Evidence Action

Deworm the World Initiative

Independent Monitoring of National Deworming Day in Chhattisgarh

February 9, 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 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 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.

Chhattisgarh observed the February 2018 round of NDD on February 9; followed by mop-up day on February 15. Fieldwork for process monitoring was conducted on February 9 and 15, while coverage validation in the state was conducted February 21-27.

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

Survey Methodology

Using a two-stage probability sampling procedure, across all 27 districts, Evidence Action selected 200 schools (Government schools=149 and Private schools = 51), and 200 *anganwadi*s for process monitoring visits during NDD and mop-up days; 500 schools (Government schools=367 and Private schools = 133) 500 *anganwadi*s 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 Chhattisgarh's state government. One combined tool was used for process monitoring at schools and *anganwadi*s on NDD and mop-up day, and one each for schools and *anganwadi*s for coverage validation.

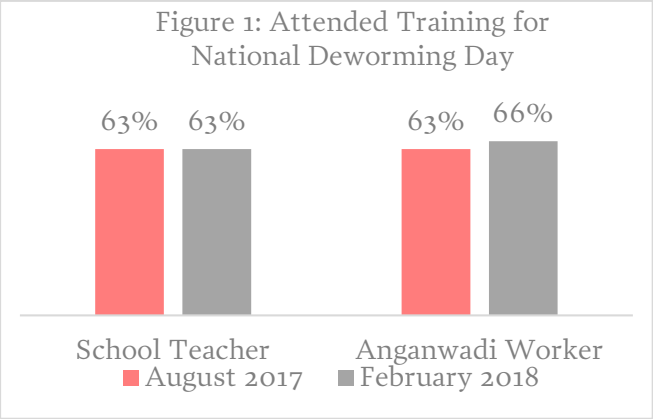
Implementation

Prior to the survey, Evidence Action conducted a comprehensive training of master trainers who further conducted a two-day training of 100 surveyors and 20 supervisors. The training included an orientation on NDD, the importance of independent monitoring, details of the monitoring formats including 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*s for coverage validation. Surveyors were provided with a tablet computer with the latest CAPI version downloaded, a battery charger, a printed copy of monitoring formats as backup, and albendazole tablets for demonstration during data collection. The details of sampled schools were shared with surveyors one day before the commencement of fieldwork to ensure that surveyors did not contact schools and *anganwadi*s 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, school and *anganwadi* workers (AWWs) were asked to sign a participation form with an official stamp to authenticate the surveyor visits to school or *anganwadi*s. Further, photographs of schools and *anganwadi*s were also collected to authenticate the location of the interview. Evidence Action reviewed all data sets; shared feedback with the agency for any inconsistencies 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 program implementation. Figure 1 reveals that 63% of teachers and 66% of AWWs visited by the surveyors had attended training for the February 2018 NDD round (Annex-Table PM1). While all teachers and *anganwadi* workers are mandated to attend training for every round of NDD, irrespective of whether they had attended training in earlier rounds, it remains almost the same as the August 2017 round in both categories. Although the training attendance among private school teachers has improved from 26% in August 2017 to 37% in February 2018, their attendance remained low in training (Annex-Table PM7).

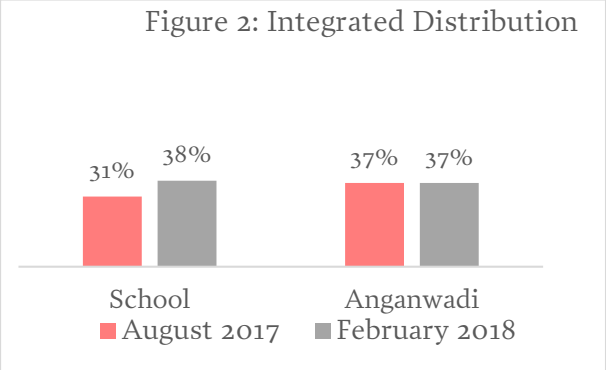
Among those who did not attend training, 59% of teachers and 57% of AWWs reported lack of information about NDD training as the main reason for not attending. Fifty-two percent of teachers provided training to all other teachers at their school, which is a decline of 10 percentage points over August 2017 round. Fifty-four percent of teachers and only 38% of AWWs had reported having received a SMS about NDD (Annex-Table PM1). Among private school teachers, it remains low from 25% in the previous round to 21% in the February 2018 (Annex-Table PM7). The absence of an updated database of mobile numbers is largely responsible for the sub-optimal delivery of SMS to teachers and AWWs.

Integrated Distribution of NDD Kit Including Drugs

Although mandated in the NDD guidelines, integrated distribution of NDD kits was low for both schools (38%) and *anganwadi* centers (37%) with marginal improvement for schools compared to the August 2017 round (Fig. 2). Around 95% of schools and *anganwadis* received deworming tablets, while only two-third (65% of schools and 66% of *anganwadis*) received posters/banners (Annex-Table PM4). Moreover, 98% of schools and 91% of *anganwadis*

reported having received sufficient drugs for deworming (Annex-Table PM3). About 81% of schools and 79% of *anganwadis* received handouts/reporting forms (Annex-Table PM4).

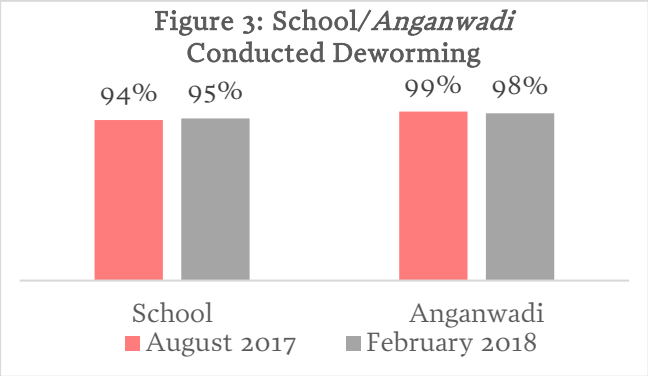
Among the sampled private schools, 77% received deworming tablets and among those, 88% reported having received sufficient quantity. Forty-nine percent of the private schools covered during process monitoring had received posters/banners and 58% received handouts/reporting forms (Annex-Table PM7). The corresponding figures for August 2017 round were 27% and 30% respectively, this showing marked improvements.



Source of Information about the Recent Round of NDD

Training was the most reported source of information in schools (43%) and *anganwadi*s (45%) on NDD. Thirty-eight percent of the schools and 19% of the *anganwadi*s reported that they received information about NDD through SMS. Another important source of information was the newspaper, which was reported as a source by 25% of schools and 17% of *anganwadi*s. Radio was the least effective source of information for the round (Annex-Table PM1).

NDD Implementation



The proportion of schools and *anganwadis* implementing NDD remains high (more than 95%) in both the August 2017 and February 2018 rounds. The data revealed that 95% of schools and 98% of *anganwadi*s dewormed children on either NDD or mop=up day, which is similar to the last round. Surveyors were able to directly witness deworming activities taking place in 93% of schools and 89% of *anganwadi*s.

Adverse Events- Knowledge and Management

Interviews with headmasters/teachers, and AWWs reveals a high degree of awareness regarding potential adverse events due to deworming and a high level of understanding of the appropriate protocols to follow in the case of such events. Vomiting was listed as a side effect by 94% of the headmasters/teachers and 88% of the *anganwadi* workers, followed by mild abdominal pain (as reported by 78% of headmasters/teachers and 73% of AWWs). Knowledge about management of adverse events reported high in both schools and *anganwadi*s. About 71% of teachers and 70% of *anganwadi* workers knew that they had to make a child lie down

in an open and shady place in case of an adverse event. Representatives from 23% of schools and 21% of *anganwadi*s had further recalled that during adverse events a child should be kept under observation for at least two hours in school/*anganwadi* premises. Approximately 60% of teachers and of AWWs could also recall that they would need to call a Primary Health Centre (PHC) doctor if symptoms persisted.

Recording Protocol

Sixty-five percent of schools and 64% of *anganwadi*s followed the correct recording protocol (single and double ticks) after administering deworming tablets to children. Ten percent of schools and 14% of *anganwadis* followed partial recording protocol, whereas 25% of schools and 22% of *anganwadis* did not follow any protocol (Annex CV3).

As recommended in NDD guidelines, teachers and AWWs are supposed to retain a copy of reporting forms; however, 89% of headmasters who were interviewed and 86% AWWs interviewed were aware of this requirement. Further, the reporting form was available in 79% of schools and 66% of *anganwadis*.

Accredited Social Health Activists (ASHAs) are required to prepare a list of out-of-school children and children not registered in *anganwadis* and submit it to *anganwadi* workers. However, only 26% of *anganwadis* had received a list of unregistered children (1-5 years) and 46% had received the list of out-of-school children (6-19 years) (Annex CV1). Only 7% of ASHA workers (who were available at the *anganwadis* at the time of surveyors visit) reported receiving incentives 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]. 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 0.43, indicating that on an average, for every 100 dewormed children reported by the school, forty-three were verified either through single/double tick or through any other available documents at the schools. Similarly, the overall state-level verification factor for children dewormed at *anganwadis* was 0.9, indicating that on an average, for every 100 dewormed children reported by the *anganwadi,* ninety were verified through available documents (Annex CV3).

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[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.

However, category-wise verification factors for registered (1-5 years), unregistered (1-5 years) and out-of-school (6-19 years) children were 0.80, 1.58 and 1.14 respectively for *anganwadis*. (Annex CV3). The data suggests under reporting of coverage figures particularly for unregistered and out-of-school children in *anganwadis*, therefore, highlighting a need for proper record keeping. Further, based off of child interviews, the majority of the children present at schools on NDD or mop-up day received (99%) and consumed (99%) the albendazole tablet on either NDD or mop-up day.

Against the state government reported 83% coverage in schools and 92% 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 95% of schools conducted deworming on either NDD or mop-up day (Annex-Table CV1), a maximum of 91% of children were in attendance (Annex-Table CV3), 99% of children received an albendazole tablet, and 97% of children reported to consume the tablet under supervision (Annex-Table CV4). Considering these factors, 83%[3](0.95*0.91*0.99*0.97) 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 74% (0.80*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.

Recommendations

1. The participation of teachers and AWWs in training in the February 2017 NDD round is similar to that of the August 2017 round. The overall training attendance of teachers was relatively low due to less participation of private schools in training (Government schools= 70% vs. Private schools= 37%). Additional efforts need to made to improve training participation among private teachers to ensure high training attendance in upcoming rounds. The participation of the teachers irrespective of government and private schools, and AWWs need to be leveraged in the next round of NDD to ensure the successful implementation of a high quality NDD program.

2. The percentage of headmasters/teachers and *anganwadi* worker that received deworming related SMS declined over the last two rounds, despite using an updated

[3]This was estimated on the basis of NDD implementation status (95%), maximum attendance on NDD and mop-up day (91%), children received albendazole (99%) and supervised drug administration (97%). In absence of children's interview in *anganwadis,* the Government reported coverage was adjusted by implying state-level verification factor.

contact database in February 2018. More efforts need to be made to improve the credibility of the database, especially in *anganwadis*. SMSs reaching all functionaries will facilitate comprehensive, effective and timely dissemination of information pertaining to NDD.

3. While a significant increase in integrated distribution is evident from the August 2017 to February 2018 in schools, it remained low in *anganwadis.* This may be attributed to delayed procurement and distribution of drugs at the block level and delayed printing of IEC and training materials at the state level. Adherence to these timelines as per the operational plan is crucial for integrated distribution at trainings.

4. Although adherence to correct recording protocols has improved from August 2017 to February 2018 in both schools and *anganwadis*, there is scope for further improvement. Greater emphasis on correct recording protocols through training and reinforcement messages will be helpful. Special attention on recording protocols need to be given during sub-district level trainings.

5. Coverage validation findings revealed an improvement in the availability of reporting forms at schools and *anganwadis* from the previous round. Along with providing two copies of reporting forms during training, trainers should continue to emphasize the importance to maintain a copy of reporting forms.

6. The maximum attendance observed in schools has remained high during the August 2017 NDD round; leading to high NDD coverage among school enrolled children in the state. Emphasis should be given to maintain high attendance on NDD days to achieve maximum NDD coverage in the state.

ANNEXURE 1

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

Sample Details	Number
Total number of NDD districts in the state	27
Number of districts covered under process monitoring	27
Number of trained monitors deployed during process monitoring	100
Number of blocks[4] covered during process monitoring	100
Total number of schools covered	200
• Number of government schools covered[5]	149
• Number of private schools covered	51
Total number of *anganwadis* covered[6]	200

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

Indicators	School			Anganwadi		
	Denominator	Numerator	%	Denominator	Numerator	%
Attended training for current round of NDD	200	126	63	200	131	66
Ever attended training for NDD[7]	200	134	67	200	143	72
Never attended training for NDD	200	66	33	200	57	29

[4]These are sampled blocks selected from DISE data.
[5]These are the actual schools covered during NDD and MUD visits. Numbers given in subsequent tables (numerator and denominator) are weighted
[6]These are the actual anganwadis covered during NDD and MUD visits. Numbers given in subsequent tables (numerator and denominator) are unweighted.
[7]Includes those school teachers and *anganwadi* workers who attended training either for NDD February 2018 or attended tanning in past.

Indicators	School			Anganwadi		
	Denominator	Numerator	%	Denominator	Numerator	%
Reasons for not attending NDD training (Multiple Response)						
Location was too far away	74	2	3	69	4	6
Did not know the date/timings/venue	74	44	59	69	39	57
Busy in other official/personal work	74	10	14	69	4	6
Attended deworming training in the past	74	9	12	69	12	17
Not necessary	74	3	4	69	2	3
No incentives/no financial support	74	1	1	69	0	0
Trained teacher that provided training to other teachers in their schools						
All other teachers	126	65	52	NA	NA	NA
Few teachers	126	28	22	NA	NA	NA
No (himself/herself only teacher)	126	10	8	NA	NA	NA
No, did not train other teachers	126	22	17	NA	NA	NA
Source of information about current NDD round (Multiple Response)						
Television	200	31	16	200	28	14
Radio	200	9	5	200	7	4
Newspaper	200	49	25	200	33	17
Banner	200	24	12	200	34	17
SMS	200	76	38	200	38	19
Other school/teacher/*anganwadi* worker	200	57	29	200	72	36
WhatsApp message	200	53	27	200	21	11

Indicators	School			Anganwadi		
	Denominator	Numerator	%	Denominator	Numerator	%
Training	200	86	43	200	89	45
Others	200	31	16	200	43	22
Received SMS for current NDD round	200	107	54	200	76	38
Probable reasons for not receiving SMSs						
Changed Mobile number	93	15	16	124	21	17
Other family members use this number	93	17	18	124	39	31
Number not registered to receive such messages	93	26	28	124	33	27
Others	93	35	38	124	31	25

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

Indicators	School			Anganwadi		
	Denominator	Numerator	%	Denominator	Numerator	%
Awareness about the ways a child can get worm infection	200	165	83	200	158	79
Different ways a child can get worm infection (Multiple Response)						
Not using sanitary latrine	165	55	33	158	43	27
Having unclean surroundings	165	125	76	158	112	71
Consume vegetables and fruits without washing	165	97	59	158	81	51
Having uncovered food and drinking dirty water	165	87	53	158	87	55

Having long and dirty nails	165	89	54	158	75	47
Moving in bare feet	165	93	56	158	90	57
Having food without washing hands	165	97	59	158	87	55
Not washing hands after using toilets	165	75	45	158	70	44
Awareness about all the possible ways a child can get a worm infection[8]	165	12	7	158	7	4
Perceives that health education should be provided to children	200	190	95	200	187	94
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	200	167	84
2-3 years of children (Crush one full tablet between two spoons, and administer with water)	NA	NA	NA	200	91	46
3-5 years of children (one full tablet and child chewed the tablet properly)	NA	NA	NA	200	172	86
6-19 years of children (one full tablet and child chewed the tablet properly)	200	197	99	200	194	97
Awareness about non-administration of albendazole tablet to sick child						
Will administer albendazole tablet to sick child	200	28	14	200	34	17
Will not administer albendazole tablet to sick child	200	172	86	200	166	83

[8]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.

Awareness about consuming albendazole tablet						
Chew the tablet	200	200	100	200	196	98
Swallow the tablet directly	200	-	-	200	4	2
Awareness about consuming albendazole in school/*anganwadi*	200	195	98	200	199	100
Awareness about the last date (February 21, 2018) for submitting the reporting form	200	4	2	200	1	1
Awareness about submission of reporting forms to ANM	200	96	48	200	113	57
Awareness to retain a copy of the reporting form	200	177	89	200	172	86

Table PM3: Deworming activity, drug availability, and list of unregistered and out-of-school children, February2018

Indicators	School			Anganwadi		
	Denominator	Numerator	%	Denominator	Numerator	%
Albendazole tablet administered on the day of visit						
Yes, ongoing	200	96	48	200	90	45
Yes, already done	200	32	16	200	46	23
Yes, after sometime	200	48	24	200	36	18
No, will not administer today	200	23	12	200	28	14
Schools/*anganwadis* conducted deworming on either of the day[9]	200	184	92	200	186	93
Schools/*anganwadis* conducted deworming on NDD[10]	100	90	90	99	90	91

[9]Schools/*anganwadis* administered albendazole tablet to children either on NDD or Mop-Up Day
[10]Based on the samples visited on NDD.

Schools/*anganwadis* conducted deworming on Mop-Up Day[11]	100	87	87	101	87	86
Reasons for not conducting deworming						
No information	16	9	56	14	4	29
Albendazole tablet not received	16	1	6	14	8	57
Apprehension of adverse events	16	2	13	14	0	0
Others[12]	16	4	25	14	2	14
Attendance on NDD[13]	14538	10748	74	NA	NA	NA
Attendance on Mop-Up Day[14]	16989	12728	75	NA	NA	NA
Anganwadis having list of unregistered/out-of-school children	NA	NA	NA	200	81	41
Out-of-school children (Age 6-19 years) administered albendazole tablet	NA	NA	NA	200	135	68
Unregistered children (Age 1-5 years) administered albendazole tablet	NA	NA	NA	200	107	54
Sufficient quantity of albendazole tablets[15]	190	186	98	189	172	91

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

Indicators	Schools			*Anganwadi*		
	Denominator	Numerator	%	Denominator	Numerator	%
Items received by school teacher and anganwadi worker						
Albendazole tablet	200	190	95	200	189	95
Poster/banner	200	130	65	200	131	66
Handouts/ reporting form	200	161	81	200	158	79
Received all materials	200	118	59	200	122	61

[11]Based on the samples visited on mop-up day only.
[12]Others include 'Teacher not present' and 'Students not present'
[13]Based on those schools conducted deworming on NDD
[14]Based on those schools conducted deworming on mop-up-day
[15] This indicator is based on the sample that received albendazole tablet.

Items verified during Independent Monitoring						
Albendazole tablet	190	187	98	189	184	97
Poster/banner	130	126	97	131	120	92
Handouts/ reporting form	161	157	98	158	154	97
Received all materials	118	112	95	122	110	90
No of school teachers/anganwadi worker attended training and received items during training						
Albendazole tablet	126	107	85	128	106	83
Poster/banner	99	86	87	96	80	83
Handouts/ reporting form	114	100	88	114	93	82
Received all materials	118	76	64	122	74	61
Integrated Distribution of albendazole tablet IEC and training materials[16]	200	76	38	200	74	37

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

Indicators	Schools			Anganwadi		
	Denominator	Numerator	%	Denominator	Numerator	%
Deworming activity was taking place	96	89	93	90	80	89
Albendazole tablets were administered by						
Teacher/headmaster	96	93	97	90	3	3
Anganwadi worker	96	2	2	90	74	82
ASHA	-	-	-	90	9	10
ANM	96	2	2	90	4	4
Student	-	-	-	90	-	-
Teacher/Anganwadi worker asked children to chew the tablet	96	92	96	90	82	91
Followed any recording protocol[17]	129	103	80	139	95	68
Protocol followed						

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

[17]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.

Putting single/double tick	103	89	86	95	78	82
Put different symbols	103	10	10	95	12	13
Prepare the separate list for dewormed	103	3	3	95	5	5
Visibility of poster/banner during visits	130	97	75	131	92	70

Table PM6: Awareness about Adverse events and Its Management, February2018

Indicators	Schools			Anganwadi		
	Denominator	Numerator	%	Denominator	Numerator	%
Opinion of occurrence of an adverse event after administering albendazole tablet	200	94	47	200	98	49
Awareness about possible adverse events (Multiple Response)						
Mild abdominal pain	94	73	78	98	72	73
Nausea	94	37	39	98	40	41
Vomiting	94	88	94	98	86	88
Diarrhea	94	24	26	98	26	27
Fatigue	94	40	43	98	33	34
All possible adverse event[18]	94	7	7	98	3	3
Awareness about mild adverse event management						
Make the child lie down in open and shade/shaded place	200	142	71	200	140	70
Give ORS/water	200	82	41	200	88	44
Observe the child at least for 2 hours in the school	200	46	23	200	42	21
Don't know/don't remember	200	33	17	200	32	16
Awareness about severe adverse event management						
Call PHC or emergency number	200	119	60	200	119	60

[18]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.

Take the child to the hospital /call doctor to school	200	122	61	200	129	65
Don't know/don't remember	200	19	10	200	11	6
Available contact numbers of the nearest ANM or MO-PHC	200	156	78	200	162	81
Asha present in Anganwadi center	NA	NA	NA	200	101	51

Table PM7: Selected Indicators of Process Monitoring in Private Schools, February2018

Indicators[19]	Denominator	Numerator	%
Attended training for current round of NDD	43	16	37
Received albendazole tablets	43	33	77
Sufficient quantity of albendazole tablets	33	29	88
Received poster/banner	43	21	49
Received handouts/ reporting form	43	25	58
Received SMS for current NDD round	43	9	21
Albendazole administered to children	43	29	67
Reasons for not conducting deworming			
No information	14	10	71
Albendazole tablets not received	14	1	7
Apprehension of adverse events	14	1	7
Others[20]	14	2	14
Albendazole tablet administered to children by teacher/headmaster[21]	15	14	93
Perceive that health education should be provided to children	43	34	79
Awareness about correct dose and right way of albendazole administration	43	41	95
Awareness about non-administration of albendazole tablet to sick child	43	38	88

[19]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
[20]Others include 'Teacher not present'
[21]This indicator is based on samples where deworming was ongoing.

Opinion of occurrence of an adverse event after taking albendazole tablet	43	17	40
Awareness about occurrence of possible adverse events			
Mild abdominal pain	17	11	65
Nausea	17	9	53
Vomiting	17	14	82
Diarrhea	17	7	41
Fatigue	17	10	59
Awareness about mild adverse event management			
Let the child rest in an open and shaded place	43	20	47
Provide clean water to drink/ORS	43	17	40
Contact the ANM/nearby PHC	43	0	0
Available contact numbers of the nearest ANM or MO-PHC	43	27	63
Followed correct[22] recording protocol	12	12	100

[22]Correct recording protocol implies putting single tick (✓) on NDD and double tick (✓✓) for all those children administered albendazole tablets.

ANNEXURE 2

Table A: Sample Description including Number of Schools and *Anganwadis* Covered during Coverage Validation[23]

Sample/Sites Detail	Number
Total number of districts in the state	27
• Total number of NDD districts in the state	27
• Number of districts covered under coverage validation	27
Number of trained surveyors deployed during coverage validation	100
Number of trained supervisors deployed during coverage validation	20
Number of blocks in the state	151
• Number of blocks in NDD districts	151
• Number of blocks[24] covered through coverage validation	100
Total number of schools covered	500
• Total number of government schools covered[25]	367
• Total number of private schools covered	133
Total number of *anganwadis* covered[26]	500

[23]Coverage validation in the state was conducted during February 21-26, 2018.
[24]These are sampled blocks selected from U-DISE data, 2016-17.
[25]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.
[26]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 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[27]	500	477	95	500	492	98
	Percentage of government schools conducted deworming	368	364	99	Not Applicable		
	Percentage of private schools conducted deworming	132	113	85	Not Applicable		
1a	Percentage of school and *anganwadis* administered albendazole on day of - **(Multiple Response)**						
	a. National Deworming Day	477	460	96	492	468	95
	b. Mop-up Day	477	372	78	492	350	71
	c. Between NDD and mop-up Day	477	45	9	492	49	10
	d. Both days (NDD and mop-up day)	477	365	76	492	334	68
1b	Reasons for not conducting deworming						
	a. No information	23	16	68	8	3	42
	b. Drugs not received	23	6	28	8	4	49
	c. Apprehension of adverse events	23	1	4	8	1	10
	d. Others[28]	23	0	0	8	0	0%

[27]Schools and *anganwadis* that conducted deworming on NDD or mop-up day.
[28] Other includes mainly strike of *anganwadi* worker and no incentives for deworming.

2	Percentage of schools and *anganwadis* left over with albendazole tablet after deworming	477	311	65	492	268	55
2a	Number of albendazole tablets left after deworming						
	a. Less than 50 tablets	311	263	84	268	249	93
	b. 50-100 tablets	311	31	10	268	15	6
	c. More than 100 tablets	311	18	6	268	1	0
3	Copy of filled-in reporting form was available for verification	477	378	79	492	327	66
	Copy of filled-in reporting form was available for verification in Government school	363	299	82	Not Applicable		
	Copy of filled-in reporting form was available for verification in Private school	114	79	69	Not Applicable		
3a	Reasons for non-availability of copy of reporting form[29]						
	a. Did not receive	85	30	35	139	42	30
	b. Submitted to ANM	85	43	51	139	66	47
	c. Unable to locate	85	5	5	139	21	15
	d. Other[30]	85	7	8	139	10	7
4	Percentage of *Anganwadi* center where ASHA administered albendazole	Not Applicable			492	294	60
5	*Anganwadis* having list of unregistered children (aged 1-5 years)	Not Applicable			492	129	26

[29]In 14 schools and 26 *anganwadis* blank reporting form was available.
[30]Other includes mainly kept at home, given to ASHA, submitted to Sankul/CHC, and misplaced.

6	*Anganwadis* having list of out-of-school children (aged 6-19 years)	Not Applicable	492	228	46

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

Sr. No.	Indicators	Anganwadis		
		Denominator	Numerator	%
1	ASHA[31] conducted meetings with parents to inform about NDD	316	291	92
2	ASHA prepared list of unregistered and out-of-school children	316	174	55
3	ASHA shared the list of unregistered and out-of-school children with *anganwadis* worker[32]	174	115	66
4	ASHA administered albendazole to children	316	277	88
5	ASHA received incentive for NDD Aug 2017 round	316	21	7

Table CV3: Recording protocol, verification factor and school's attendance

Sr.No.	Indicators	Schools/Children			Anganwadis/Children		
		Denominator	Numerator	%	Denominator	Numerator	%

[31]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.
[32]Based on sub-sample who reported to prepare the said list.

1	Followed correct[33] recording protocol	292	189	65	492	313	64
2	Followed partial[34] recording protocol	292	29	10	492	71	14
3	Followed no[35] recording protocol	292	74	25	492	108	22
	Followed correct recording protocol in government school	220	161	73	Not Applicable		
	Followed correct recording protocol in private school	72	28	40	Not Applicable		
4	State-level verification factor[36] (children enrolled/registered)	42,643	18,340	43	20,656	18,491	90
	a. Children registered with *anganwadis*	Not Applicable			16623	13278	80
	b. Children unregistered with *anganwadis* (Aged 1-5)	Not Applicable			1,385	2,184	158
	c. Out-of-school	Not Applicable			2,647	3,028	114

[33]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.
[34]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.
[35]No protocol includes all those schools/*anganwadis* where none of the classes/registers followed any protocol to record the information of dewormed children.
[36]Ratio of recounted value of the dewormed children to the reported value. This calculation is based on only those schools (n=378) and *anganwadis* (n=327) 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)	70,209	57,640	82	Not Applicable		
6	Attendance on NDD (children enrolled)	70,209	57,529	82	Not Applicable		
7	Attendance on mop-up day (children enrolled)	70,209	55,257	79	Not Applicable		
8	Children who attended on both NDD and mop-up day (children enrolled)	70,209	49,017	70	Not Applicable		
9	Maximum attendance of children on NDD and mop-up day[37] (Children enrolled)	70,209	63,768	91	Not Applicable		
10	Estimated NDD coverage[38],[39]	83			74		
11	Estimated NDD coverage in government school	85			Not Applicable		
12	Estimated NDD coverage in private school	73			Not Applicable		

[37]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.
[38]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.*
[39]This was estimated by implying state-level verification factor on government reported coverage for 1-5 years registered children in AWC.

Table CV4: Description on children (6-19 years) interviewed in the schools (n=477) during coverage validation

Sr.No.	Indicators	Denominator	Numerator	%
1	Children received albendazole tablets	876	863	99
2	Children aware about the albendazole tablets	863	778	90
	Source of information about deworming among children (Multiple response)			
3	a. Teacher/school	778	769	99
	b. Television	778	63	8
	c. Radio	778	32	4
	d. Newspaper	778	53	7
	e. Poster/Banner	778	163	21
	f. Parents/siblings	778	76	10
	g. Friends/neighbors	778	34	4
	Children aware about the worm infection	863	581	67
5	Children awareness about different ways a child can get worm infection (Multiple response)[40]			
	a. Not using sanitary latrine	578	258	45
	b. Having unclean surroundings	578	354	61
	c. Consume vegetables and fruits without washing	578	291	50
	d. Having uncovered food and drinking dirty water	578	225	39
	e. Having long and dirty nails	578	316	55
	f. Moving in bare feet	578	246	42
	g. Having food without washing hands	578	297	51

[40]Responses captured for 578 records, rest 3 records are missing

	h. Not washing hands after using toilets	578	186	32
6	Children consumed albendazole tablet	863	859	99
7	Way children consumed the tablet			
	a. Chew the tablet	859	823	96
	b. Swallow tablet directly	859	37	4
8	Supervised administration of tablets	859	831	97
9	Reasons for not consuming albendazole tablet			
	a. Feeling sick	4	1	25
	b. Afraid of taking the tablet	4	2	50
	c. Parents told me not to have it	4	0	0
	d. Do not have worms so don't need it	4	0	0
	e. Did not like the taste	4	1	25