

Evidence  
**Action**

Deworm the  
World Initiative



Independent Monitoring of  
National Deworming Day in Tripura  
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 the NDD program with an objective of identifying gaps and suggesting recommendations for improvements in future NDD rounds. Process monitoring is conducted to understand the 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.

Tripura observed the August 2018 round of NDD on August 10, followed by mop-up day on August 20. Fieldwork for process monitoring was conducted on August 10 and 20, while coverage validation in the state was conducted August 27 to 31.

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, across all eight districts of the state a total of 160 schools (121 government schools and 39 private schools) and 160 *anganwadis* were covered for process monitoring visits during NDD and mop-up days, and 400 schools (299 government schools, 93 private schools and 8 Madarsa) and 400 *anganwadis* 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 the state government. One combined tool for process monitoring was used 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-days training each for process monitoring and coverage validation of 80 surveyors and 16 supervisors. The training included an orientation on NDD, the importance of independent monitoring, details of the monitoring formats including CAPI (Computer Assisted Personal Interview) practices and 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 having with latest CAPI version downloaded, 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 monitors did not contact schools and *anganwadis* in advance, as this could cause bias in the results.

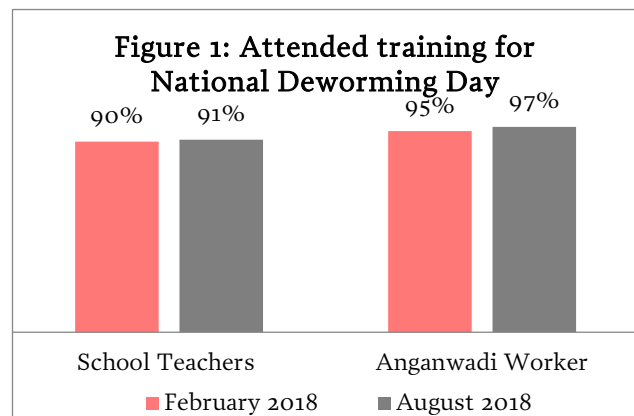
Appropriate quality assurance measures were taken to ensure that the data collected was accurate, consistent and authenticated. For example, teachers and *anganwadi* workers (AWWs) were asked to sign a participation form with an official stamp to authenticate

surveyor visits to schools or *anganwadis*. Further, consent based thumb impression of all survey respondents in electronic mode including headmasters, teachers, *anganwadi* workers, ASHAs and children was also collected for verification purposes. The GPS location along with a time stamp and photographs of all schools and *anganwadis* visited during data collection was also collected through CAPI to authenticate the location and f the time of the interview. Evidence Action reviewed all data sets and shared feedback with the agency for any inconsistencies observed and ensured timely corrective actions. Analysis was done 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. Ninety-one percent of teachers and 97% 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. Training in schools and *anganwadis*

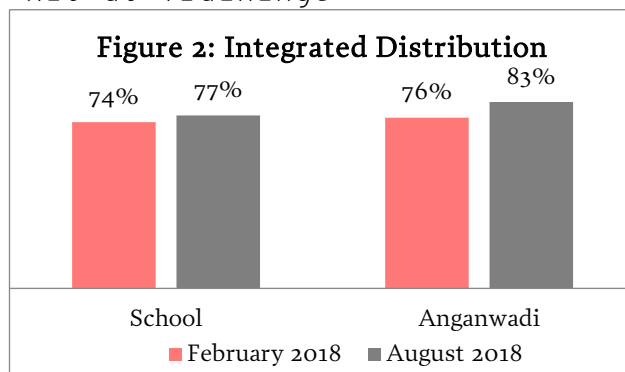


remained almost the same as the previous round, with a marginal increase of one percentage point in schools and two percentage points in *anganwadis* (Figure 1). Attendance of private schools in training was 81% and it is increased by 13 percentage points compared to the February 2018 round (Annex- Table PM7).

Among those who did not attend the training, 41% of teachers 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). Fifteen percent of teachers and 21% of AWWs reported that they did not receive an SMS about NDD against 29% in schools and 39% of *anganwadis* in the February 2018 round. Although it showed an improvement compared to the last round; the most probable reported reason for teachers and AWWs not attending training was the sub-optimal delivery of SMS due to contact numbers not being registered, followed by other family members using the registered number and absence of updated database of mobile numbers (Annex Table PM1).

### *Integrated Distribution of NDD Kit at Trainings*

Integrated distribution of the NDD kit was (77%) for schools and (83%) for *anganwadis* (Figure 2). In schools it increased by three percentage points and seven percentage points in *anganwadis* from the February 2018 round. Drug availability and their distribution at schools and *anganwadis* was ensured by the school inspector, ICDS supervisor and Block Nodal Officer (BNO), leading to 100% of schools and *anganwadis* reporting to have received deworming drugs (Annex-Table PM4).



Ninety-three percent of schools and 98% of *anganwadis* received posters/banners, while 96% of schools and *anganwadis* received handouts/reporting forms (Annex-Table PM4). Ninety-six percent of schools and 94% of *anganwadis* reported having received sufficient drugs for deworming (Annex-Table PM3).

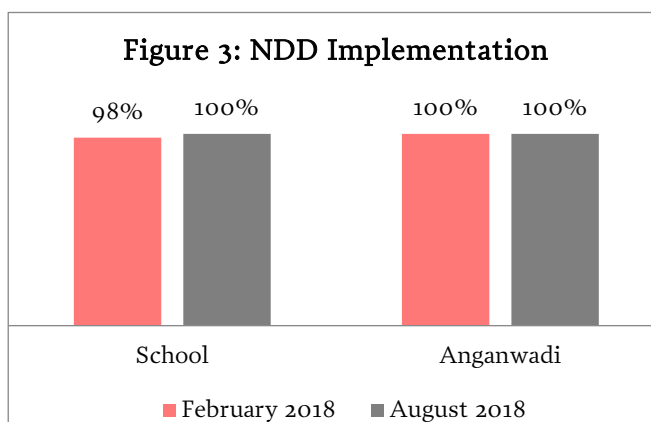
Among the sampled private schools, 100% received deworming drugs and among those, 98% reported having received a sufficient quantity. Further, 77% of the private schools covered during process monitoring received posters/banners and 87% received handouts/reporting forms. (Annex Table PM7).

### *Source of Information about the Recent Round of NDD*

Training was the most reported source of information in schools (56%) and *anganwadis* (67%) on NDD. Forty-five percent of schools and 34% of *anganwadis* reported that they received information about NDD through SMS. Forty-six percent of schools and 36% of *anganwadis* reported hearing about NDD from Television. For school teachers/AWWs, Radio and WhatsApp messages were the least effective source of information about NDD for the current round (Annex Table PM1).

### *NDD Implementation*

All the schools and *anganwadis* covered during coverage validation reported to conduct deworming (Figure 3). Out of the total 800 sampled schools and *anganwadi* s only three sites did not conduct deworming and the major reason reported was that they did not receive information about NDD. (Annex- Table CV1). Out of all the schools and *anganwadis* visited during process monitoring, surveyors were able to observe deworming activities in 96% of schools and 99% of *anganwadis* (Annex- Table PM5).



## *Adverse Events- Knowledge and Management*

Interviews with headmasters/teachers and *anganwadi* workers reveals a moderate level of awareness (76% in schools and 75% in *anganwadis*) regarding potential adverse events due to deworming. A considerable knowledge gap was observed on appropriate protocols to follow in the case of such events. Mild abdominal pain and nausea was listed as a side effect by 89% of teachers and 88% of AWWs, followed by vomiting (73% in school and 78% in *anganwadi*). Further, 91% of teachers and 89% of AWWs knew to make a child lie down in an open/shaded place in the case of any mild adverse events, and around 67% of schools and 60% of *anganwadis* knew to give ORS/water. Only 22% of schools and 24% of AWWs were aware of the need to observe the child for at least two hours following deworming treatment. Further, 71% of schools and *anganwadis* reported to know the need to call a PHC doctor if symptoms persisted (Annex- Table PM6).

### **Recording Protocol**

Seventy-two percent of schools and 76% of *anganwadis* followed the correct (single and double ticks) recording protocol. Around 18% of schools and 15% of *anganwadis* carried out partial recording<sup>1</sup>. Nine percent of schools and *anganwadis* did not follow any protocol to record the information of dewormed children (Annexure- CV3). Further, as per NDD guidelines, all schools and *anganwadis* are supposed to retain a copy of reporting forms however, 71% of schools and 65% of *anganwadi* retained a copy of reporting forms for verification (Annex -Table CV1). The findings from process monitoring suggests that 97% of schools and 98% 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 *anganwadi* workers. However, only 17% of *anganwadis* reported to have the list of unregistered (1-5 years) children and 47% reported having the list of out-of-school children (6-19 years) (Annex – Table CV1). Of the ASHAs interviewed during coverage validation (who were available at the *anganwadis* at the time of surveyors visit), 66% reported to prepare the list of unregistered and out-of-school children. Out of these only 87% had shared it with the *anganwadi* workers and only a mere 26% of ASHA workers reported receiving incentives for the last round of NDD (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<sup>2</sup> are common indicators to measure the accuracy of reported treatment values for neglected tropical disease control

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<sup>1</sup>Partial recording protocol includes schools/*anganwadi* where all the classes/register did not follow correct protocol, but put different symbol and prepared separate list to be record the information of dewormed children.

<sup>2</sup>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.

programs<sup>3</sup>. 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 0.55, indicating that on an average, for every 100 dewormed children reported by the school, fifty-five were verified either 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 0.95, indicating that on an average; for every 100 dewormed children reported by the *anganwadi*, ninety-five were verified through available documents (Annex –Table CV3).

However, category-wise verification factors for registered (1-5 years), unregistered (1-5 years) and out-of-school (6-19 years) children were 0.92, 1.40, and 0.97 respectively for *anganwadis* (Annex – Table CV3). The data suggests reporting and aggregation error of coverage figures in *anganwadis* and thus highlights a need for proper record keeping. 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 (100%) the albendazole tablet on either NDD or mop-up day.

Against the state government reported 87% coverage in schools and 89% 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 100% of schools conducted deworming on either NDD or mop-up day (Annex-Table CV1), a maximum of 86% of children were in attendance (Annex-Table CV3), 98% of children received an albendazole tablet, and 99% of children reported to consume the tablet under supervision (Annex-Table CV4). Considering these factors, 83%<sup>4</sup> ( $1.00 \times 0.86 \times 0.98 \times 0.99$ ) 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 88% ( $0.96 \times 0.92$ ) 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.

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<sup>3</sup>WHO (2013), Data Quality Assessment tool for Neglected Tropical Diseases: Guidelines for Implementation December 2013.

<sup>4</sup> This was estimated on the basis of NDD implementation status (100%), maximum attendance on NDD and mop-up day (86%); children received albendazole (98%) and supervised drug administration (99%). In absence of children interview in *anganwadis*, the government reported coverage was adjusted by implying state level verification factor.

## Recommendations

The following are key recommendation for program improvements that emerged from the process monitoring and coverage validation exercise.

1. Training participation of teachers and *anganwadi* workers in the current NDD round has showed a marginal improvement from the previous round. The reasons for this increase were the reinforcement messages sent through SMS and intimation to officials during state training. To improve it further, reinforcement and timely intimation for the training should be made to ensure maximum attendance during training. District/block level officials must ensure private school teachers' participation during training to further improve the training attendance and subsequently to strengthen the program.
2. Integrated distribution is a critical part of the NDD program. Although it has shown an improvement compared to the last round, further efforts should be made to improve integrated distribution for better alignment of the distribution cascade (NDD kits) and hand over of NDD kits to teachers and *anganwadi* workers at the time of training.
3. Adherence to correct recording protocols has improved significantly from February 2018 to August 2018 in both schools and *anganwadis*. There is scope for further improvement. Greater emphasis on recording protocols during block level trainings can improve the quality of data management and documentation in subsequent rounds. Practical sessions on recording protocols for teachers and *anganwadi* workers can also be organized during block level trainings to make them aware on the recording procedure.
4. Despite efforts made towards greater involvement of ASHAs in mobilization of unregistered and out-of-school children; their involvement can still be greatly improved. The role of ASHAs in mobilizing unregistered and out-of-school children should be discussed in detail during trainings. Engagement with state ASHA cells at the planning stages of the program is crucial. Field level activities should be initiated at least two months prior to NDD to provide sufficient time for community mobilization activities.
5. Engaging private school through participation of their representatives in block and district level coordination committee meetings, and special meetings called by district and block education officers have contributed towards their better engagement. The state should continue to engage private schools as such.
6. Coverage validation findings showed a significant increase in estimated coverage in schools and a decrease in *anganwadis*. The increase in school estimated coverage may be attributed to an increase in deworming implementation status and maximum attendance. The decrease in *anganwadis* estimated coverage attributed to a decrease in the verification factor (for 1-5 registered children) in *anganwadis*. Though it is suggested to maintained a proper record and reporting procedure at *anganwadis*, it remains challenging for unregistered and out-of-school children.

## Annexure :

### Findings from Process Monitoring and Coverage Validation of National Deworming Day (NDD), August 2018, Tripura

**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	8
Number of districts covered under process monitoring	8
Number of trained surveyors deployed during process monitoring	80
Number of blocks <sup>5</sup> covered during process monitoring	40
Total number of schools covered	160
• Number of government schools covered <sup>6</sup>	121
• Number of private schools covered	39
Total number of <i>anganwadis</i> covered <sup>7</sup>	160
• Number of districts covered under coverage validation	8
Number of trained surveyors deployed during coverage validation	96
Number of blocks in the state	40
• Number of blocks in NDD districts	40
• Number of blocks <sup>8</sup> covered through coverage validation	40
Total number of schools covered	400
• Total number of government schools covered <sup>9</sup>	299
• Total number of private schools covered	93
• Madarasa	8

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<sup>5</sup>These are sampled blocks selected from UDISE data.

<sup>6</sup>These are the actual schools covered during NDD and mop-up day visits. Numbers given in subsequent tables (numerator and denominator) are weighted

<sup>7</sup>These are the actual *anganwadis* covered during NDD and mop-up day visits. Numbers given in subsequent tables (numerator and denominator) are unweighted.

<sup>8</sup>These are sampled blocks selected from U-DISE data, 2017-18.

<sup>9</sup>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.



Total number of <i>anganwadis</i> covered <sup>10</sup>	400
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**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	160	146	91	160	155	97
Ever attended training for NDD <sup>11</sup>	160	146	91	160	155	97
Never attended training for NDD	160	14	9	160	5	3
Reasons for not attending current NDD round training (Multiple Response)						
Location was too far away	14	0	0	5	0	0
Did not know the date/timings/venue	14	6	41	5	0	0
Busy in other official/personal work	14	3	19	5	2	40
Attended deworming training in the past	14	0	0	5	0	0
Not necessary	14	1	7	5	2	40
No incentives/no financial support	14	1	6	5	0	0
Trained teacher that provided training to other teachers in their schools						
All other teachers	146	70	48	Not Applicable		
Few teachers	146	45	31	Not Applicable		
No (himself/herself only teacher)	146	21	15	Not Applicable		
No, did not train other teachers	146	10	7	Not Applicable		

<sup>10</sup>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.

<sup>11</sup>Includes those school teachers and *anganwadi* workers who attended training either for NDD August 2018 or attended training in past.

Indicators	School			Anganwadi		
	Denominator	Numerator	%	Denominator	Numerator	%
Source of information about current NDD round (Multiple Response)						
Television	160	74	46	160	58	36
Radio	160	16	10	160	16	10
Newspaper	160	61	38	160	37	23
Banner	160	38	24	160	41	26
SMS	160	71	45	160	54	34
Others school/teacher/ <i>anganwadi</i> worker	160	10	6	160	31	19
WhatsApp message	160	27	17	160	4	3
Training	160	90	56	160	107	67
Others <sup>12</sup>	160	27	17	160	34	21
Received SMS for current NDD round	160	136	85	160	127	79
Probable reasons for not receiving SMS <sup>13</sup>						
Changed Mobile number	23	2	7	22	2	9
Other family members use this number	23	2	8	22	2	9
Number not registered to receive such messages	23	9	40	22	10	45
Others <sup>14</sup>	23	10	44	22	8	36

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

Indicators	School	Anganwadi
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<sup>12</sup>Others include: inspector of school, circular by education department, hospital, and monthly meeting.

<sup>13</sup> One Schools and 11 *Anganwadis* reported that they don't know about receiving the SMS and reasons were not asked to them.

<sup>14</sup>Other includes: don't know, did not checked the message, network problem, newly joined unaware of such messages.

	Denominator	Numerator	%	Denominator	Numerator	%
Awareness about the ways a child can get worm infection	160	156	98	160	157	98
Different ways a child can get worm infection (Multiple Response)						
Not using sanitary latrine	156	91	58	157	88	56
Having unclean surroundings	156	115	74	157	117	75
Consume vegetables and fruits without washing	156	97	62	157	79	50
Having uncovered food and drinking dirty water	156	64	41	157	50	32
Having long and dirty nails	156	82	53	157	82	52
Moving in bare feet	156	122	78	157	117	75
Having food without washing hands	156	108	69	157	114	73
Not washing hands after using toilets	156	70	44	157	58	37
Awareness about all the possible ways a child can get a worm infection <sup>15</sup>	156	14	9	157	8	5
Perceives that health education should be provided to children	160	159	99	160	157	98
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			160	153	96

<sup>15</sup>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.

2-3 years of children (Crush one full tablet between two spoons, and administer with water)	Not Applicable			160	119	74
3-5 years of children (one full tablet and child chewed the tablet properly)	Not Applicable			160	149	93
6-19 years of children (one full tablet and child chewed the tablet properly)	160	155	97	160	159	99
Awareness about non-administration of albendazole tablet to sick child						
Will administer albendazole tablet to sick child	160	9	5	160	8	5
Will not administer albendazole tablet to sick child	160	151	95	160	152	95
Awareness about consuming albendazole tablet						
Chew the tablet	160	159	99	160	159	99
Swallow the tablet directly	160	1	1	160	1	1
Awareness about consuming albendazole in school/ <i>anganwadi</i>	160	156	97	160	159	99
Awareness about the last date (Aug 25, 2018) for submitting the reporting form	160	98	62	160	95	59
Awareness about submission of reporting forms to ANM	160	20	13	160	5	3
Awareness to retain a copy of the reporting form	160	155	97	160	156	98

**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	160	80	50	160	70	44
Yes, already done	160	37	23	160	43	27
Yes, after sometime	160	4	3	160	7	4
No, will not administer today	160	39	24	160	40	25
Schools/ <i>anganwadis</i> conducted deworming on either of the day <sup>16</sup>	160	129	81	160	125	78
Schools/ <i>anganwadis</i> conducted deworming on NDD <sup>17</sup>	80	80	100	80	80	100
Schools/ <i>anganwadis</i> conducted deworming on Mop-Up Day <sup>18</sup>	80	41	51	80	40	50
Reasons for not conducting deworming						
No information	39	1	2	40	0	0
Albendazole tablet not received	39	0	0	40	0	0
Apprehension of adverse events	39	0	0	40	0	0
Already dewormed	39	8	20	40	5	12
Others <sup>19</sup>	39	30	78	40	35	88
Attendance on NDD <sup>20</sup>	14217	9956	70	Not Applicable		
Attendance on Mop-Up Day <sup>21</sup>	13094	8320	64	Not Applicable		
<i>Anganwadis</i> having list of unregistered/out-of-school children	Not Applicable			160	79	49
Out-of-school children (Age 6-19)	Not Applicable			160	118	74

<sup>16</sup>Schools/*anganwadis* administered albendazole tablet to children either on NDD or Mop-Up Day

<sup>17</sup>Based on the samples visited on NDD.

<sup>18</sup>Based on the samples visited on Mop-Up Day only.

<sup>19</sup>Others include: conducted deworming on August 18<sup>th</sup>, 2018.

<sup>20</sup>Based on those schools visited on NDD

<sup>21</sup>Based on those schools visited on Mop-Up-Day

years) administered albendazole tablet						
Unregistered children (Age 1-5 years) administered albendazole tablet	Not Applicable			160	111	69
Sufficient quantity of albendazole tablets <sup>22</sup>	160	154	96	160	151	94

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

Indicators	Schools			Anganwadi		
	Denominator	Numerator	%	Denominator	Numerator	%
<b>Items received by school teacher and <i>anganwadi</i> worker</b>						
Albendazole tablet	160	160	100	160	160	100
Poster/banner	160	148	93	160	156	98
Handouts/ reporting form	160	154	96	160	154	96
Received all materials	160	146	91	160	150	94
<b>Items verified during Independent Monitoring</b>						
Albendazole tablet	160	145	91	160	143	89
Poster/banner	148	142	96	156	152	97
Handouts/ reporting form	154	138	90	154	133	86
Received all materials	146	132	90	150	129	86
<b>No of school teachers/<i>anganwadi</i> worker attended training and received items during training</b>						
Albendazole tablet	146	127	87	155	144	93
Poster/banner	138	133	96	151	149	99
Handouts/ reporting form	142	138	97	149	146	98
Received all materials	146	123	84	150	133	89
Integrated Distribution of albendazole tablet IEC and training materials <sup>23</sup>	160	123	77	160	133	83

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

Indicators	Schools	Anganwadi
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<sup>22</sup>This indicator is based on the sample that received albendazole tablet.

<sup>23</sup> Integrated distribution of NDD kits includes albendazole, banner/poster and handout/reporting forms and provided to schools and AWC during the trainings.

	Denominator	Numerator	%	Denominator	Numerator	%
Deworming activity was taking place	80	77	96	70	69	99
Albendazole tablets were administered by						
Teacher/headmaster	77	64	83	69	10	14
Anganwadi worker	77	6	8	69	57	83
ASHA	77	0	0	69	2	3
ANM	77	0	0	69	0	0
Student	77	7	9	69	0	0
Teacher/ <i>Anganwadi</i> worker asked children to chew the tablet	80	76	95	70	69	99
Followed any recording protocol <sup>24</sup>	117	102	87	113	96	85
Protocol followed						
Putting single/double tick	102	85	83	96	70	73
Put different symbols	102	5	5	96	5	5
Prepare the separate list for dewormed	102	12	12	96	21	22
Visibility of poster/banner during visits	148	139	94	156	149	96

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

Indicators	Schools			<i>Anganwadi</i>		
	Denominator	Numerator	%	Denominator	Numerator	%
Opinion of occurrence of an adverse event after administering albendazole tablet	160	121	76	160	120	75
Awareness about possible adverse events (Multiple Response)						
Mild abdominal pain	121	108	89	120	105	88
Nausea	121	108	89	120	103	86
Vomiting	121	88	73	120	94	78
Diarrhea	121	35	29	120	43	36
Fatigue	121	12	10	120	12	10

<sup>24</sup>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.

All possible adverse event <sup>25</sup>	121	5	4	120	4	3
Awareness about mild adverse event management						
Make the child lie down in open and shade/shaded place	160	146	91	160	143	89
Give ORS/water	160	107	67	160	96	60
Observe the child at least for 2 hours in the school	160	35	22	160	38	24
Don't know/don't remember	160	3	2	160	3	2
Awareness about severe adverse event management						
Call PHC or emergency number	160	114	71	160	114	71
Take the child to the hospital /call doctor to school	160	101	63	160	88	55
Don't know/don't remember	160	0	0	160	3	2
Available contact numbers of the nearest ANM or MO-PHC	160	147	92	160	136	85
Asha present in <i>Anganwadi</i> center	Not Applicable			160	94	59

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

Indicators <sup>26</sup>	Denominator	Numerator	%
Attended training for current round of NDD	37	30	81
Received albendazole tablets	37	37	100
Sufficient quantity of albendazole tablets	37	36	98
Received poster/banner	37	28	77
Received handouts/ reporting form	37	32	87
Received SMS for current NDD round	37	36	97
Albendazole administered to children	37	30	81
Reasons for not conducting deworming			
No information	8	1	12
Albendazole tablets not received	8	0	0
Apprehension of adverse events	8	0	0
Already dewormed	8	1	12

<sup>25</sup>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.

<sup>26</sup>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



Others <sup>27</sup>	8	6	76
Albendazole tablet administered to children by teacher/headmaster <sup>28</sup>	18	18	96
Perceive that health education should be provided to children	37	37	100
Awareness about correct dose and right way of albendazole administration	37	36	97
Awareness about non-administration of albendazole tablet to sick child	37	34	93
Opinion of occurrence of an adverse event after taking albendazole tablet	37	27	75
Awareness about occurrence of possible adverse events			
Mild abdominal pain	27	23	84
Nausea	27	23	84
Vomiting	27	20	72
Diarrhea	27	10	35
Fatigue	27	4	16
Awareness about mild adverse event management			
Let the child rest in an open and shaded place	37	32	87
Provide clean water to drink/ORS	37	26	70
Contact the ANM/nearby PHC	37	11	31
Available contact numbers of the nearest ANM or MO-PHC	37	34	93
Followed correct <sup>29</sup> recording protocol	28	24	85

**Table PM8: Indicators on MDM and Hygiene August 2018**

Indicators	Schools		
	Denominator	Numerator	%
Covered under MDM	160	122	76
Send daily update from MDM	122	116	95
Aware to send NDD updates through MDM platform	122	108	88
Source of information for NDD updates through MDM platform			
Training	108	73	67
SMS	108	49	45
IVRS	108	9	9
Departmental communication	108	8	8
Others <sup>30</sup>	108	10	10
Visibility of poster for hand washing and Nail cutting during visits [1]	160	119	74
Visibility of poster for sanitation and Hygiene during visits	160	124	77

<sup>27</sup>Others include: conducted deworming on August 18<sup>th</sup>, 2018.

<sup>28</sup>This indicator is based on samples where deworming was ongoing.

<sup>29</sup>Correct recording protocol implies putting single tick (✓) on NDD and double tick (✓✓) for all those children administered albendazole tablets.

<sup>30</sup> Other include: information from Officer/School Inspector, Monthly Meetings, INPS, etc.

Children/student wash their hands before administration of deworming tablet	160	145	91
Children/student cut their nail before administration of deworming tablet	160	131	82

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

Sr. No.	Indicators	Schools			Anganwadis		
		Denominator	Numerator	%	Denominator	Numerator	%
1	Percentage of schools/ <i>anganwadis</i> conducted deworming <sup>31</sup>	400	398	100	400	399	100
	Percentage of conducted deworming in Government schools	322	322	100	Not Applicable		
	Percentage of conducted deworming in Private schools	78	76	98	Not Applicable		
1a	Percentage of school and <i>anganwadis</i> administered albendazole on day of - <b>(Multiple Response)</b>						
	a. National Deworming Day	398	384	96	399	392	98
	b. Mop-up day	398	343	86	399	312	78
	c. Between NDD and mop-up day	398	13	3	399	5	1

<sup>31</sup>Schools and *anganwadis* that conducted deworming on NDD or mop-up day.

	d. Both days (NDD and mop-up day)	398	340	85	399	311	78
1b	Reasons for not conducting deworming						
	a. No information	2	1	50	1	1	100
	b. Drugs not received	2	0	0	1	0	0
	c. Apprehension of adverse events	2	1	50	1	0	0
	d. Others	2	0	0	1	0	0
2	Percentage of schools and <i>anganwadis</i> left over with albendazole tablet after deworming	398	207	52	399	210	53
2a	Number of albendazole tablets left after deworming						
	a. Less than 50 tablets	207	175	85	210	209	100
	b. 50-100 tablets	207	19	9	210	0	0
	c. More than 100 tablets	207	13	6	210	0	0
3	Copy of filled-in reporting form was available for verification	398	262	66	399	259	65
	Copy of filled-in reporting form was available for verification in Government schools	322	216	67	Not Applicable		
	Copy of filled-in reporting form was available for verification in Private schools	76	45	60	Not Applicable		
3a	Reasons for non-availability of copy of reporting form <sup>32</sup>						
	a. Did not received	134	18	13	137	2	1

<sup>32</sup> In 78 schools and 105 *anganwadis* blank reporting form was available.

	b. Submitted to ANM	134	41	31	137	50	37
	c. Unable to locate	134	33	25	137	46	34
	d. Others <sup>33</sup>	134	43	32	137	38	28
4	Percentage of <i>Anganwadi</i> center where ASHA administered albendazole	Not Applicable			399	326	82
5	<i>Anganwadis</i> having list of unregistered children (aged 1-5 years)	Not Applicable			399	68	17
6	<i>Anganwadis</i> having list of out-of-school children (aged 6-19 years)	Not Applicable			399	186	47

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

Sr. No.	Indicators	<i>Anganwadis</i>		
		Denominator	Numerator	%
1	ASHA <sup>34</sup> conducted meetings with parents to inform about NDD	183	175	96
2	ASHA prepared list of unregistered and out-of-school children	183	121	66
3	ASHA shared the list of unregistered and out-of-school children with <i>anganwadis</i> teacher <sup>35</sup>	121	105	87
4	ASHA administered albendazole to children	183	106	58
5	ASHA received incentive for NDD February 2018 round	183	48	26

<sup>33</sup>Other includes mainly misplaced

<sup>34</sup> 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.

<sup>35</sup> Based on sub-sample who reported to prepare the said list

**Table CV3: Recording protocol, verification factor and school attendance**

Sr.No.	Indicators	Schools/Children			Anganwadis/Children		
		Denominator	Numerator	%	Denominator	Numerator	%
1	Followed correct <sup>36</sup> recording protocol	398	288	72	399	304	76
2	Followed partial <sup>37</sup> recording protocol	398	73	18	399	58	15
3	Followed no <sup>38</sup> recording protocol	398	38	9	399	37	9
	Followed correct recording protocol in Government schools	322	238	74	Not Applicable		
	Followed correct recording protocol in Private schools	76	50	65	Not Applicable		
4	State-level verification factor <sup>39</sup> (children enrolled/registered)	50421	27937	55	8306	7922	95
	a. Children registered with <i>anganwadis</i>	Not Applicable			686	630	92
	b. Children unregistered with <i>anganwadis</i> (Aged 1-5)	Not Applicable			518	723	140
	c. Out-of-school	Not Applicable			926	896	97

<sup>36</sup>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.

<sup>37</sup>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.

<sup>38</sup>No protocol includes all those schools/*anganwadis* where none of the classes/registers followed any protocol to record the information of dewormed children

<sup>39</sup>Ratio of recounted value of the dewormed children to the reported value. This calculation is based on only those schools (n=262) and *anganwadis* (n=259) where deworming was conducted and copy of reporting form was available for verification.

	children (Aged 6-19)				
5	Attendance on previous day of NDD (children enrolled)	62926	47083	75	Not Applicable
6	Attendance on NDD (children enrolled)	62926	47286	75	Not Applicable
7	Attendance on mop-up day (children enrolled)	62926	37898	60	Not Applicable
8	Children who attended on both NDD and mop-up day (children enrolled)	62926	31226	50	Not Applicable
9	Maximum attendance of children on NDD and mop-up day <sup>40</sup> (Children enrolled)	62926	53958	86	Not Applicable
10	Estimated NDD coverage <sup>41,42</sup>	83		88	
11	Estimated NDD coverage in Government schools	78		Not Applicable	
12	Estimated NDD coverage in Private schools	87		Not Applicable	

**Table CV4: Description on children (6-19 years) interviewed in the schools (n=398) during coverage validation**

Sr.No	Indicators	Denominator	Numerator	%
1	Children received albendazole tablets	1195	1167	98

<sup>40</sup>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.

<sup>41</sup> 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*.

<sup>42</sup>This was estimated by implying state-level verification factor on government reported coverage for 1-5 years registered children in AWC.

2	Children aware about the albendazole tablets	1167	1100	94
	Source of information about deworming among children (Multiple response)			
3	a. Teacher/school	1100	1090	99
	b. Television	1100	91	8
	c. Radio	1100	24	2
	d. Newspaper	1100	25	2
	e. Poster/Banner	1100	127	12
	f. Parents/siblings	1100	119	11
	g. Friends/neighbors	1100	29	3
4	Children aware about the worm infection	1167	848	73
5	Children awareness about different ways a child can get worm infection (Multiple response)			
	a. Not using sanitary latrine	848	530	62
	b. Having unclean surroundings	848	419	50
	c. Consume vegetables and fruits without washing	848	347	41
	d. Having uncovered food and drinking dirty water	848	224	27
	e. Having long and dirty nails	848	298	35
	f. Moving in bare feet	848	413	49
	g. Having food without washing hands	848	383	45
	h. Not washing hands after using toilets	848	53	6
6	Children consumed albendazole tablet	1167	1167	100
7	Way children consumed the tablet			
	a. Chew the tablet	1167	1108	95
	b. Swallow tablet directly	1167	59	5
8	Supervised administration of tablets	1167	1155	99
9	Reasons for not consuming albendazole tablet			
	a. Feeling sick	0	0	0
	b. Afraid of taking the tablet	0	0	0
	c. Parents told me not to have it	0	0	0
	d. Do not have worms so don't need it	0	0	0
	e. Did not like the taste	0	0	0

