Evidence Action

Deworm the World Initiative

Independent Monitoring of National Deworming Day in Uttar Pradesh 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.

Uttar Pradesh observed the August 2018 round of NDD[1] on August 10, followed by mop-up day[2] on August 20. Fieldwork for process monitoring was conducted on August 10 and 20, while coverage validation in the state was conducted August 23-28. 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 75 districts Evidence Action selected a total of 298 schools (197 government schools and 101 private schools) and 292 *anganwadi*s for process monitoring and 909 schools (614 government schools and 291 private schools) and 905 *anganwadi*s for 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 *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 two-days separate training for each process monitoring and coverage validation of 150 surveyors and 30 supervisors at Lucknow. The training included an orientation on NDD, the importance of independent monitoring, details of the monitoring formats including CAPI (Computer Assisted Personal Interview) practices, survey protocols and practical sessions. Each surveyor was allotted one school and one *anganwadi* for process monitoring on NDD and mop-up day, and subsequently five schools and five *anganwadi*s for coverage validation. Surveyors were provided with a tablet computer with the latest CAPI

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[1] NDD was postponed in 6 districts (Aug 18, 2018- Bagpat, Ghaziabad; Aug 20, 2018-Jaunpur, Meerut; Aug 21, 2018-Muzzafarnagar, Saharanpur) due to ongoing Kanwar yatra.

[2]Mop-up day was postponed to August 20, 2018 in 65 districts as state government declared holiday on August 17 due to sudden demise of former Prime Minister Shri Atal Bihari Vajpayee. Rest 10 districts- observed mop-up day on August 21-Bareilly, Badaun, Varanasi; August 24- Moradabad; August 25- Baghpat, Jaunpur, Meerut, Muzzafarpur; August 27-Ghaziabad, Saharanpur

version downloaded, battery charger, 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.

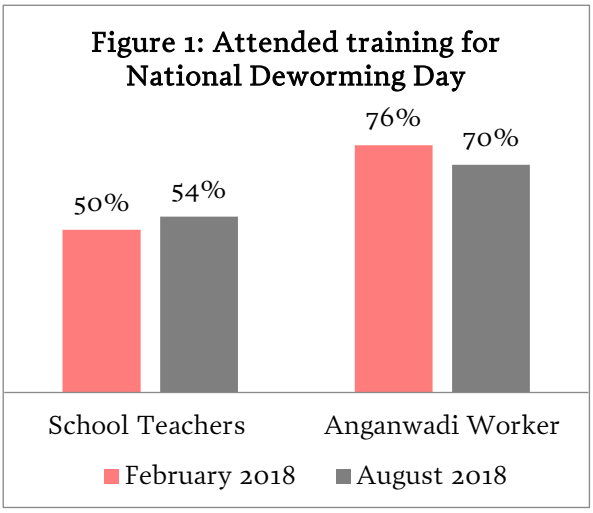
Appropriate quality assurance measures were taken to ensure that the data collected was accurate, consistent and authenticated. For example, teachers and *anganwadi* workers (AWWs) were asked to sign a participation form with an official stamp to authenticate surveyor visits to schools or *anganwadis*. Further, consent based electronic thumb impression of all survey respondents including headmasters, teachers, AWWs, ASHAs and children were collected for verification purpose. The GPS location along with time stamp and photographs of all schools and *anganwadis* visited during data collection was also collected through CAPI to authenticate the location and time of the interview. Evidence Action reviewed all data sets and shared feedback with the agency for any 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 implementation of the program. NDD guideline mandates to schools and *anganwadis* to attend training for every NDD round, irrespective of whether they attended training in earlier rounds. Fifty-four percent of teachers and 70% AWWs attended training for August 2018 NDD round, which is four percentage points increase and a six percentage point decrease in training of schools and *anganwadis* respectively as compared to the February 2018 round (Figure 1). The attendance of private schools in trainings also improved slightly from 19% in February 2018 to 27% in the August 2018 round (Annex- Table PM7).

Figure 1: Attended training for National Deworming Day

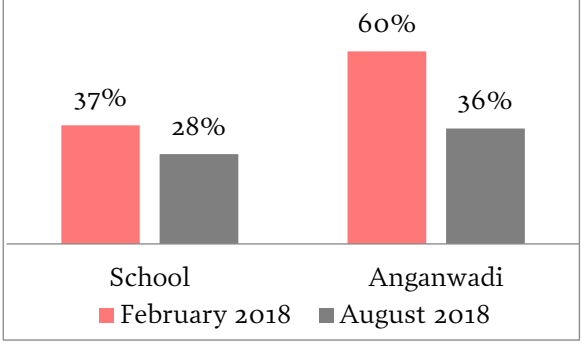


Among those who did not attend training, 51% of teachers and 47% of AWWs reported lack of information about NDD training as the main reason for not attending. 63% of teachers provided training to all other teachers at their school, which has increased marginally from the February 2018 round (62%). Forty-five percent of teachers and 60% of AWWs reported to receive SMS about NDD. Among private school teachers, it decreased from 31% in the February 2018 round to 23% in August 2018.

Integrated Distribution of NDD Kit at Trainings

Integrated distribution of the NDD kit was lower this round compared to the February 2018 NDD round (Figure2). This is largely attributed to delays in the delivery of tablets at district and block levels. Eighty-six percent of schools and 84% of *anganwadis* received albendazole tablets, and 92% and 91% of them respectively reported to receive sufficient quantities (Annex-Table PM3). Further, 53% of schools and 67% of *anganwadis* received posters and banners; and 49% and 72% received handout/reporting forms respectively (Annex-Table PM4). Despite the low level of integrated distribution, tablets and IEC materials reached the majority of schools and *anganwadis,* indicating the state government commitment towards the program.

Figure 2: Integrated Distribution



Among the sampled private schools, 39% received albendazole and among them 82% reported to have received it in sufficient quantity. Twenty-two percent of private schools received posters/banners and 24% reported having received handout and reporting forms. The corresponding figures for the February 2018 round were 26% for posters/banners and 28% for handouts/reporting forms (Annex-Table PM7).

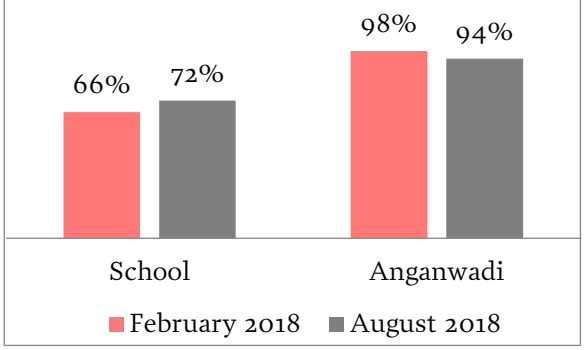
Source of Information about the Recent Round of NDD

Newspaper was the major source of information about the NDD for schools (28%) and SMS for *anganwadis* (31%). Twenty-seven percent of schools reported that they received information about NDD through SMS whereas 27% of AWWs reported training. Sixteen percent of schools and 25% of *anganwadis* reported hearing about NDD from other teachers and *anganwadi workers*. Radio, banner and WhatsApp messages were the least effective sources of information about NDD for the current round (Annex Table PM1).

NDD Implementation

The proportion of schools and *anganwadis* that conducted deworming remained about the same during both NDD rounds. The data shows that around 72% of schools and 94% of *anganwadis* conducted deworming in the August 2018 round, which is a six percentage point increase in schools and slight decrease in *anganwadis* (Figure 3). Fifty-one percent of schools reported that they did not had any information on the program as the most common reason for not conducting deworming (Annex- Table PM1). Out of all the schools and *anganwadis* visited during process monitoring, surveyors were able to observe deworming activities in only 96% of schools and 89% of *anganwadis* (Annex- Table PM5). Drug administration to unregistered (66%) and

Figure 3: NDD Implementation



out-of-school children (65%) also declined nominally in the current round from the February 2018 round. Further, 55% of AWWs reported that ASHAs were present at the *anganwadis* centre on NDD or mop-up day.

Adverse Events- Knowledge and Management

Interviews with headmasters/teachers and *anganwadi* workers reveal a moderate level of awareness among them (53% in schools and 55% in *anganwadis*) regarding potential adverse events due to deworming. The majority of school teachers (82%) and *anganwadi* workers (86%) reported vomiting as a side effect of albendzole administration followed by mild abdominal pain (74% and 80% respectively). A considerable knowledge gap was also observed on the appropriate protocols to follow in the case of such events. For example, 77% of teachers and 83% of AWWs knew to make a child lie down in an open, shaded place in the case of any symptoms of adverse events and around 30% of schools and 35% of AWWs knew to give ORS/water. Only 25% of schools and 23% of AWWs knew to observe the child for at least two hours. Further, 69% of schools and 78% of AWWs reported the need to call a PHC doctor if symptoms persisted (Annex- Table PM6). However, around 56% of private school teachers reported the need to call to a Primary Health Centre (PHC) doctor if a child continued to report the symptoms of an adverse event. Findings necesitate emphasis on adverse event management protocols during training of teachers and AWWs.

Recording Protocol

Thirty-nine percent of schools and 43% of *anganwadis* followed the correct (single and double ticks) recording protocol. Around nine percent of schools and 17% of *anganwadis* carried out partial[3] recording. A major proportion of school (52%) and *anganwadi* (40%) did not follow any protocol to record the information of dewormed children (Annex – Table CV3). Compared to the previous round, there was a decline in adherence to correct recording protocols, where 54% of schools and 60% of *anganwadis* followed the correct recording protocol in the August 2018 round. Further, as per NDD guidelines, all schools and *anganwadis* are supposed to retain a copy of reporting forms; during coverage validation it was observed that only 41% of schools and 46% of *anganwadis* had retained the copy of reporting forms (Annex – Table CV1). The findings from process monitoring suggests that 66% of schools and 87% 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 26% of *anganwadis* reported to have the list of unregistered (1-5 years) children and 28% reported having the list of out-of-school children (6-19 years) (Annex –Table CV1). Nevertheless, 56% of all the ASHAs interviwed

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

during coverage validation (who were available at the *anganwadis* at the time of surveyors visit), reported to prepare the list of unregistered and out-of-school children and 61% had shared it with the AWWs. Only 11% of ASHA workers reported receiving incentives for the last round of NDD i.e. February 2018 (Annex – Table CV2).

Coverage Validation

Coverage validation provides an opportunity to assess the accuracy of reported data and verify government-reported treatment figures. Verification factors[4] are common indicators to measure the accuracy of reported treatment values for neglected tropical disease control programs[5]. It also gives us an idea about record keeping and data management at the service delivery point. The verification factor is 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 in the August 2018 round is 0.58, indicating that on an average, for every 100 dewormed children reported by the school, 58 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 0.73, indicating that on an average; for every 100 dewormed children reported by the *anganwadi,* 73 were verified through available documents (Annex CV3).

The category-wise verification factors for registered (1-5 years), unregistered (1-5 years) and out-of-school (6-19 years) children were 0.62, 1.20, and 0.91 respectively for *anganwadis* (Annex CV3). The data suggests reporting and aggregation errors of coverage figures, particularly for unregistered and out-of-school children in *anganwadis* and therefore highlights a need for proper 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 (97%) and consumed (100%) the albendazole tablet on either NDD or mop-up day.

Against the state government reported 88% coverage in schools and 87% 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 72% of schools conducted deworming on either NDD or mop-up day (Annex-Table CV1), a maximum of 85% of children were in attendance (Annex-Table CV3), 97% of children received an albendazole tablet, and 95% of children reported to consume the tablet under supervision

[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.

(Annex-Table CV4). Considering these factors, 56%6 (0.72*0.85*0.97*0.95) 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 54% (0.87*0.62) of registered children (1-5 years) in *anganwadis* could have been dewormed. The calculation of verification factors is based on only those schools and *anganwadis* where a copy of the reporting form was available for verification. Therefore, adjusted coverage in *anganwadis* based on verification factor needs to be interpreted with caution.

Recommendations

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

1. When compared with the last round, participation in training has improved, but around half of the school teachers and one-third of the *anganwadis* have not attended training. Hence a significant amount of reinforcements and timely intimation for the trainings should be made to ensure maximum attendance during block level trainings. A successful turnover in the training will also ensure distribution of tablets, IEC and training materials in the NDD kit and their subsequent availability at schools and *anganwadis*. Pre-planning of sessions and timely communication of training dates and venues to schools and *anganwadis* will be crucial. Further, efforts should be made to ensure that block level trainings are conducted at least 1 to 2 week prior to NDD, allowing sufficient time for intensive community mobilization activities as per the plan. At the state level, stringent review and follow-up of districts should be ensured.

2. As the findings indicate, a contact database of teachers and *anganwadi* workers should be regularly updated. This will help in relaying the NDD related information through the fastest and most personal medium, that is, SMS.

3. As integrated distribution of the NDD kit is cost effective, it eases logistical concerns and ensure quality services. Efforts should be made to strengthen the same. This round there was a significant decline in integrated distributed compared with the last round. Efforts to improve integrated distribution need to be strengthened for better alignment of the distribution cascade (NDD kits) and handing over of NDD kits to teachers and *anganwadi* workers at the time of training.

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[6] This was estimated on the basis of NDD implementation status (72%), maximum attendance on NDD and mop-up day (85%); children received albendazole (97%) and supervised tablet administration (95%). In absence of children interview in *Anganwadis*, the government reported coverage was adjusted by implying state level verification factor.

4. Findings reveal a dismally low participation of private schools in the trainings. More concerted efforts need to be made to encourage private schools to participate in training, facilitate drug logistics, share IEC materials and manage adverse events.

5. As per the findings, significant efforts are required to improve media platforms around NDD to ensure maximum awareness. Such awareness efforts will help address turn-over in school and *anganwadis* and help increase the reach of the program to out-of-school and unregistered children.

6. Adherence to correct recording protocol in schools and *anganwadis* is comparatively low from the previous round. Also, awareness regarding retaining a copy of reporting form declined among teachers and *anaganwadi* workers. Training and reinforcement messages need to have an increased focus on the importance of following correct reporting protocols, and maintaining correct and complete documentation. 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 protocol for teachers and AWWs can also be organized during block level trainings to make them aware of the recording procedure.

7. Efforts are required to increase ASHA participation by sending reminder SMSs to them that includes information on incentives. As findings show, a small proportion of ASHAs received incentive for the February 2018 round, timely disbursement of ASHA incentives can be a motivating factor for their engagement in the program.

ANNEXURES

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

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	75
Number of districts covered under process monitoring	75
Number of trained surveyors deployed during process monitoring	150
Number of blocks[7] covered during process monitoring	150
Total number of schools covered during process monitoring	298
• Number of government schools covered[8]	197
• Number of private schools covered	101
Total number of *anganwadis* covered[9] during process monitoring	292
Total number of schools covered during coverage validation	928
Total number of government schools covered[10]	614
Total number of private schools covered	291
Total number of *anganwadis* covered[11] during coverage validation	905

[7]These are sampled blocks selected from UDISE data.
[8]These are the actual schools covered during NDD and Mop-Up Day visits. Numbers given in subsequent tables (numerator and denominator) are weighted
[9]These are the actual *anganwadis* covered during NDD and Mop-Up Day visits. Numbers given in subsequent tables (numerator and denominator) are unweighted.
[10]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.
[11]These are the actual *anganwadis* covered during Coverage Validation visits. Numbers given in subsequent tables (numerator and denominator) are weighted. The weights are used in order to generalize the findings at state level.

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

Indicators	School			*Anganwadi*		
	Denominator	Numerator	%	Denominator	Numerator	%
Attended training for current round of NDD	298	161	54	292	205	70
Ever attended training for NDD[12]	298	170	57	292	216	74
Never attended training for NDD	298	128	43	292	76	26
Reasons for not attending current NDD round training (Multiple Response)						
Location was too far away	137	5	4	87	10	12
Did not know the date/timings/venue	137	70	51	87	41	47
Busy in other official/personal work	137	11	8	87	14	16
Attended deworming training in the past	137	8	6	87	11	13
Not necessary	137	5	4	87	3	3
No incentives/no financial support	137	4	3	87	0	0
Trained teacher that provided training to other teachers in their schools						
All other teachers	161	102	63	Not Applicable		
Few teachers	161	22	14	Not Applicable		
No (himself/herself only teacher)	161	14	9	Not Applicable		
No, did not train other teachers	161	23	14	Not Applicable		
Source of information about current NDD round (Multiple Response)						
Television	298	59	20	292	62	21

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

Indicators	School			*Anganwadi*		
	Denominator	Numerator	%	Denominator	Numerator	%
Radio	298	35	12	292	32	11
Newspaper	298	84	28	292	62	21
Banner	298	34	11	292	46	16
SMS	298	82	27	292	91	31
Others school/teacher/*anganwadi* worker	298	47	16	292	74	25
WhatsApp message	298	43	15	292	16	6
Training	298	55	19	292	78	27
Others[13]	298	61	20	292	44	15
Received SMS for current NDD round	298	135	45	292	174	60
Probable reasons for not receiving SMS[14]						
Changed Mobile number	147	16	11	97	14	14
Other family members use this number	147	13	9	97	14	14
Number not registered to receive such messages	147	99	67	97	60	62
Don't know	147	0	0	97	0	0
Others[15]	147	19	13	97	9	9

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

Indicators	School	Anganwadi

[13] Others include frontline workers/block level/ICDS officer/supervisors.
[14] 16 Schools and 21 *Anganwadis* reported that they don't know about receiving the SMS and reasons were not asked to them.
[15] Others includes Phone not in working condition, phone not reachable and no information/don't know etc.

	Denominator	Numerator	%	Denominator	Numerator	%
Awareness about the ways a child can get worm infection	298	241	81	292	254	87
Different ways a child can get worm infection (Multiple Response)						
Not using sanitary latrine	241	148	62	254	157	62
Having unclean surroundings	241	187	78	254	200	79
Consume vegetables and fruits without washing	241	167	69	254	156	61
Having uncovered food and drinking dirty water	241	142	59	254	148	58
Having long and dirty nails	241	108	45	254	119	47
Moving in bare feet	241	116	48	254	111	44
Having food without washing hands	241	107	45	254	95	37
Not washing hands after using toilets	241	71	30	254	63	25
Awareness about all the possible ways a child can get a worm infection[16]	241	31	13	254	23	9
Perceives that health education should be	298	280	94	292	283	97

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

provided to children						
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			292	252	87
2-3 years of children (Crush one full tablet between two spoons, and administer with water)	Not Applicable			292	121	42
3-5 years of children (one full tablet and child chewed the tablet properly)	Not Applicable			292	233	80
6-19 years of children (one full tablet and child chewed the tablet properly)	298	278	93	292	289	99
Awareness about non-administration of albendazole tablet to sick child						
Will administer albendazole tablet to sick child	298	21	7	292	22	8
Will not administer albendazole tablet to sick child	298	277	93	292	270	92
Awareness about consuming albendazole tablet						
Chew the tablet	298	286	96	292	291	100
Swallow the tablet directly	298	12	4	292	1	0
Awareness about consuming	298	284	95	292	286	98

albendazole in school/*anganwadi*						
Awareness about the last date (August 22, 2018) for submitting the reporting form	298	100	34	292	137	47
Awareness about the revised last date (August 24 & 29, 2018) for submitting the reporting form	298	3	1	292	3	1
Awareness about submission of reporting forms to ANM	298	108	36	292	173	59
Awareness to retain a copy of the reporting form	298	198	66	292	255	87

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	298	115	39	292	150	51
Yes, already done	298	39	13	292	70	24
Yes, after sometime	298	38	13	292	11	4
No, will not administer today	298	107	36	292	61	21
Schools/*anganwadis* conducted deworming on either of the day[17]	298	204	68	292	251	86

[17]Schools/*anganwadis* administered albendazole tablet to children either on NDD or Mop-Up Day

Schools/*anganwadis* conducted deworming on NDD[18]	155	114	73	148	132	89
Schools/*anganwadis* conducted deworming on Mop-Up Day[19]	143	78	54	144	99	69
Reasons for not conducting deworming						
No information	107	60	56	61	17	28
Albendazole tablet not received	107	23	21	61	8	13
Apprehension of adverse events	107	1	1	61	2	3
Already Dewormed	107	12	12	61	20	33
Others[20]	107	11	10	61	14	23
Attendance on NDD[21]	30509	19954	65	Not Applicable		
Attendance on Mop-Up Day[22]	24631	15504	63	Not Applicable		
Anganwadis having list of unregistered/out-of-school children	Not Applicable			292	119	41
Out-of-school children (Age 6-19 years) administered albendazole tablet	Not Applicable			292	188	65
Unregistered children (Age 1-5 years) administered albendazole tablet	Not Applicable			292	193	66
Sufficient quantity of albendazole tablets[23]	215	197	92	275	250	91

[18]Based on the samples visited on NDD.
[19]Based on the samples visited on Mop-Up Day only.
[20]Others include Teacher/Student not present, already dewormed on different dates, health issues, local fair.
[21] Based on the schools visited on NDD.
[22] Based on the school visited on Mop-Up Day.
[23] This indicator is based on the sample that received albendazole tablet.

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

Indicators	Schools			*Anganwadi*		
	Denominator	Numerator	%	Denominator	Numerator	%
Items received by school teacher and *anganwadi* worker						
Albendazole tablet	298	215	72	292	275	94
Poster/banner	298	157	53	292	196	67
Handouts/ reporting form	298	145	49	292	211	72
Received all materials	298	126	42	292	170	58
Items verified during Independent Monitoring						
Albendazole tablet	215	186	86	275	243	88
Poster/banner	157	140	89	196	180	92
Handouts/ reporting form	130	124	96	187	181	97
Received all materials	126	104	82	170	145	85
No of school teachers/*anganwadi* worker attended training and received items during training						
Albendazole tablet	151	130	86	201	168	84
Poster/banner	118	104	88	149	126	85
Handouts/ reporting form	115	103	89	158	138	87
Received all materials	126	83	66	170	106	62
Integrated Distribution of albendazole tablet IEC and training materials[24]	298	83	28	292	106	36

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

Indicators	Schools			Anganwadi		
	Denominator	Numerator	%	Denominator	Numerator	%

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

Deworming activity was taking place	115	110	96	150	134	89
Albendazole tablets were administered by						
Teacher/head master	110	107	97	134	0	0
Anganwadi worker	110	3	3	134	129	96
ASHA	110	0	0	134	5	4
ANM	110	0	0	134	0	0
Student	110	0	0	134	0	0
Teacher/*Anganwadi* worker asked children to chew the tablet	115	113	98	150	137	91
Followed any recording protocol[25]	153	117	76	220	179	81
Protocol followed						
Putting single/double tick	117	89	76	179	137	77
Put different symbols	117	2	2	179	9	5
Prepare the separate list for dewormed	117	26	22	179	33	18
Visibility of poster/banner during visits	157	116	74	196	144	73

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

Indicators	Schools	Anganwadi

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

	Denominator	Numerator	%	Denominator	Numerator	%
Opinion of occurrence of an adverse event after administering albendazole tablet	298	157	53	292	160	55
Awareness about possible adverse events (Multiple Response)						
Mild abdominal pain	157	116	74	110	128	80
Nausea	157	108	69	110	110	69
Vomiting	157	129	82	110	138	86
Diarrhea	157	40	26	110	44	28
Fatigue	157	32	21	110	36	23
All possible adverse event[26]	157	16	10	110	18	11
Awareness about mild adverse event management						
Take the child lie down in open and shade/shaded place	298	228	77	292	242	83
Give ORS/water	298	88	30	292	101	35
Observe the child at least for 2 hours in the school	298	74	25	292	67	23
Don't know/don't remember	298	61	20	292	33	11
Awareness about severe adverse event management						
Call PHC or emergency number	298	204	69	292	227	78

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

Take the child to the hospital /call doctor to school	298	123	41	292	128	44
Don't know/don't remember	298	41	14	292	13	5
Available contact numbers of the nearest ANM or MO-PHC	298	203	68	292	242	83
Asha present in *Anganwadi* center	Not Applicable			292	160	55

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

Indicators[27]	Denominator	Numerator	%
Attended training for current round of NDD	101	27	27
Received albendazole tablets	101	39	39
Sufficient quantity of albendazole tablets	39	32	82
Received poster/banner	101	23	22
Received handouts/ reporting form	101	25	24
Received SMS for current NDD round	101	24	23
Albendazole administered to children	101	33	32
Reasons for not conducting deworming			
No information	68	47	69
Albendazole tablets not received	68	13	19
Apprehension of adverse events	68	1	1
Already Dewormed	68	1	3
Others[28]	68	5	8

[27]These indicators are based on small samples; therefore, precautions should be taken while interpreting the results as these are not representative of all private schools in the state

[28]Others include already dewormed on previous days and no information about the programme too.

Albendazole tablet administered to children by teacher/headmaster[29]	23	23	100
Perceive that health education should be provided to children	101	87	86
Awareness about correct dose and right way of albendazole administration	101	94	93
Awareness about non-administration of albendazole tablet to sick child	101	7	7
Opinion of occurrence of an adverse event after taking albendazole tablet	101	41	41
Awareness about occurrence of possible adverse events (Multiple Response)			
Mild abdominal pain	41	33	81
Nausea	41	28	69
Vomiting	41	35	85
Diarrhea	41	6	14
Fatigue	41	6	15
Awareness about mild adverse event management			
Let the child rest in an open and shaded place	101	62	61
Provide clean water to drink/ORS	101	26	26
Contact the ANM/nearby PHC	101	56	56
Available contact numbers of the nearest ANM or MO-PHC	101	53	52
Followed correct[30] recording protocol	30	20	67

[29]This indicator is based on samples where deworming was ongoing.
[30]Correct recording protocol implies putting single tick (✓) on NDD and double tick (✓✓) for all those children administered albendazole tablets.

Findings from Coverage Validation Data – Uttar Pradesh, August 2018

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

Sr. No.	Indicators	Schools			*Anganwadis*		
		Denominator	Numerator	%	Denominator	Numerator	%
1	Percentage of schools/*anganwadis* conducted deworming[31]	905	654	72	905	853	94
	Percentage of conducted deworming in Government schools	601	557	93	Not Applicable		
	Percentage of conducted deworming in Private schools	304	97	32	Not Applicable		
1a	Percentage of school and *anganwadis* administered albendazole on day of - **(Multiple Response)**						
	a. National Deworming Day	654	632	97	853	820	96
	b. Mop-up day	654	485	74	853	631	74
	c. Between NDD and mop-up day	654	67	10	853	95	11
	d. Both days	654	473	72	853	624	73

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

	(NDD and mop-up day)						
1b	Reasons for not conducting deworming						
	a. No information	251	172	69	52	25	49
	b. Drugs not received	251	53	21	52	19	36
	c. Apprehension of adverse events	251	20	8	52	2	5
	d. Others[32]	251	6	3	52	5	10
2	Percentage of schools and *anganwadis* left over with albendazole tablet after deworming	654	275	42	853	388	46
2a	Number of albendazole tablets left after deworming						
	a. Less than 50 tablets	275	194	70	387	243	63
	b. 50-100 tablets	275	50	18	387	79	20
	c. More than 100 tablets	275	32	12	387	66	17
3	Copy of filled-in reporting form was	654	269	41	853	389	46

[32] Other includes Emergency work, don't know, *anganwadi* worker was not present and the medicines were not received on time.

	available for verification						
	Copy of filled-in reporting form was available for verification in Government schools	552	246	45	Not Applicable		
	Copy of filled-in reporting form was available for verification in Private schools	97	20	20	Not Applicable		
3a	Reasons for non-availability of copy of reporting form[33]						
	a. Did not received	366	215	59	263	123	47
	b. Submitted to ANM	366	71	19	263	90	34
	c. Unable to locate	366	36	10	263	36	14
	d. Others[34]	366	45	12	263	13	5
4	Percentage of *Anganwadi*center where ASHA administered albendazole	Not Applicable			853	545	64
5	*Anganwadis* having list of unregistered children (aged 1-5 years)	Not Applicable			853	222	26

[33] In 78 schools and 105 anganwadis blank reporting form was available.
[34]Others includes those who have already submitted the form, principal was absent, submitted to block level officials.

6	*Anganwadis* having list of out-of-school children (aged 6-19 years)	Not Applicable	853	235	28

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

Sr. No.	Indicators	Anganwadis		
		Denominator	Numerator	%
1	ASHA[35] conducted meetings with parents to inform about NDD	313	286	91
2	ASHA prepared list of unregistered and out-of-school children	313	174	56
3	ASHA shared the list of unregistered and out-of-school children with *angnawadis* teacher[36]	174	106	61
4	ASHA administered albendazole to children	313	281	90
5	ASHA received incentive for NDD Feb 2018 round	313	34	11

Table CV3: Recording protocol, verification factor and school attendance

Sr.No.	Indicators	Schools/Children			*Anganwadis*/Children		
		Denominator	Numerator	%	Denominator	Numerator	%
1	Followed correct[37] recording protocol	654	258	39	853	367	43

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

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

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

2	Followed partial[38] recording protocol	654	59	9	853	147	17
3	Followed no[39] recording protocol	654	337	52	853	339	40
	Followed correct recording protocol in Government schools	557	228	41	Not Applicable		
	Followed correct recording protocol in Private schools	97	27	28	Not Applicable		
4	State-level verification factor[40](children enrolled/registered)	28019	16117	58	39090	28421	73
	a. Children registered with *anganwadis*	Not Applicable			29063	18016	62
	b. Children unregistered with *anganwadis*(Aged 1-5)	Not Applicable			4514	5410	120
	c. Out-of-school children (Aged 6-19)	Not Applicable			5513	4995	91
5	Attendance on previous day of NDD (children enrolled)	157115	115177	73	Not Applicable		
6	Attendance on NDD (children enrolled)	157115	114490	73	Not Applicable		
7	Attendance on mop-up day (children enrolled)	157115	104536	67	Not Applicable		

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

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

[40]Ratio of recounted value of the dewormed children to the reported value. This calculation is based on only those schools (n=269) and *anganwadis* (n=389) where deworming was conducted and copy of reporting form was available for verification.

8	Children who attended on both NDD and mop-up day (children enrolled)	157115	85963	55	Not Applicable
9	Maximum attendance of children on NDD and mop-up day[41] (Children enrolled)	157115	133064	85	Not Applicable
10	Estimated NDD coverage[42][43]	56			54
11	Estimated NDD coverage in Government schools	71			Not Applicable
12	Estimated NDD coverage in Private schools	25			Not Applicable

Table CV4: Description on children (6-19 years) interviewed in the schools (n=1962) during coverage validation

Sr.No.	Indicators	Denominator	Numerator	%
1	Children received albendazole tablets	1962	1905	97
2	Children aware about the albendazole tablets	1905	1755	92
	Source of information about deworming among children (Multiple response)			
3	a. Teacher/school	1755	1721	98
	b. Television	1755	122	7
	c. Radio	1755	65	4
	d. Newspaper	1755	68	4
	e. Poster/Banner	1755	85	5
	f. Parents/siblings	1755	60	3

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

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

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

	g. Friends/neighbors	1755	41	2
4	Children aware about the worm infection	1905	1276	67
5	Children awareness about different ways a child can get worm infection (Multiple response)			
	a. Not using sanitary latrine	1276	491	38
	b. Having unclean surroundings	1276	880	69
	c. Consume vegetables and fruits without washing	1276	574	45
	d. Having uncovered food and drinking dirty water	1276	490	38
	e. Having long and dirty nails	1276	581	46
	f. Moving in bare feet	1276	509	40
	g. Having food without washing hands	1276	451	35
	h. Not washing hands after using toilets	1276	119	9
6	Children consumed albendazole tablet	1905	1897	99.6
7	Way children consumed the tablet			
	a. Chew the tablet	1897	1750	92
	b. Swallow tablet directly	1897	147	8
8	Supervised administration of tablets	1897	1797	95
9	Reasons for not consuming albendazole tablet			
	a. Feeling sick	8	2	29
	b. Afraid of taking the tablet	8	3	32
	c. Parents told me not to have it	8	0	0
	d. Do not have worms so don't need it	8	2	25
	e. Did not like the taste	8	1	14