for not conducting deworming was that they did not have information about NDD (Annex-Table CV1). Among all the schools and *anganwadis* visited on process monitoring, surveyors were able to observe deworming activities in 65% of schools and 60% of *anganwadis* (Annex- Table PM5).

Figure 3: NDD Implementation



Adverse Events- Knowledge and Management

Interviews with headmasters/teachers and AWWs reveal a moderate level of awareness (52% in schools and 44% in *anganwadis*) regarding potential adverse events due to deworming. A knowledge gap was observed on appropriate protocols to follow in the case of such events. Vomiting and mild abdominal pain was listed as a side effect by 84% of

teachers and 81% of AWWs. Further, 76% of teachers and 72% of AWWs were aware to make a child lie down in an open shaded place in the case of any symptoms of adverse events. Around 35% of schools and 34% of *anganwadis* knew to give ORS/water. Only 32% of schools and 24% of *anganwadis* workers were aware to observe the child for at least two hours. Further, 60% of schools and 64% of *anganwadis* reported the need to call a PHC doctor if symptoms persisted (Annex- Table PM6). Findings necesitate emphasis on adverse event management protocols during training of teachers and AWWs.

Recording Protocol

Twenty-eight percent of schools and 25% of *anganwadis* followed the correct (single and double ticks) recording protocol. Around 10% of schools and eight percent of *anganwadis* carried out partial[1] recording. Sixty-two percent of schools and 67% of *anganwadis* did not follow any recording protocol (Annexure- CV3). Further, as per NDD guidelines, all schools and *anganwadis* are supposed to retain a copy of reporting forms; however, only 21% of schools and 11% of *anganwadis* retained a copy for verification (Annex –Table CV1). Findings from process monitoring suggest that 74% of schools and 67% of AWWs were aware of this requirement (Annex –Table PM2).

Accredited Social Health Activists (ASHAs) are required to prepare a list of out-of-school children and children unregistered in *anganwadis* and submit it to AWWs. However, only 32% of *anganwadis* reported to have the list of unregistered (1-5 years) children and 18% reported having the list of out-of-school children (6-19 years) (Annex –Table CV1). Nevertheless, of all the ASHAs interviwed during coverage validation (who were available at the *anganwadis* at the time of surveyors visit), 47% reported to prepare the list of unregistered and out-of-school children and 75% of them reported to share it with the AWWs. Only three percent of ASHA workers reported receiving incentives for the last round of NDD i.e. February 2018 (Annex –Table CV2).

Coverage Validation

Coverage validation provides an opportunity to assess the accuracy of reported data and verify government-reported treatment figures. Verification factors[2] are common indicators to measure the accuracy of reported treatment values for neglected tropical disease control programs[3]. It also gives us an idea about record keeping and data management at the service delivery point. The verification factor was estimated on the basis of the availability of a copy of reporting forms at schools and *anganwadis*. The state-level verification factor for school enrolled children was 0.33, indicating that on an average, for every 100 dewormed children reported by the school, 33 were verified either

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[1] Partial recording protocol includes schools/*anganwadis* where all the classes/registers did not follow correct protocol, but put different symbols and prepared separate list to record the information of dewormed children.

[1]A verification factor of 1 means the schools reported the exact same figures that they recorded on deworming day. A verification factor less than 1 indicates over-reporting, while a verification factor greater than 1 indicates under-reporting.

[2]WHO (2013), Data Quality Assessment tool for Neglected Tropical Diseases: Guidelines for Implementation December 2013.

through single/double tick or through other available documents at the school. Similarly, the overall state-level verification factor for children dewormed at *anganwadis* was 0.57, indicating that on an average; for every 100 dewormed children reported by the *anganwadi,* 57 were verified through available documents (Annex- Table CV3).

The category-wise verification factors for registered (1-5 years), unregistered (1-5 years) and out-of-school (6-19 years) children were 0.54, 0.82, and 0.44 respectively for anganwadis (Annex CV3). The data suggests reporting and aggregation errors of coverage figures, particularly for unregistered and out-of-school children in anganwadis and therefore highlights a need for proper documentation. Despite challenges in reporting and documentation of NDD coverage data, based on children's interviews, the majority of the children present at schools on NDD or mop-up day received (98%) and consumed (99%) the albendazole tablet on either NDD or mop-up day.

Against the state government reported 96% coverage in schools and 97% coverage for 1-5 years registered children in *anganwadis*, attempts were made to understand the maximum number of children that could have been dewormed at schools and *anganwadis* through coverage validation data. The NDD treatment coverage in schools was estimated considering the maximum attendance of children on NDD dates. Coverage validation data showed that 89% of schools conducted deworming on either NDD or mop-up day (Annex-Table CV1), a maximum of 94% of children were in attendance (Annex-Table CV3), 98% of children received an albendazole tablet, and 94% of children reported to consume the tablet under supervision (Annex-Table CV4). Considering these factors, 77%[4] (0.89*0.94*0.98*0.94) of enrolled children could have been dewormed at schools. Since interviews of children are not conducted in *anganwadis*, the verification factor of 1-5 years registered children from coverage validation data is applied to government reported coverage data for the same category. It was estimated that around 52% (0.97*0.54) of registered children (1-5 years) in *anganwadis* could have been dewormed. The calculation of verification factors is based on only those schools and *anganwadis* where a copy of the reporting form was available for verification. Therefore, adjusted coverage in *anganwadis* based on verification factor needs to be interpreted with caution.

Recommendations

The following are the key recommendation for program improvements that emerged from the exercise.

1. Training is a critical component of NDD and is required to ensure smooth implementation of the program. Efforts are needed to maximize training participation of school teachers and *angnawadi* workers at block-level trainings. Effective planning and coordination among stakeholder departments can pave the way in avoiding delays and rescheduling of training. Training sessions, including the date and venue location should be communicated to teachers and *anganwadi* workers at least one week prior to the training date. District/block level officials

[4] This was estimated on the basis of NDD implementation status (89%), maximum attendance on NDD and mop-up day (94%); children received albendazole (98%) and supervised drug administration (94%). In absence of children interview in *anganwadis*, the government reported coverage was adjusted by implying state level verification factor.

must ensure private school teachers' participation during training to further improve training attendance and strengthen the program. Efforts shall also be directed to monitor the quality of training to ensure that teacher and *anaganwadi* workers gain comprehensive understanding of program protocols.

2. As there was no contact database of teachers and *anganwadi* workers available in 13 districts, a substantial proportion of school teachers and *anganwadi* workers could not receive NDD related SMSs. Efforts are required to arrange for an updated contact database for these 13 districts. Further, a contact database of functionaries across all stakeholder department needs to be regularly updated and strengthened to ensure comprehensive information dissemination to concerned officials/functionaries in a timely manner. This would likely help to ameliorate the problems of absenteeism at trainings due to poor communication about training dates, and limited reach of training reinforcement messages to teachers and *anganwadi* workers via SMS.

3. Integrated distribution is a crucial component for the success of NDD. It is cost effective, eases logistical concerns and ensure quality services. Hence, efforts are required to ensure that the NDD kit, including drugs, reach schools and *anganwadi* workers on time through efficient planning on timely drug procurement and printing of IEC materials. Tracking the distribution cascade to identify and fill gaps in a timely manner will likely improve the availability of IEC materials.

4. Adherence to correct recording protocol is a prerequisite to understand the coverage of the program. Findings from coverage validation data depicts non-adherence to recording protocol in school and *anganwadis* in the state. Greater emphasis should be given on recording protocols during training to improve the quality of coverage data in the next round. Training and reinforcement messages shared through SMS needs to increase the focus on the importance of correct reporting protocols and maintaining accurate and complete data. Practical sessions on recording protocol for teachers and AWWs can be organized during block level trainings. Further, school teachers and *anganwadi* workers are also reinforced to keep a copy of reporting forms for verification purposes.

5. There is need for intensive efforts towards community awareness for the NDD program and its benefits. For instance, targeting parents through ASHAs and *anganwadi* workers will be critical for increasing coverage of non-enrolled children and raising community awareness about the benefits of deworming. Efforts are required to increase ASHA participation by sending reminder SMSs to them with information on incentives.

6. To achieve higher NDD coverage, emphasis should be given on achieving maximum school attendance on NDD and mop-up day through community mobilization, organizing parents meeting, and household visits of teachers and other frontline workers in community.

Annexure

Findings from Process Monitoring of National Deworming Day (NDD), August 2018

Table A: Sample Description including Number of Schools and *Anganwadis* Covered during Process Monitoring and coverage validation

Sample Details	Number
Total number of NDD districts in the state	21
Number of districts[5] covered	17
Number of trained surveyors deployed	100
Number of blocks[6] covered during	100
Total number of schools covered	200
• Number of government schools covered[7]	127
• Number of private schools covered	73
Total number of *anganwadis* covered[8] during process monitoring	200
Total number of schools covered[9] during coverage validation	500
• Total number of government schools covered	332
• Total number of private schools covered	168
Total number of *anganwadis* covered[10] during coverage validation	500

[5] Out of 17 NDD districts process monitoring was not conducted in one districts (Jhajjar) owing to last minute uncertainty on drug administration.

[6]These are sampled blocks selected from UDISE data, 2017-18. Only 95 blocks (excluding blocks of Jhajjar) were covered in process monitoring

[7]These are the actual schools covered during NDD and mop-up day visits. Numbers given in subsequent tables (numerator and denominator) are weighted

[8]These are the actual anganwadis covered during NDD and mop-up day visits. Numbers given in subsequent tables (numerator and denominator) are unweighted.

[9]These are the actual schools covered during Coverage Validation visits. Numbers given in subsequent tables (numerator and denominator) are weighted. The weights are used in order to generalize the findings at state level.

[10]These are the actual *anganwadis* covered during Coverage Validation visits. Numbers given in subsequent tables (numerator and denominator) are weighted. The weights are used in order to generalize the findings at state level.

Table PM1: Training and source of information about NDD among teachers/headmasters and *anganwadi* workers, August 2018

Indicators	School			Anganwadi		
	Denominator	Numerator	%	Denominator	Numerator	%
Attended training for current round of NDD	200	92	46	200	101	51
Ever attended training for NDD[11]	200	101	51	200	110	55
Never attended training for NDD	200	99	49	200	90	45
Reasons for not attending current NDD round training (Multiple Response)						
Location was too far away	108	3	3	99	7	7
Did not know the date/timings/venue	108	52	48	99	44	44
Busy in other official/personal work	108	9	8	99	8	8
Attended deworming training in the past	108	9	8	99	9	9
Not necessary	108	11	10	99	3	3
No incentives/no financial support	108	2	2	99	1	1
Others[12]	108	25	23	99	33	33
Trained teacher that provided training to other teachers in their schools						
All other teachers	92	44	48	Not Applicable		
Few teachers	92	17	18	Not Applicable		
No (himself/herself only teacher)	92	12	13	Not Applicable		
No, did not train other teachers	92	19	21	Not Applicable		
Source of information about current NDD round (Multiple Response)						
Television	200	41	21	200	38	19
Radio	200	24	12	200	19	10

[11]Includes those school teachers and *anganwadi* workers who attended training either for NDD August 2018 or attended tanning in past.

[12] Includes no information of program, no message received, supervisor transferred

Indicators	School			Anganwadi		
	Denominator	Numerator	%	Denominator	Numerator	%
Newspaper	200	51	26	200	40	20
Banner	200	37	19	200	46	23
SMS	200	42	21	200	32	16
Others school/teacher/*anganwadi* worker	200	57	29	200	68	34
WhatsApp message	200	35	18	200	13	7
Training	200	24	12	200	26	13
Others[13]	200	46	23	200	42	21
Received SMS for current NDD round	200	115	58	200	101	51
Probable reasons for not receiving SMS[14]						
Changed Mobile number	73	5	6	80	7	9
Other family members use this number	73	0	0	80	4	5
Number not registered to receive such messages	73	11	15	80	8	10
Don't Know	73	45	62	80	43	54
Others[15]	73	12	17	80	18	22

Table PM2: Awareness about NDD among teachers/headmasters and *anganwadi* workers, August 2018

Indicators	School			Anganwadi		
	Denominator	Numerator	%	Denominator	Numerator	%
Awareness about the ways a child can get worm infection	200	173	87	200	170	85
Different ways a child can get worm infection (Multiple Response)						

[13]ANM, Asha, BEO office, through email, CDPO office, CRC, Department Email, Hospital and doctors
[14] 12 Schools and 19 *Anganwadis* reported that they don't know about receiving the SMS and reasons were not asked to them.
[15] include: ANM received, does not know how to read, Phone switched off

Not using sanitary latrine	173	126	73	170	120	71
Having unclean surroundings	173	137	79	170	128	75
Consume vegetables and fruits without washing	173	113	65	170	103	61
Having uncovered food and drinking dirty water	173	119	69	170	97	57
Having long and dirty nails	173	111	64	170	98	58
Moving in bare feet	173	91	53	170	77	45
Having food without washing hands	173	85	49	170	83	49
Not washing hands after using toilets	173	57	33	170	53	31
Awareness about all the possible ways a child can get a worm infection[16]	173	40	23	170	34	20
Perceives that health education should be provided to children	200	194	97	200	181	91
Awareness about correct dose and right way of administration of albendazole tablet						
1-2 years of children (Crush the half tablet between two spoons and administer with water)	Not Applicable			200	161	81
2-3 years of children (Crush one full tablet between two spoons, and administer with water)	Not Applicable			200	118	59
3-5 years of children (one full tablet and child chewed the tablet properly)	Not Applicable			200	151	76
6-19 years of children (one full tablet and child chewed the tablet properly)	200	189	95	200	191	96
Awareness about non-administration of albendazole tablet to sick child						

[16]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.

Will administer albendazole tablet to sick child	200	35	17	200	29	14
Will not administer albendazole tablet to sick child	200	165	83	200	171	86
Awareness about consuming albendazole tablet						
Chew the tablet	200	196	98	200	196	98
Swallow the tablet directly	200	4	2	200	4	2
Awareness about consuming albendazole in school/*anganwadi*	200	188	94	200	188	94
Awareness about the last date (September 4, 2018) for submitting the reporting form	200	36	18	200	38	19
Awareness about submission of reporting forms to ANM	200	112	56	200	127	64
Awareness to retain a copy of the reporting form	200	147	74	200	134	67

Table PM3: Deworming activity, drug availability, and list of unregistered and out-of-school children, August 2018

Indicators	School			Anganwadi		
	Denominator	Numerator	%	Denominator	Numerator	%
Albendazole tablet administered on the day of visit						
Yes, ongoing	200	90	45	200	79	40
Yes, already done	200	33	17	200	39	20
Yes, after sometime	200	16	8	200	13	7
No, will not administer today	200	60	30	200	69	35
Schools/*anganwadis* conducted deworming on either of the day[17]	200	154	77	200	148	74
Schools/*anganwadis* conducted deworming on	99	71	72	100	65	65

[17]Schools/*anganwadis* administered albendazole tablet to children either on NDD or mop-up day

NDD[18]						
Schools/*anganwadis* conducted deworming on Mop-Up Day[19]	101	68	68	100	66	66
Reasons for not conducting deworming						
No information	60	27	45	69	28	41
Albendazole tablet not received	60	13	22	69	16	23
Apprehension of adverse events	60	1	2	69	0	0
Already dewormed all children on deworming day	60	16	26	69	17	24
Others[20]	60	3	5	69	8	12
Attendance on NDD[21]	27683	23787	86	Not Applicable		
Attendance on Mop-Up Day[22]	31045	21728	70	Not Applicable		
Anganwadis having list of unregistered/out-of-school children	Not Applicable			200	92	46
Out-of-school children (Age 6-19 years) administered albendazole tablet	Not Applicable			200	90	45
Unregistered children (Age 1-5 years) administered albendazole tablet	Not Applicable			200	115	58
Sufficient quantity of albendazole tablets[23]	163	152	93	158	146	92

[18]Based on the samples visited on NDD
[19]Based on the samples visited on mop-up day only
[20]Others include 'teacher not present, students absent, Family function, conducted on 20 august, insufficient medicine, will administer tablet tomorrow, no small children due to hilly area, principal feels that medicine will have side effects
[21]Based on those schools visited on NDD
[22]Based on those schools visited on mop-up day
[23] This indicator is based on the sample that received albendazole tablet

Table PM4: Integrated distribution of albendazole tablets and IEC materials, August 2018

Indicators	Schools			*Anganwadi*		
	Denominator	Numerator	%	Denominator	Numerator	%
Items received by school teacher and anganwadi worker						
Albendazole tablet	200	163	82	200	158	79
Poster/banner	200	99	50	200	110	55
Handouts/ reporting form	200	108	54	200	95	48
Received all materials	200	80	40	200	77	39
Items verified during Independent Monitoring						
Albendazole tablet	163	136	83	158	138	87
Poster/banner	99	85	86	110	94	85
Handouts/ reporting form	108	91	84	95	75	79
Received all materials	80	62	78	77	61	79
No of school teachers/anganwadi worker attended training and received items during training						
Albendazole tablet	92	67	73	101	72	71
Poster/banner	92	43	47	101	56	55
Handouts/ reporting form	92	48	52	101	53	52
Received all materials	92	32	35	101	36	36
Integrated Distribution of albendazole tablet IEC and training materials[24]	200	32	16	200	36	18

Table PM5: Implementation of deworming activity and observation of surveyors, August 2018

Indicators	Schools			Anganwadi		
	Denominator	Numerator	%	Denominator	Numerator	%
Deworming activity was taking place	90	83	92	79	74	94

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

Albendazole tablets were administered by						
Teacher/headmaster	83	68	83	74	2	3
Anganwadi worker	83	0	0	74	52	70
ASHA	83	9	10	74	17	23
ANM	83	6	7	74	3	4
Student	83	0	0	74	0	0
Teacher/Anganwadi worker asked children to chew the tablet	90	87	97	79	75	95
Followed any recording protocol[25]	123	92	75	118	96	81
Protocol followed						
Putting single/double tick	92	68	74	96	67	70
Put different symbols	92	7	8	96	9	9
Prepare the separate list for dewormed	92	17	18	96	20	21
Visibility of poster/banner during visits	99	78	79	110	84	76

Table PM6: Awareness about Adverse events and Its Management, August 2018

Indicators	Schools			Anganwadi		
	Denominator	Numerator	%	Denominator	Numerator	%
Opinion of occurrence of an adverse event after administering albendazole tablet	200	104	52	200	88	44
Awareness about possible adverse events (Multiple Response)						
Mild abdominal pain	104	87	84	88	71	81
Nausea	104	54	52	88	40	45
Vomiting	104	87	84	88	72	82

[25]Any recording protocol implies putting single tick (✓), double tick (✓✓), any other symbol or preparing separate list for all those children administered albendazole tablets on NDD or mop-up day.

Diarrhea	104	51	49	88	42	48
Fatigue	104	35	34	88	31	35
All possible adverse event[26]	104	22	21	88	20	23
Awareness about mild adverse event management						
Make the child lie down in open and shade/shaded place	200	151	76	200	143	72
Give ORS/water	200	69	35	200	67	34
Observe the child at least for 2 hours in the school	200	64	32	200	48	24
Don't know/don't remember	200	22	11	200	33	17
Awareness about severe adverse event management						
Call PHC or emergency number	200	120	60	200	127	64
Take the child to the hospital /call doctor to school	200	125	63	200	108	54
Don't know/don't remember	200	13	7	200	11	6
Available contact numbers of the nearest ANM or MO-PHC	200	162	81	200	178	89
Asha present in Anganwadi center	Not Applicable			200	136	68

Table PM7: Selected Indicators of Process Monitoring in Private Schools, August 2018

Indicators[27]	Denominator	Numerator	%
Attended training for current round of NDD	83	39	47
Received albendazole tablets	83	61	73

[26]Includes those who are aware that a mild abdominal pain and nausea and vomiting and diarrhea and fatigue can be reported by a child after taking albendazole tablet.

[27]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

Sufficient quantity of albendazole tablets	61	53	87
Received poster/banner	83	34	41
Received handouts/ reporting form	83	41	49
Received SMS for current NDD round	83	39	47
Albendazole administered to children	83	44	53
Reasons for not conducting deworming			
No information	39	21	55
Albendazole tablets not received	39	5	13
Apprehension of adverse events	39	1	2
Already dewormed all children on deworming day	39	7	18
Others[28]	39	5	12
Albendazole tablet administered to children by teacher/headmaster[29]	24	21	89
Perceive that health education should be provided to children	83	82	99
Awareness about correct dose and right way of albendazole administration	83	78	94
Awareness about non-administration of albendazole tablet to sick child	83	14	17
Opinion of occurrence of an adverse event after taking albendazole tablet	83	41	49
Awareness about occurrence of possible adverse events			
Mild abdominal pain	41	35	85
Nausea	41	22	54
Vomiting	41	34	83
Diarrhea	41	22	54
Fatigue	41	17	41
Awareness about mild adverse event management			
Let the child rest in an open and shaded place	83	59	71
Provide clean water to drink/ORS	83	28	34
Contact the ANM/nearby PHC	83	0	0

[28]Others include no team came for deworming, principal feels that medicine will have side effects
[29]This indicator is based on samples where deworming was ongoing.

Available contact numbers of the nearest ANM or MO-PHC			
Followed correct[30] recording protocol	83	66	80

Findings from Coverage Validation Data - August 2018

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

Sr. No.	Indicators	Schools			Anganwadis		
		Denominator	Numerator	%	Denominator	Numerator	%
1	Percentage of schools/*anganwadis* conducted deworming[31]	500	447	89	500	461	92
	Percentage of conducted deworming in Government schools	288	277	96	Not Applicable		
	Percentage of conducted deworming in Private schools	212	170	80	Not Applicable		
1a	Percentage of school and *anganwadis* administered albendazole on day of - **(Multiple Response)**						
	a. National Deworming Day	447	386	86	461	409	89
	b. Mop-up day	447	267	60	461	246	53
	c. Between NDD and mop-up day	447	92	21	461	86	19
	d. Both days (NDD and mop-up day)	447	252	56	461	237	52
1b	Reasons for not conducting deworming						
	a. No information	53	32	60	40	19	48
	b. Drugs not received	53	15	29	40	21	52
	c. Apprehension of adverse events	53	2	3	40	0	0
	d. Others[32]	53	4	8	40	0	0

[30]Correct recording protocol implies putting single tick (✓) on NDD and double tick (✓✓) for all those children administered albendazole tablets.
[31]Schools and *anganwadis* that conducted deworming on NDD or mop-up day.
[32] Other includes Tablets given before NDD, Not allowed by school authorities, parents not allowed, etc.

2	Percentage of schools and *anganwadis* left over with albendazole tablet after deworming	447	157	35	461	146	32
2a	Number of albendazole tablets left after deworming						
	a. Less than 50 tablets	157	126	80	146	121	83
	b. 50-100 tablets	157	16	10	146	21	14
	c. More than 100 tablets	157	15	10	146	4	3
3	Copy of filled-in reporting form was available for verification	447	93	21	461	52	11
	Copy of filled-in reporting form was available for verification in Government schools	277	51	19	Not Applicable		
	Copy of filled-in reporting form was available for verification in Private schools	170	42	25	Not Applicable		
3a	Reasons for non-availability of copy of reporting form[33]						
	a. Did not received	347	125	36	396	134	34
	b. Submitted to ANM	347	179	51	396	226	57
	c. Unable to locate	347	26	8	396	22	6
	d. Others[34]	347	17	5	396	14	3
4	Percentage of *Anganwadi* center where ASHA administered albendazole	Not Applicable			461	393	85
5	*Anganwadis* having list of unregistered children (aged 1-5 years)	Not Applicable			461	149	32
6	*Anganwadis* having list of out-of-school children (aged 6-19 years)	Not Applicable			461	83	18

[33] In 7 schools and 13 *anganwadis* blank reporting form was available.

[34]Other includes ANM filled format and then she provided, Did not have/lost, With Supervisor, missing, not received, misplaced, Asha has taken the form, Doctor has taken the form, Has been given to other teachers, Submitted to BO/CRC/ASHA, Teacher absent, etc

Table CV2: Selected indicators based on ASHA's interview at *Anganwadi* Centre, Coverage Validation Data

Sr. No.	Indicators	Anganwadis		
		Denominator	Numerator	%
1	ASHA[35] conducted meetings with parents to inform about NDD	246	231	94
2	ASHA prepared list of unregistered and out-of-school children	246	116	47
3	ASHA shared the list of unregistered and out-of-school children with *anganwadis* worker[36]	116	87	75
4	ASHA administered albendazole to children	246	219	89
5	ASHA received incentive for NDD February 2018 round	246	8	3

Table CV3: Recording protocol, verification factor and school attendance

Sr.No.	Indicators	Schools/Children			Anganwadis/Children		
		Denominator	Numerator	%	Denominator	Numerator	%
1	Followed correct[37] recording protocol	447	126	28	461	115	25
2	Followed partial[38] recording protocol	447	42	10	461	38	8
3	Followed no[39] recording protocol	447	279	62	461	308	67
	Followed correct recording protocol in Government schools	277	76	27	Not Applicable		

[35] Surveyors were instructed to call ASHA at *anganwadi* centers during coverage validation and collect relevant information. Surveyors could only cover those ASHA's who were able to join for interview because it was not mandatory for ASHA's to attend.

[36] Based on sub-sample who reported to prepare the said list

[37]Correct recording protocol includes schools/*anganwadis* where all the classes/registers put single tick (✓) on NDD and double tick (✓✓) on mop-up day to record the information of dewormed children.

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

[39]No protocol includes all those schools/*anganwadis* where none of the classes/registers followed any protocol to record the information of dewormed children

	Followed correct recording protocol in Private schools	170	51	30	Not Applicable		
4	State-level verification factor[40] (children enrolled/registered)	27526	9002	33	4404	2531	57
	a. Children registered with *anganwadis*	Not Applicable			2885	1557	54
	b. Children unregistered with *anganwadis* (Aged 1-5)	Not Applicable			797	653	82
	c. Out-of-school children (Aged 6-19)	Not Applicable			722	321	44
5	Attendance on previous day of NDD (children enrolled)	134418	114442	85	Not Applicable		
6	Attendance on NDD (children enrolled)	134418	117572	87	Not Applicable		
7	Attendance on mop-up day (children enrolled)	134418	108134	80	Not Applicable		
8	Children who attended on both NDD and mop-up day (children enrolled)	134418	99899	74	Not Applicable		
9	Maximum attendance of children on NDD and mop-up day[41] (Children enrolled)	134418	125807	94	Not Applicable		

[40]Ratio of recounted value of the dewormed children to the reported value. This calculation is based on only those schools (n=93) and *anganwadis* (n=52) where deworming was conducted and copy of reporting form was available for verification.

[41]Maximum attendance refers to the total attendance of children who were exclusively present in school either on NDD or mop-up day and children who attended school on both days.

10	Estimated NDD coverage[42][43]	77	52
11	Estimated NDD coverage in Government schools	83	Not Applicable
12	Estimated NDD coverage in Private schools	69	Not Applicable

Table CV4: Description on children (6-19 years) interviewed in the schools (n=447) during coverage validation

Sr.No	Indicators	Denominator	Numerator	%
1	Children received albendazole tablets	1341	1313	98
2	Children aware about the albendazole tablets	1313	1109	84
	Source of information about deworming among children (Multiple response)			
3	a. Teacher/school	1109	1077	97
	b. Television	1109	105	9
	c. Radio	1109	60	5
	d. Newspaper	1109	78	7
	e. Poster/Banner	1109	122	11
	f. Parents/siblings	1109	49	4
	g. Friends/neighbors	1109	42	4
4	Children aware about the worm infection	1313	674	51
5	Children awareness about different ways a child can get worm infection (Multiple response)			
	a. Not using sanitary latrine	674	371	55
	b. Having unclean surroundings	674	465	69
	c. Consume vegetables and fruits	674	410	61

[42] This was estimated on the basis of NDD implementation status, attendance on NDD and mop-up day, whether child received albendazole and its supervised administration. Since no child interview is conducted at *anganwadis*; this has not been estimated for *anganwadis.*

[43]This was estimated by implying state-level verification factor on government reported coverage for 1-5 years registered children in AWC.

	without washing			
	d. Having uncovered food and drinking dirty water	674	362	54
	e. Having long and dirty nails	674	400	59
	f. Moving in bare feet	674	350	52
	g. Having food without washing hands	674	287	43
	h. Not washing hands after using toilets	674	103	15
6	Children consumed albendazole tablet	1313	1302	99
7	Way children consumed the tablet			
	a. Chew the tablet	1302	1248	96
	b. Swallow tablet directly	1302	53	4
8	Supervised administration of tablets	1302	1228	94
9	Reasons for not consuming albendazole tablet			
	a. Feeling sick	11	6	55
	b. Afraid of taking the tablet	11	1	9
	c. Parents told me not to have it	11	4	36
	d. Do not have worms so don't need it	11	0	0
	e. Did not like the taste	11	0	0