Evidence Action

Deworm the World Initiative

Independent Monitoring of National Deworming Day in Tripura

January 2018

REPORT

May 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 independent survey agencies, 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 the individual state government's preparedness for NDD and adherence to the program's prescribed processes, coverage validation is an ex - post check of the accuracy of the reporting data and coverage estimates to verify government-reported treatment figures.

Tripura observed the February 2018 round of NDD on January 18; followed by mop-up day on January 20. Fieldwork for process monitoring was conducted on January 18 and 20, while coverage validation was conducted January 29 to February 4.

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

Methodology

Using a two-stage probability sampling procedure, across all eight districts, a total of 153 schools (Government schools=122 and Private schools = 31), and 152 anganwadis were selected for process monitoring visits during NDD and mop-up days; 393 schools (Government schools=259 and Private schools = 134) and 400 anganwadis were selected for coverage validation. 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 approvals from Tripura'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

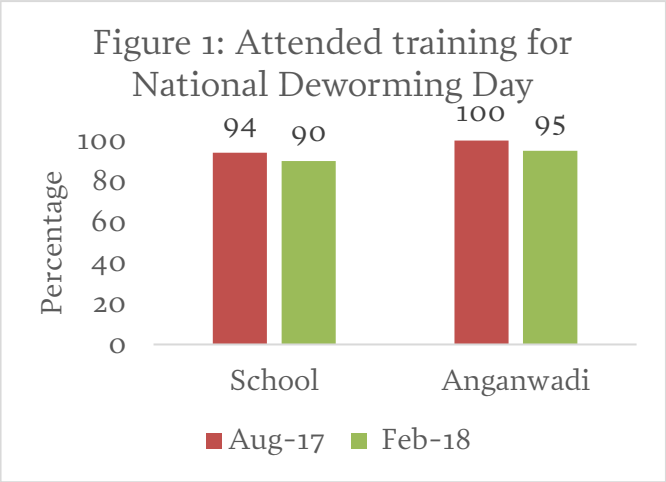
Prior to the survey, Evidence Action conducted a comprehensive training of master trainers who further conducted a two-day training of 80 surveyors and 16 supervisors at Agartala. The training included an orientation on NDD, the importance of independent monitoring, details of the monitoring formats including computer-assisted personal interview (CAPI) 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 *anganwadi* for coverage validation. Surveyors were provided with a tablet computer, charger, printed copy of monitoring formats as backup, and albendazole tablets for demonstration during data collection. The details of sample schools and *anganwadis* were shared with them one day before the commencement of fieldwork to ensure that surveyors 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. These measures included: teachers and *anganwadi* workers (AWWs) were asked to sign a participation form with an official stamp to verify that the school/*anganwadi* was visited. Further, photographs of schools and *anganwadi*s were also collected to authenticate the location of the interview. Evidence Action reviewed all the data sets and shared the feedback to the

agency for any inconsistencies observed. The analysis was carried out using STATA and Microsoft Excel.

Key Findings

Training

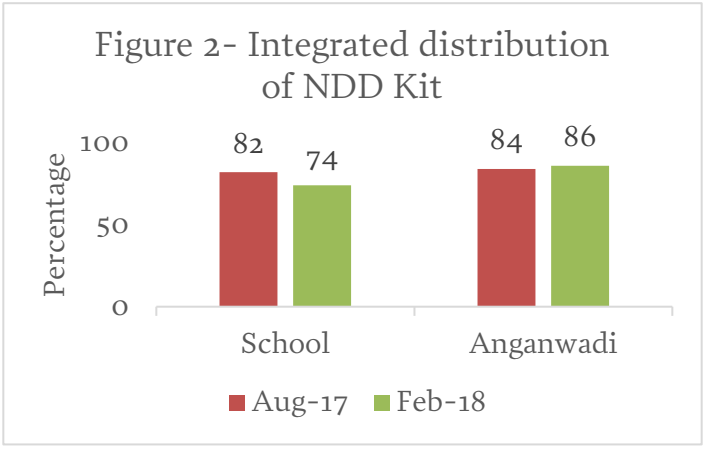
Prior to each NDD round, teachers and AWWs are trained on the processes and protocols of the NDD programme to ensure effective implementation, including integrated distribution of IEC materials and drugs. Finding shows that 90% of teachers and 95% of *anganwadi* workers attended training for the January 2018 NDD round (Figure 1). Further, 51% of teachers provided training to other teachers at their schools. The training attendance among private school teachers declined significantly from 100% (N=13) in August 2017 to 68% (N=26) in February 2018. The training attendance in schools and *anganwadis* have shown a declining trend. This could be due to the involvement of school teachers in trainings for state assembly elections.



Due to an updated contact database of frontline workers and the involvement of private telecom service providers in the state, 61% of AWWs and 71% of teachers received NDD program related SMSs, which has improved as compared to the August 2017 round by 23 percent points in *anganwadis* and 12 percent points in schools (Annex- Table PM1). However, the percentage of private schools that received SMSs is 58%, which is stagnant (60%) compared to the previous NDD round. Efforts to update the contact database involved identifying errors (duplicate numbers, 11 digit numbers) and having the correct contact details in place with the help of tele-callers.

Integrated Distribution of NDD Kit including Drugs at Training

As mandated in NDD guidelines, integrated distribution on NDD kit (drugs, IEC and training material) occurred in 74% of schools and 86% of *anganwadis* during training, which is a decline of eight percent points in schools and the same in *anganwadis* in comparison to the August 2017 round.



The decline is due to the fact that printing and distribution of IEC and training material and drugs was delayed in view of the preponement of NDD dates to January 2018. Though their availability on NDD was ensured with coordination of

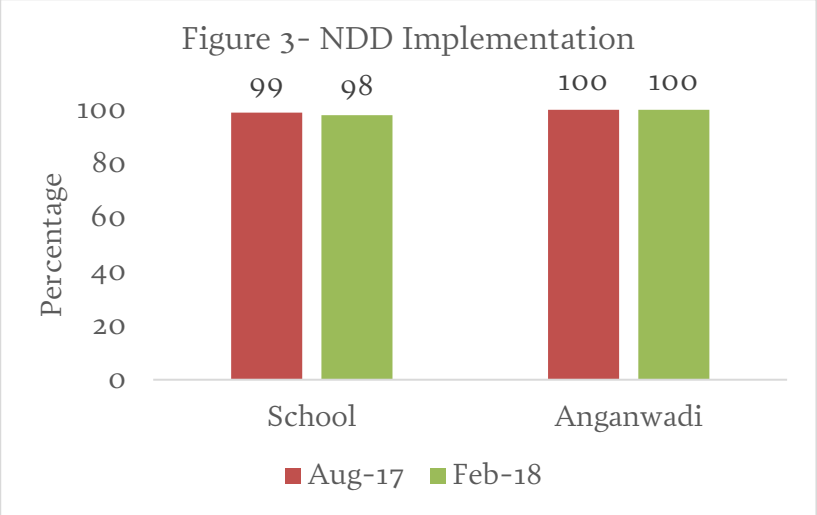
block-level education officers (school inspectors) at schools and Child Development Program Officers at *anganwadis*. Ninty-eight percent of schools and 100% of *anganwadis* received tablets for deworming and 96% of schools and 97% of *anganwadis* received posters/banners (Annex-Table PM4). The availability of reporting forms at schools and *anganwadis* would help in timely reporting of coverage data, as per findings, 95% of schools and 96% of *anganwadis* received handouts/reporting forms (Annex- Table PM4). Around, 90% of schools and 95% of *anganwadis* reported having received sufficient drugs for deworming (Annex-Table PM3).

Among sampled private schools, 91% received tablets for deworming and 92% of these schools reported having received a sufficient quantity of the tablets (Annex- Table PM7).

Source of Information about Recent Round of NDD

SMS was the most reported mode of information on NDD in schools (55%) and *anganwadis* (47%) followed by training among teachers (50%) and *anganwadi workers* (55%). Another important source of information was television, which was reported by 47% of schools and 45% of *anganwadis*. Gram Pradhan/Panchayati Raj Institutions were the least effective source of information for the current round in both schools (3%) and *anganwadis* (3%) (Annex- Table PM1).

NDD Implementation



The percentage of schools and *anganwadis* that conducted deworming has remained high and consistent (Figure 3). The finding shows that around 98% of schools and 100% of *anganwadis* dewormed children either on NDD or mop-up day (Annex- Table PM3). Drugs administered to unregistered (65%) and out-of-school children (74%) has improved by 11 percentage points and 17 percentage points respectively in comparison to August 2017 round. Only half (51%) of AWWs reported that ASHAs were present at the *anganwadi center* on NDD or mop-up day. There is a need to increase the role of ASHAs in community mobilization to achieve improved coverage of the 1-5 years unregistered and 6-19 years out-of-school children.

Adverse Events – Knowledge and Management

Interviews with teachers and AWWs revealed moderate level of awareness regarding potential adverse events due to deworming and understanding of the protocols to follow in the case of such events. Vomiting was listed as one of the side effects by about 77% of schools and 78% of *anganwadis* followed by nausea by 72% of schools and 68% of *anganwadis* (Annex- Table PM6).

Out of total sampled, 69% of headmasters/teachers and 72% of *anganwadi* workers mentioned giving ORS/ water to a child experiencing adverse events. Further, 68% of headmasters/teachers and 64% of *anganwadi* workers mentioned making the child lie down in open and shaded place in case of any side effects. Eighty-three percent of headmasters/teachers and 87% of *anganwadi workers* mentioned the availability of the contact numbers of the nearest Auxiliary Nurse Midwife (ANM) or Medical officer of Primary Health Centre (MO-PHC), so they can contact them if symptoms persisted (Annex- Table PM6). Sixty-seven percent of of private school teachers reported knowledge of the need to call to a Primary Health Centre (PHC) doctor if the child continues to report the symptoms of an adverse event.

Recording Protocol

As per coverage validation data, 45% of schools and 63% of *anganwadis* followed the correct recording protocols, which is a declin of 23 percent points and 10 percent points respectively in schools and *anganwadis* compared to the August 2017 round. Around 45% of schools and 22% of *anganwadis* followed partial protocols (marking down different symbols or making lists of dewormed children). However, 23% of schools and 15% of *anganwadis* did not follow any protocol or keep records of dewormed children (Annex-Table CV3).

As recommended in NDD guidelines, teachers and AWWs were supposed to retain a copy of reporting forms; 96% of teachers who were interviewed and 97% of AWWs were aware of this requirement. Further, the reporting form was available in 71% schools and 65% *anganwadis*.

ASHAs are required to prepare a list of out-of-school children and children not registered in *anganwadis* and submit it to AWWs. However, only 22% of *anganwadis* received list of unregistered children (1-5 years) and 43% received the list of out-of-school children (6-19 years) (Annex CV1). Almost half (53%) of ASHA workers (who were available at the *anganwadis* at the time of surveyors visit) reported receiving incentive for the last round of NDD.

Coverage Validation

Coverage validation provides an opportunity to assess the accuracy of reported data and verify government-reported treatment figures. Verification factors[1] are common indicators to measure the accuracy of reported treatment values for neglected tropical disease control programs.[2] Coverage validation 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 overall state-level verification factors for children dewormed at schools and *anganwadis* were 0.67 and 0.88 respectively. This indicates that on an average, for every 100 dewormed children reported by the school, sixty-seven were verified either through

[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.

single/double tick or through any other available documents at the schools. Similarly, for every 100 dewormed children reported by the *anganwadis*, eighty-eight were verified through available documents.

However, category-wise verification factors in *anganwadis* for registered (1-5 years), unregistered (1-5 years) and out-of-school (6-19 years) children were 0.97, 0.69 and 0.69 **(Annex-Table CV3)**. The data suggests over reporting of coverage figures particularly for unregistered and out-of-school children in *anganwadis*, therefore, highlighting a need for proper record keeping. Further, interview of children suggests that majority of the children present on NDD or mop-up day (81%) almost all received deworming tablets (96%) but only 77% consumed. Among those children who consumed albendazole, 95% was reported to be consumed it under supervision (Annex-Table CV4).

Against the state government reported 92% coverage in schools and 95% for 1-5 years registered children in *anganwadis*, attempts were made to understand the maximum number of children that could have been dewormed in 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 98% of schools conducted deworming on either NDD or mop-up day (Annex-Table CV1), a maximum of 81% children were in attendance (Annex-Table CV3), 96% children received an albendazole tablet, and 95% children reported to consume the tablet under supervision (Annex-Table CV4). Considering these factors, 72%[3] (0.98*0.81*0.96*0.95) of enrolled children could have been dewormed in the 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 92% (0.97*0.95) of children in *anganwadis* could have been dewormed in category of 1-5 years registered children. 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 factors needs to be interpreted with caution.

Recommendations

The key recommendations based on the above findings are as follows:

1. Training attendance has slightly declined but still remained high in both schools and *anganwadis* in the last NDD round compared to August 2017. Emphasis is required to improve the participation of private schools by strengthening private school engagement through participation of their representatives at district-level coordination committee meetings, and special meetings called by district and block education officers. The state should continue communicating to the District Magistrates and informing them about their role in strengthening private school engagement in the NDD program.

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[3]This was estimated on the basis of NDD implementation status (98%), maximum attendance on NDD and mop-up day (81%), children received albendazole (96%) and supervised drug administration (95%). In absence of children's interview in *anganwadis*, the Government reported coverage was adjusted by implying state-level verification factor.

2. Procurement and distribution of drugs and printing of IEC and training materials was planned as per the agreed work plan, but the preponement of NDD date due to the state assembly elections resulted in low integrated distribution of NDD materials during training. Better planning is required to work upon priorities in view of anticipated state specific events like an assembly election.

3. The proportion of schools and *anganwadi*s receiving SMSs for current round shows an improvement from the previous round. Efforts are required to continue updating the contact database of frontline functionaries to ensure its effective use for communication and information sharing on NDD program.

4. Role of ASHAs in mobilizing unregistered and out-of-school children needs to be strengthened. Concerted efforts are required to engage with the state ASHAs cell to be more actively engaged in the planning and dissemination of necessary communication/guidelines on both roles and responsibilities and the disbursement of incentives. Field level activities like community mobilization should be initiated well in advance to provide sufficient time for community mobilization activities in the state.

5. Emphasis must be given to improve attendance of children in schools on NDD days to achieve high NDD coverage in the state. The state education department needs to ensure maximum attendance of children in schools by sending specific directives to district and block level education officials, ensure household visits by teachers including sending reinforcement messages to teachers by using WhatsApp groups and regular SMS platforms.

ANNEXURE

Table PM 1: Training and source of information about NDD among teachers/headmasters and *anganwadi* workers, January 2018

Indicators	School			Anganwadi		
	Denominator	Numerator	%	Denominator	Numerator	%
Attended training for current round of NDD	153	138	90	152	145	95
Ever attended training for NDD[4]	153	139	91	152	145	95
Never attended training for NDD	153	14	9	152	7	5
Reasons for not attending NDD training (Multiple Response)						
Location was too far away	14	1	7	7	1	14
Did not know the date/timings/venue	14	9	64	7	1	14
Busy in other official/personal work	14	2	14	7	4	57
Not necessary	14	0	0	7	1	14
Trained teacher that provided training to other teachers in their schools						
All other teachers	138	78	51	NA	NA	NA
Few teachers	138	39	25	NA	NA	NA
No (himself/herself only teacher)	138	13	8	NA	NA	NA
No, did not train other teachers	138	9	6	NA	NA	NA
Source of information about current NDD round (Multiple Response)						
Television	153	72	47	152	68	45
Radio	153	18	12	152	18	12

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

Indicators	School			Anganwadi		
	Denominator	Numerator	%	Denominator	Numerator	%
Newspaper	153	69	45	152	46	30
Banner	153	33	22	152	35	23
SMS	153	84	55	152	72	47
Other school/teacher/*anganwadi* worker	153	13	9	152	21	14
WhatsApp message	153	8	5	152	1	1
Training	153	76	50	152	83	55
Gram Pradhan /PRI	153	4	3	152	5	3
Others[5]	153	10	7	152	21	14
Received SMS for current NDD round	153	108	71	152	93	61
Probable reasons for not receiving SMSs						
Changed Mobile number	45	13	30	59	15	25
Other family members use this number	45	3	6	59	17	29
Number not registered to receive such messages	45	15	34	59	12	20
Others[6]	45	14	31	59	15	25

[5] Other mainly include inspector of school, CDPO, MPW and *anganwadi* supervisor.
[6] Others mainly include network problem or respondent was not aware about the reason.

Table PM 2: Awareness about NDD among teachers/headmasters and *anganwadi* workers, January 2018

Indicators	School			Anganwadi		
	Denominator	Numerator	%	Denominator	Numerator	%
Awareness about the ways a child can get worm infection	153	144	94	152	138	91
Different ways a child can get worm infection (Multiple Response)						
Not using sanitary latrine	144	104	72	138	102	74
Having unclean surroundings	144	108	75	138	97	70
Consume vegetables and fruits without washing	144	79	55	138	81	59
Having uncovered food and drinking dirty water	144	58	40	138	55	40
Having long and dirty nails	144	94	65	138	86	62
Moving in bare feet	144	80	56	138	79	57
Having food without washing hands	144	78	54	138	73	53
Not washing hands after using toilets	144	50	35	138	55	40
Awareness about all the possible ways a child can get a worm infection[7]	144	11	8	138	10	7
Perceives that health education should be provided to children	153	141	92	152	138	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)	NA	NA	NA	152	128	84
2-3 years of children (Crush one full tablet between two spoons,	NA	NA	NA	152	58	38

[7]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.

and administer with water)						
3-5 years of children (one full tablet and child chewed the tablet properly)	NA	NA	NA	152	140	92
6-19 years of children (one full tablet and child chewed the tablet properly)	153	146	95	152	150	99
Awareness about non-administration of albendazole tablet to sick child						
Will administer albendazole tablet to sick child	153	21	13	152	29	19
Will not administer albendazole tablet to sick child	153	132	87	152	123	81
Awareness about consuming albendazole tablet						
Chew the tablet	153	150	98	152	146	96
Swallow the tablet directly	153	3	2	152	6	4
Awareness about consuming albendazole in school/*anganwadi*	153	152	99	152	151	99
Awareness about the last date (January 25, 2018) for submitting the reporting form	153	103	67	152	92	61
Awareness about submission of reporting forms to ANM by January 25, 2018	153	132	86	152	122	80
Awareness to retain a copy of the reporting form	153	147	96	152	148	97

Table PM 3: Deworming activity, drug availability, and list of unregistered and out-of-school children, January 2018

Indicators	School			Anganwadi		
	Denominator	Numerator	%	Denominator	Numerator	%
Albendazole tablet administered on the day of visit						
Yes, ongoing	153	64	42	152	61	40
Yes, already done	153	56	37	152	67	44
Yes, after sometime	153	28	18	152	13	9
No, will not administer today	153	5	3	152	11	7
Schools/*anganwadis* conducted deworming on either of the day[8]	153	148	97	152	141	93
Schools/*anganwadis* conducted deworming on NDD[9]	79	76	96	78	73	94
Schools/*anganwadis* conducted deworming on Mop-Up Day[10]	74	72	98	74	68	92
Reasons for not conducting deworming						
No information	5	5	100	11	11	100
Attendance on NDD[11]	14376	8744	61	NA	NA	NA
Attendance on Mop-Up Day[12]	8980	4973	55	NA	NA	NA
Anganwadis having list of unregistered/out-of-school children	NA	NA	NA	152	70	46
Out-of-school children (Age 6-19 years) administered albendazole tablet	NA	NA	NA	152	112	74

[8]Schools/*anganwadis* administered albendazole tablet to children either on NDD or Mop-Up Day
[9]Based on the samples visited on NDD.
[10]Based on the samples visited on Mop-Up Day only.
[11] Based on those schools conducted deworming on NDD
[12] Based on those schools conducted deworming on Mop-Up-Day

Unregistered children (Age 1-5 years) administered albendazole tablet	NA	NA	NA	152	99	65
Sufficient quantity of albendazole tablets[13]	150	134	90	152	144	95

Table PM 4: Integrated distribution of albendazole tablets and IEC materials, January 2018

Indicators	Schools			*Anganwadi*		
	Denominator	Numerator	%	Denominator	Numerator	%
Items received by school teacher and *anganwadi* worker						
Albendazole tablet	153	150	98	152	152	100
Poster/banner	**153**	147	96	152	148	97
Handouts/ reporting form	**153**	145	95	152	146	96
Received all materials	**153**	141	92	152	143	94
Items verified during Independent Monitoring						
Albendazole tablet	150	145	97	152	145	95
Poster/banner	147	144	98	148	145	98
Handouts/ reporting form	145	139	96	146	140	96
Received all materials	141	129	92	143	132	92
No of school teachers/*anganwadi* worker attended training and received items during training						
Albendazole tablet	136	121	89	145	141	97
Poster/banner	135	130	97	141	140	99
Handouts/ reporting form	132	129	97	139	136	98
Received all materials	129	114	88	136	130	96
Integrated Distribution of albendazole tablet IEC and training materials [14]	153	114	74	152	130	86

[13] This indicator is based on the sample that received albendazole tablet.

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

Table PM 5: Implementation of deworming activity and observation of surveyor, January 2018

Indicators	Schools			Anganwadi		
	Denominator	Numerator	%	Denominator	Numerator	%
Deworming activity was taking place	64	57	89	61	57	93
Albendazole tablets were administered by						
Teacher/headmaster	64	63	98	61	3	5
Anganwadi worker	64	1	1	61	56	92
ASHA	64	0	0	61	2	3
ANM	64	1	1	61	0	0
Teacher/Anganwadi worker asked children to chew the tablet	64	62	97	61	58	95
Followed any recording protocol[15]	121	115	95	128	117	91
Protocol followed						
Putting single/double tick	115	96	84	117	92	77
Put different symbols	115	5	5	117	6	4
Prepare the separate list for dewormed	115	14	12	117	27	19
Visibility of poster/banner during visits	147	137	93	148	139	94

Table PM 6: Awareness about Adverse events and Its Management, January 2018

Indicators	Schools			Anganwadi		
	Denominator	Numerator	%	Denominator	Numerator	%
Opinion of occurrence of an adverse event after administering	153	112	73	152	109	72

[15]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.

albendazole tablet						
Awareness about possible adverse events (Multiple Response)						
Nausea	112	81	72	109	74	68
Vomiting	112	86	77	109	85	78
Diarrhea	112	30	27	109	31	28
Fatigue	112	7	6	109	6	6
Awareness about mild adverse event management						
Make the child lie down in open and shade/shaded place	153	105	68	152	97	64
Give ORS/water	153	106	69	152	109	72
Observe the child at least for 2 hours in the school	153	52	34	152	40	26
Don't know/don't remember	153	4	3	152	9	6
Awareness about severe adverse event management						
Call PHC or emergency number	153	90	59	152	96	63
Take the child to the hospital /call doctor to school	153	98	64	152	97	64
Don't know/don't remember	153	1	1	152	4	3
Available contact numbers of the nearest ANM or MO-PHC	153	128	83	152	132	87
Asha present in Anganwadi center	NA	NA	NA	152	78	51

Table PM 7: Selected Indicators of Process Monitoring in Private Schools, January 2018

Indicators[16]	Denominator	Numerator	%
Attended training for current round of NDD	26	18	68
Received albendazole tablets	26	24	91
Sufficient quantity of albendazole tablets	24	22	92
Received poster/banner	26	24	91
Received handouts/ reporting form	26	24	91
Received SMS for current NDD round	26	15	58
Albendazole administered to children	26	22	85
Reasons for not conducting deworming			
No information	4	4	100
Albendazole tablet administered to children by teacher/headmaster[17]	13	13	100
Perceive that health education should be provided to children	26	23	87
Awareness about correct dose and right way of albendazole administration	26	25	95
Awareness about non-administration of albendazole tablet to sick child	26	22	86
Opinion of occurrence of an adverse event after taking albendazole tablet	26	18	71
Awareness about occurrence of possible adverse events			
Nausea	18	13	72
Vomiting	18	16	89
Diarrhea	18	9	50
Fatigue	18	2	11
Awareness about mild adverse event management			
Let the child rest in an open and shaded place	26	17	65
Provide clean water to drink/ORS	26	16	63
Contact the ANM/nearby PHC	26	17	67

[16]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

[17]This indicator is based on samples where deworming was ongoing.

Available contact numbers of the nearest ANM or MO-PHC	26	22	84
Followed correct[18] recording protocol	18	11	63

Table PM 8: Indicators on Hygiene

Indicators	Schools			Anganwadi		
	Denominator	Numerator	%	Denominator	Numerator	%
Visibility of poster for hand washing and Nail cutting during visits[19]	153	111	73	152	127	84
Visibility of poster for sanitation and Hygiene during visits	153	110	72	152	112	74
Children/student wash their hands before administration of deworming tablet	153	128	84	152	127	84
Children/student cut their nail before administration of deworming tablet	153	112	73	152	100	66

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[20]	393	386	98	400	400	100
	Percentage of government schools conducted deworming	259	257	99	Not Applicable		
	Percentage of private schools conducted	134	129	97	Not Applicable		

[18]Correct recording protocol implies putting single tick (✓) on NDD and double tick (✓✓) for all those children administered albendazole tablets.
[19]This indicator based on the sample who received poster for hand washing and nail cutting.
[20]Schools and *anganwadis* that conducted deworming on NDD or mop-up day.

	deworming						
1a	Percentage of School and *anganwadis* administered albendazole on day of - **(Multiple Response)**						
	a. National Deworming Day	386	349	90	400	381	95
	b. Mop-Up Day	386	284	73	400	291	73
	c. Between NDD and Mop-Up Day	386	26	7	400	13	3
	d. Both days (NDD and Mop-Up day)	386	272	70	400	289	72
1b	Reasons for not conducting deworming						
	a. No information	7	3	44	0	0	0
	b. Drugs not received	7	3	39	0	0	0
	c. Apprehension of adverse events	7	0	0	0	0	0
	d. Others[21]	7	1	17	0	0	0
2	Percentage of schools and *anganwadis* left over with Albendazole tablet after deworming	386	222	57	400	212	53
2a	Number of albendazole tablets left after deworming						
	a. Less than 50 tablets	222	173	78	212	212	100
	b. 50-100 tablets	222	16	7	212	0	0
	c. More than 100 tablets	222	33	15	212	0	0
3	Copy of reporting form was available	386	275	71	400	259	65

[21] Other includes “vacations are ongoing and sessions are not started yet”.

	for verification						
	Copy of filled-in reporting form was available for verification in Government school	257	194	76	Not Applicable		
	Copy of filled-in reporting form was available for verification in Private school	129	81	63	Not Applicable		
3a	Reasons for non-availability of copy of reporting form[22]						
	a. Did not received	104	5	5	120	3	3
	b. Submitted to ANM	104	43	41	120	74	62
	c. Unable to locate	104	32	31	120	17	14
	d. Other[23]	104	24	23	120	26	22
4	Percentage of *Anganwadi* center where ASHA administered albendazole	Not Applicable			400	142	36
5	*Anganwadis* having list of unregistered children (Aged 1-5 years)	Not Applicable			400	87	22
6	*Anganwadis* having list of out-of-school children (Aged 6-19 years)	Not Applicable			400	170	43

[22]In 7 schools and 21 anganwadis blank reporting form was available.
[23] Other includes mainly Headmaster was absent during survey, already submitted to ISO/ block nodal office and in process of submission.

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

Sr. No.	Indicators	Anganwadis		
		Denominator	Numerator	%
1	ASHA[24] conducted meetings with parents to inform about NDD	198	176	89
2	ASHA prepared list of unregistered and out-of-school children	198	124	63
3	ASHA shared the list of unregistered and out-of-school children with *anganwadis* teacher	124	112	90
4	ASHA administered albendazole to children	198	140	71
5	ASHA received incentive for NDD Aug 2017 round	198	105	53

Table CV3: Recording protocol, verification, inflation and attendance in schools and *anganwadis*

Sr.No.	Indicators	Schools/Children			Anganwadis/Children		
		Denominator	Numerator	%	Denominator	Numerator	%
1	Followed correct[25] recording protocol	382	171	45	400	251	63
2	Followed partial[26] recording protocol	382	122	45	400	89	22
3	Followed no[27] recording protocol	382	89	23	400	61	15

[24] 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.

[25]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.

[26]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.

	Followed correct recording protocol in government school	256	135	53	Not Applicable		
	Followed correct recording protocol in private school	127	37	29	Not Applicable		
4	State-level verification factor[28](Children enrolled/registered)	30,062	19,994	67	9417	8334	88
	a. Children registered with *anganwadis*	Not Applicable			6,444	6,276	97
	b. Children unregistered with *anganwadis* (Aged 1-5)	Not Applicable			1,078	748	69
	c. Out-of-school children (Aged 6-19)	Not Applicable			1,895	1,310	69
5	Attendance on previous day of NDD (Children enrolled)	46,831	29,435	63	Not Applicable		
6	Attendance on NDD (Children enrolled)	46,831	31,401	67	Not Applicable		
7	Attendance on Mop-Up Day (Children enrolled)	46,831	28,374	61	Not Applicable		
8	Children who attended on both	46,831	21,999	47	Not Applicable		

[27]No protocol includes all those schools where none of the classes followed any protocol to record the information of dewormed children.
[28]Ratio of recounted value of the dewormed children to the reported value. This calculation is based on only those schools (n=275) and *anganwadis* (n=259) where deworming was conducted and copy of reporting form was available for verification.

	NDD and Mop-Up Day (Children enrolled)				
9	Maximum attendance of children on Deworming Day and Mop-Up Day[29] (Children enrolled)	46,831	37,776	81	Not Applicable
10	Estimated NDD coverage[30],[31]	72			92
11	Estimated NDD coverage in government school	74			Not Applicable
12	Estimated NDD coverage in private school	68			Not Applicable

Table CV4: Description on children (6-19 years) interviewed in the schools (n=386) during coverage validation

Sr.No.	Indicators	Denominator	Numerator	%
1	Children received Albendazole tablets	1158	1109	96
2	Children aware about the Albendazole tablets	1109	1057	95
	Source of information about deworming among children (Multiple response)			
3	a. Teacher/school	1057	997	94
	b. Television	1057	176	17

[29]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.
[30] 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.*
[31]This was estimated by implying state-level verification factor on government reported coverage for 1-5 years registered children in AWC.

	c. Radio	1057	31	3
	d. Newspaper	1057	86	8
	e. Poster/Banner	1057	181	17
	f. Parents/siblings	1057	92	9
	g. Friends/neighbours	1057	60	6
4	Children aware about the worm infection	1057	958	91
5	Children awareness about different ways a child can get worm infection (Multiple response)			
	a. Not using sanitary latrine	958	847	88
	b. Having unclean surroundings	958	237	25
	c. Consume vegetables and fruits without washing	958	210	22
	d. Having uncovered food and drinking dirty water	958	188	20
	e. Having long and dirty nails	958	287	30
	f. Moving in bare feet	958	162	17
	g. Having food without washing hands	958	198	21
	h. Not washing hands after using toilets	958	45	5
6	Children consumed Albendazole tablet	1109	851	77
7	Way children consumed the tablet[32]			
	a. Chew the tablet	848	814	97
	b. Swallow tablet directly	848	33	4
8	Supervised administration of tablets	848	802	95
9	Reasons for not consuming Albendazole tablet			
	a. Feeling sick	258	69	27

[32] It is calculated for 848 and 3 cases are missing.

	b. Afraid of taking the tablet	258	67	26
	c. Parents told me not to have it	258	61	24
	d. Do not have worms so don't need it	258	30	12
	e. Did not like the taste	258	32	13