Evidence Action

Deworm the World Initiative

Independent Monitoring of National Deworming Day in Uttarakhand

August 2018

Report

October 2018

Background

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

Uttarakhand 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 -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 13 districts Evidence Action covered 162 schools (127 government schools and 35 private schools) and 160 *anganwadis* for process monitoring visits during NDD and mop-up days; 406 schools (313 government schools, 93 private schools) and 408 *anganwadis* were covered 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 approval from Uttarakhand's government. One combined tool was used for process monitoring at schools and *anganwadis* on NDD and mop-up day, and one each for schools and *anganwadis* for coverage validation.

Implementation

Prior to the survey, Evidence Action conducted a comprehensive training of master trainers who further conducted two two-days trainings of 80 surveyors and 16 supervisors for process monitoring and coverage validation. The training included an orientation on NDD, the importance of independent monitoring, details of the monitoring formats including CAPI (Computer Assisted Personal Interview) practices, survey protocols, and practical sessions. Each surveyor was allotted one school and one *anganwadi* for process monitoring on NDD and mop-up day, and subsequently five schools and five *anganwadis* for coverage validation. Surveyors were provided with a tablet computer with the latest CAPI version downloaded, battery charger, printed copy of monitoring formats as backup, and albendazole tablets for demonstration during data collection. The details of sample schools were shared with surveyors one day before the commencement of fieldwork to ensure that they did not contact schools and *anganwadis* in advance, as this could cause bias in the results.

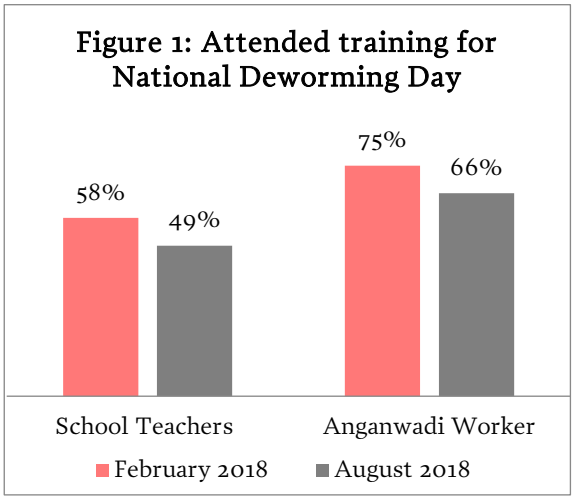
Appropriate quality assurance measures were taken to ensure that the data collected was accurate, consistent and authenticated. For example, teachers and *anganwadi* workers (AWWs) were asked to sign a participation form with an official stamp to authenticate surveyor's visit to schools and *anganwadis.* Further, consent based thumb impression of all survey respondents in electronic mode including headmasters, teachers, AWWs,

ASHAs and children were collected for verification purpose. The GPS location along with time stamp and photographs of all schools and *anganwadis* visited during data collection was also collected through CAPI to authenticate the location and the time of the interview. Evidence Action reviewed all data sets and shared feedback with the agency for any inconsistency observed and ensured timely corrective actions. All analysis was performed using STATA and Microsoft Excel.

Key Findings

Training

Prior to each NDD round, teachers and *anganwadi* workers are trained on NDD related processes and protocols to facilitate effective implementation. In August 2018 NDD round, 49% of teachers and 66% of AWWsworkers attended training which was a decline by nine percentage points in both schools and *anganwadis* in comparison to the February 2018 round (Figure 1). All schools and AWWs are mandated to attend training for every NDD round, irrespective of whether they attended training in earlier rounds. It was observed that 43% of school teachers and 28% of AWWs never attended training. Fifty-four percent of private school teachers participated in the block-level trainings and a decline of seven percentage points was observed as compared to the February 2018 round (61% of private school teachers) (Annex- Table PM7).

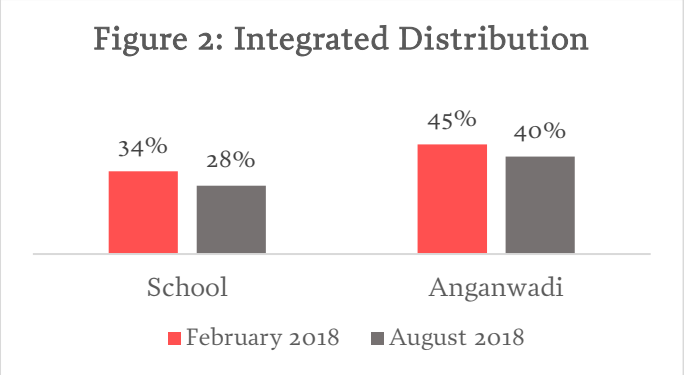


Among those who did not attend the training, 47% of teachers and 49% of AWWs reported having received no information about the NDD training date/venue/timing as the main reason for not attending the training (Annex- Table PM1). Further, 65% of teachers provided training to other teachers at their schools (Annex- Table PM1). Approximately 26% of teachers and 37% of *anganwadi* workers reported that they did not receive an SMS about NDD (Annex Table PM1). Lack of updated contact database of teachers and AWWs is one of the probable reasons for the sub-optimal delivery of SMS to them.

Integrated Distribution of NDD Kit at Trainings

Integrated distribution of the NDD kit was low for both schools (28%) and *anganwadis* (40%), which declined marginally from the previous NDD round (Figure 2). The low level of integrated distribution is partly attributed to delays in distribution of albendazole tablets to districts. Despite low integrated distribution in the state, drug availability at schools and *anganwadis* was ensured by the district and block officials, leading to 96% of schools and 97% of *anganwadis* reporting to have received albendazole tablets (Annex-Table PM4).

Eighty-one percent of schools and 83% of *anganwadis* received posters/banners, while 75% of schools and 73% of *anganwadis* received handouts/reporting forms (Annex-Table PM4). Almost all the schools (99%) and 95% of *anganwadis* reported having received sufficient tablets for deworming (Annex-Table PM3).



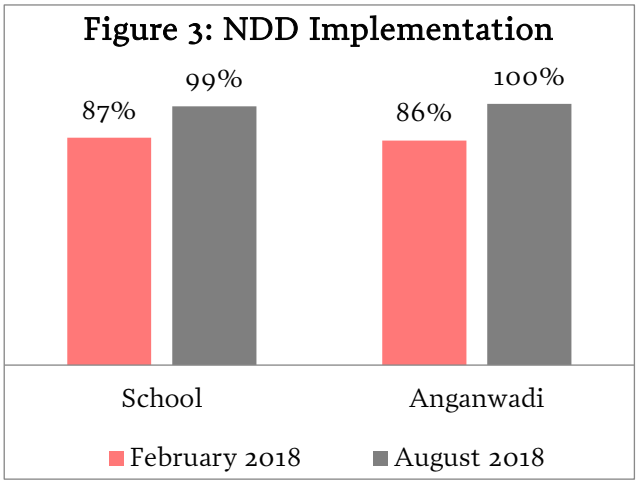
Among the sampled private schools, 89% received deworming tablets and among them, 94% reported having received sufficient quantity. Further, 69% of the private schools covered during process monitoring received posters/banners and 60% received handouts/reporting forms (Annex Table PM7).

Source of Information about the Recent Round of NDD

SMS was the most reported source of information in schools (46%) and in *anganwadis* (35%) on NDD. Forty-four percent of schools and 16% of *anganwadis* reported that they received information about NDD through WhatsApp messages. Thirty-five percent of schools and 17% of *anganwadis* reported that they received information about NDD through the newspaper. Eighteen percent of schools and 24% of *anganwadis* reported hearing about NDD from other teachers and *anganwadi* workers. Radio, Banner and *Gram Panchayat*[1] was the least effective source of information about NDD for the current round (Annex Table PM1).

NDD Implementation

As evident from Figure 3, a high proportion of schools and *anganwadis* conducted deworming during both NDD rounds. The coverage validation data shows that around 99% (401 out of 406) of schools and approximately 100% (406 out of 408) of *anganwadis* conducted deworming on NDD which is a 12 percentage point increase in schools and 14 percentage point increase in *anganwadi*s from the February 2018 round (Figure 3). No information about NDD and apprehension of adverese event ere the main reason among a small number of schools (5) for not conducting deworming(Annex- Table CV1).



[1] Village council

Adverse Events- Knowledge and Management

Interviews with headmasters/teachers and *anganwadi* workers reveal a moderate degree of awareness (54% in schools and 47% in *anganwadis*) regarding potential adverse events due to deworming. Knowledge gap was observed on appropriate protocols to follow in case of such events. Vomiting was listed as a side effect by 74% of teachers and 87% of AWWs and mild abdominal pain by 75% of teachers and 72% of *anganwadis*. Further, 73% of teachers and 78% 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 44% of schools and 41% of *anganwadis* knew to give ORS/water. Only 29% of schools and 18% of AWWs knew to observe the child for at least two hours. Further, 70% of schools and 68% of *anganwadis* reported the need to call a PHC doctor if symptoms persisted (Annex- Table PM6). Findings necesitate further emphasis on adverse event management protocols during training of teachers and AWWs.

Recording Protocol

Twenty-four percent of schools and 27% of *anganwadis* followed the correct (single and double ticks) recording protocol. Around 14% of schools and 19% of *anganwadis* carried out partial[2] recording. Sixty-two percent of schools and 54% of *anganwadis* did not follow any recording protocol (Annexure- CV3). Further, as per NDD guidelines, all schools and *anganwadis* are supposed to retain a copy of reporting forms; however, only 62% of schools and 47% of *anganwadis* retained a copy for verification (Annex –Table CV1). The findings from process monitoring suggests that 91% of schools and 84% of *anganwadi* workers 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 prior to NDD. However, only 26% of *anganwadis* reported to have the list of unregistered (1-5 years) children and 12% reported having the list of out-of-school children (6-19 years) (Annex –Table CV1). Neverthless, of all the ASHAs interviwed during coverage validation (who were available at the *anganwadis* at the time of surveyors visit), 35% reported to prepare the list of unregistered and out-of-school children and 69% of them reported to share it with AWWs. Further merely eight percent of ASHA workers reported receiving incentives for the last round of NDD i.e. February 2018. (Annex –Table CV2).

Coverage Validation

Coverage validation provides an opportunity to assess the accuracy of reported data and verify government-reported treatment figures. Verification factors[3] are common indicators to measure the accuracy of reported treatment values for neglected tropical

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

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

disease control programs[4]. 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 0.47, indicating that on an average, for every 100 dewormed children reported by the school, 47 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 0.57, indicating that on an average; for every 100 dewormed children reported by the *anganwadi,* 57 were verified through available documents (Annex – Table CV3).

The category-wise verification factors for registered (1-5 years), unregistered (1-5 years) and out-of-school (6-19 years) children were 0.49, 1.08, and 0.90 respectively for *anganwadis* (Annex CV3). The data suggests miss reporting and aggregation errors of coverage figures, particularly for unregistered and out-of-school children in *anganwadis* and therefore highlights a need for proper documentation. Despite challenges in reporting and documentation of NDD coverage data, based on children's interviews, the majority of the children present at schools on NDD or mop-up day received (99%) and consumed (100%) the albendazole tablet on either NDD or mop-up day.

Against the state government reported 96% 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 99% of schools conducted deworming on either NDD or mop-up day (Annex-Table CV1), a maximum of 94% of children were in attendance (Annex-Table CV3), 99% of children received an albendazole tablet, and 96% of children reported to consume the tablet under supervision (Annex-Table CV4). Considering these factors, 88%[5] (0.99*0.94*0.99*0.96) 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 44% (0.89*0.49) of registered children (1-5 years) in *anganwadis* could have been dewormed. The calculation of verification factors is based on only those schools and *anganwadis* where a copy of the reporting form was available for verification. Therefore, adjusted coverage in *anganwadis* based on verification factor needs to be interpreted with caution.

Recommendations

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

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

[5] This was estimated on the basis of NDD implementation status (99%), maximum attendance on NDD and mop-up day (94%); children received albendazole (99%) and supervised drug administration (96%). In absence of children interview in *anganwadis*, the government reported coverage was adjusted by implying state level verification factor.

1. Training is critical component of NDD to ensure smooth implementation of the program. Efforts are required to maximize training participation of school teachers and *anganwadi* workers at block-level trainings. Effective planning and coordination among stakeholder departments can pave ways in avoiding delays and rescheduling of training. Training sessions including the date and venue should be communicated to teachers and AWWs at least one week prior to the training date. District/Block level officials must ensure private school teachers' participation during training to further improve training attendance and strengthen the program. Efforts shall also be directed to monitor the quality of training to ensure that teachers and *anganwadi* workers gain comprehensive understanding of program protocols.

2. Integrated distribution is a crucial component for the success of NDD. It is cost effective, eases logistical concerns and ensures quality services. Timely procurement of deworming tablets and printing of IEC/training materials and its distribution to districts is critical in order to ensure the integrated distribution of the NDD kit (Drug, IEC& Training materials) at all block-level. Robust and efficiently planned integrated distribution of tablets and materials at trainings is important to mitigate the supply gap. This is all the more critical considering the difficult geographical terrain with accessibility issues in the state.

3. ASHAs plays a crucial role in NDD program in tapping unregistered and out-of-school children for deworming. In the current round of NDD, though guidelines from the state were released to improve the engagement of ASHAs in mobilizing out-of-school children and spreading awareness about deworming benefits, findings indicate scope for greater involvement of ASHAs in community mobilization in future rounds. ASHA engagement can be strengthened by highlighting the role of ASHAs in the joint directive, encouraging their participation in training sessions, and sending reminder SMSs to them with information on incentives. Further, as finding shows, a low proportion of ASHA received incentive for February 2018 round; timely disbursement of ASHA incentives could be a motivating factor for their engagement in the program.

4. Adherence to correct recording protocol is a prerequisite to understanding the coverage of the program. Findings from coverage validation data shows low adherence to correct recording protocol at both schools and *anganwadis*. Teachers and *anganwadi* workers should be informed of the importance of recording protocol during training and additional practical sessions held during training. Adherence to recording protocol can also be strengthened through reinforcement SMSs. Standard copies of reporting formats, attached with the training handout, should be available at trainings.

5. Coverage validation findings showed a significant decrease in the estimated coverage in *anganwadis*. This could be attributed to a decrease in the verification factor (for 1-5 registered children) in *anganwadis*. Emphasis should be given to maintain proper records and reporting at *anganwadis*.

Annexure:

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

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	13
Number of districts covered under process monitoring	13
Number of trained surveyors deployed during process monitoring	80
Number of blocks[6] covered during process monitoring	80
Total number of schools covered	162
• Number of government schools[7]	127
• Number of private schools	35
Total number of *anganwadis* covered[8]	160
Total number of schools covered[9] during coverage validation	406
• Total number of government schools covered	313
• Total number of private schools covered	93
Total number of *anganwadis* covered[10] during coverage validation	408

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	162	79	49	160	105	66
Ever attended training for NDD[11]	162	93	57	160	116	73
Never attended training for NDD	162	69	43	160	44	28
Reasons for not attending current NDD round training (Multiple Response)						
Location was too far away	83	13	16	55	8	15
Did not know the date/timings/venue	83	39	47	55	27	49
Busy in other official/personal work	83	5	6	55	2	4
Attended deworming	83	14	17	55	11	20

[6]These are sampled blocks selected from UDISE data, 2017-18.
[7]These are the actual schools covered during NDD and Mop-Up Day visits.
[8]These are the actual *anganwadis* covered during NDD and Mop-Up Day visits.
[9]These are the actual schools covered during Coverage Validation visits. Numbers given in subsequent tables (numerator and denominator) are weighted. The weights are used in order to generalize the findings at state level.
[10]These are the actual *anganwadis* covered during Coverage Validation visits. Numbers given in subsequent tables (numerator and denominator) are weighted. The weights are used in order to generalize the findings at state level.
[11]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	%
training in the past						
Not necessary	83	8	10	55	4	7
No incentives/no financial support	83	3	4	55	2	4
Others	83	20	24	55	11	20
Trained teacher that provided training to other teachers in their schools						
All other teachers	79	51	65	Not Applicable		
Few teachers	79	9	11	Not Applicable		
No (himself/herself only teacher)	79	9	11	Not Applicable		
No, did not train other teachers	79	10	13	Not Applicable		
Source of information about current NDD round (Multiple Response)						
Television	162	48	30	160	42	26
Radio	162	20	12	160	16	10
Newspaper	162	57	35	160	27	17
Banner	162	29	18	160	22	14
SMS	162	75	46	160	56	35
Others school/teacher/*anganwadi* worker	162	29	18	160	39	24
WhatsApp message	162	72	44	160	25	16
Training	162	33	20	160	45	28
Gram Panchayat	162	5	3	160	9	6
Others[12]	162	15	9	160	25	18
Received SMS for current NDD round	162	120	74	160	101	63
Probable reasons for not receiving SMS[13]						
Changed Mobile number	40	7	17	56	12	21
Other family members use this number	40	2	5	56	2	4
Number not registered to receive such messages	40	4	10	56	8	14
Don't Know	40	21	53	56	29	52
Others[14]	40	6	15	56	5	9

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

Indicators	School			Anganwadi		
	Denominator	Numerator	%	Denominator	Numerator	%
Awareness about the ways a child can get worm infection	162	149	92	160	145	91
Different ways a child can get worm infection (Multiple Response)						
Not using sanitary latrine	149	105	70	145	93	64
Having unclean surroundings	149	104	70	145	107	74

[12] Other includes by ANM/BRC/SUPERVISOR/PHC/meeting, received call.
[13]2 Schools and 3 *Anganwadis* reported that they don't know about receiving the SMS and reasons were not asked to them.
[14] Other includes Network/light Problem, phone switch off.

Consume vegetables and fruits without washing	149	102	68	145	88	61
Having uncovered food and drinking dirty water	149	91	61	145	75	52
Having long and dirty nails	149	88	59	145	91	63
Moving in bare feet	149	74	50	145	75	52
Having food without washing hands	149	81	54	145	79	54
Not washing hands after using toilets	149	49	33	145	40	28
Awareness about all the possible ways a child can get a worm infection[15]	149	22	15	145	14	10
Perceives that health education should be provided to children	162	161	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	138	86
2-3 years of children (Crush one full tablet between two spoons, and administer with water)	Not Applicable			160	84	53
3-5 years of children (one full tablet and child chewed the tablet properly)	Not Applicable			160	133	83
6-19 years of children (one full tablet and child chewed the tablet properly)	162	160	99	160	158	99
Awareness about non-administration of albendazole tablet to sick child						
Will administer albendazole tablet to sick child	162	23	14	160	10	6
Will not administer albendazole tablet to sick child	162	139	86	160	150	94
Awareness about consuming albendazole tablet						
Chew the tablet	162	158	98	160	159	99
Swallow the tablet directly	162	4	2	160	1	1
Awareness about consuming albendazole in school/*anganwadi*	162	158	98	160	158	99
Awareness about the last date (August 22, 2018) for submitting the reporting form	162	79	49	160	68	43
Awareness about the revised last date (August 24, 2018) for submitting the reporting form	162	0	0	160	2	1

[15]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 submission of reporting forms to ANM	162	79	49	160	84	53
Awareness to retain a copy of the reporting form	162	148	91	160	134	84

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	162	63	39	160	58	36
Yes, already done	162	52	32	160	59	37
Yes, after sometime	162	18	11	160	8	5
No, will not administer today	162	29	18	160	35	22
Schools/*anganwadis* conducted deworming on either of the day[16]	162	155	96	160	149	93
Schools/*anganwadis* conducted deworming on NDD[17]	81	79	98	81	77	95
Schools/*anganwadis* conducted deworming on Mop-Up Day[18]	81	54	67	79	48	61
Reasons for not conducting deworming						
No information	29	5	17	35	5	14
Albendazole tablet not received	29	1	3	35	3	9
Apprehension of adverse events	29	0	0	35	0	0
Already Dewormed all children on deworming day	29	22	76	35	24	69
Others[19]	29	1	3	35	3	9
Attendance on NDD[20]	10570	8910	84	Not Applicable		
Attendance on Mop-Up Day[21]	12799	10336	81	Not Applicable		
Anganwadis having list of unregistered/out-of-school children	Not Applicable			160	45	28
Out-of-school children (Age 6-19 years) administered albendazole tablet	Not Applicable			160	72	45
Unregistered children (Age 1-5 years) administered albendazole tablet	Not Applicable			160	82	51

[16]Schools/*anganwadis*administeredalbendazole tablet to children either on NDD or Mop-Up Day
[17]Based on the samples visited on NDD.
[18]Based on the samples visited on Mop-Up Day only.
[19]Others include: gave tablet on 18.8.2018, children were absent, Tablet yet not received.
[20]Based on those schools visited on NDD
[21]Based on those schools visited on Mop-Up Day

Sufficient quantity of albendazole tablets[22]	156	154	99	155	148	95

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	162	156	96	160	155	97
Poster/banner	162	132	81	160	132	83
Handouts/ reporting form	162	121	75	160	117	73
Received all materials	162	111	69	160	107	67
Items verified during Independent Monitoring						
Albendazole tablet	156	132	85	155	124	80
Poster/banner	132	121	92	132	117	89
Handouts/ reporting form	101	95	94	94	86	91
Received all materials	111	84	76	107	78	73
No of school teachers/*anganwadi* worker attended training and received items during training						
Albendazole tablet	76	61	80	103	85	83
Poster/banner	65	57	88	95	84	88
Handouts/ reporting form	60	53	88	86	75	87
Received all materials	111	45	41	107	64	60
Integrated Distribution of albendazole tablet IEC and training materials[23]	162	45	28	160	64	40

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

Indicators	Schools			Anganwadi		
	Denominator	Numerator	%	Denominator	Numerator	%
Deworming activity was taking place	63	60	95	58	56	97
Albendazole tablets were administered by						
Teacher/headmaster	60	59	98	56	2	4
Anganwadi worker	60	0	0	56	54	96
ASHA	60	0	0	56	0	0
ANM	60	0	0	56	0	0
Student	60	1	2	56	0	0
Teacher/Anganwadi worker asked children to chew the tablet	63	59	94	58	54	93
Followed any recording protocol[24]	115	92	80	117	84	72
Protocol followed						
Putting single/double tick	92	66	72	84	58	69

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

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

[24]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.

Put different symbols	92	11	12	84	9	11
Prepare the separate list for dewormed	92	15	16	84	17	20
Visibility of poster/banner during visits	132	115	87	132	106	80

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

Indicators	Schools			Anganwadi		
	Denominator	Numerator	%	Denominator	Numerator	%
Opinion of occurrence of an adverse event after administering albendazole tablet	162	88	54	160	75	47
Awareness about possible adverse events (Multiple Response)						
Mild abdominal pain	88	66	75	75	54	72
Nausea	88	55	63	75	47	63
Vomiting	88	65	74	75	65	87
Diarrhea	88	38	43	75	28	37
Fatigue	88	25	28	75	22	29
All possible adverse event[25]	88	12	14	75	8	11
Awareness about mild adverse event management						
Make the child lie down in open and shade/shaded place	162	119	73	160	124	78
Give ORS/water	162	71	44	160	65	41
Observe the child at least for 2 hours in the school	162	47	29	160	28	18
Don't know/don't remember	162	23	14	160	27	17
Awareness about severe adverse event management						
Call PHC or emergency number	162	114	70	160	109	68
Take the child to the hospital /call doctor to school	162	96	59	160	88	55
Don't know/don't remember	162	7	4	160	9	6
Available contact numbers of the nearest ANM or MO-PHC	162	121	75	160	129	81
Asha present in Anganwadi center	Not Applicable			160	77	48

[25]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.

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

Indicators[26]	Denominator	Numerator	%
Attended training for current round of NDD	35	19	54
Received albendazole tablets	35	31	89
Sufficient quantity of albendazole tablets	31	29	94
Received poster/banner	35	24	69
Received handouts/ reporting form	35	21	60
Received SMS for current NDD round	35	24	69
Albendazole administered to children	35	26	74
Reasons for not conducting deworming			
No information	9	3	33
Albendazole tablets not received	9	0	0
Apprehension of adverse events	9	0	0
Already dewormed all children on deworming day	9	5	56
Others[27]	9	1	11
Albendazole tablet administered to children by teacher/headmaster[28]	11	11	100
Perceive that health education should be provided to children	35	35	100
Awareness about correct dose and right way of albendazole administration	35	34	97
Awareness about non-administration of albendazole tablet to sick child	35	27	77
Opinion of occurrence of an adverse event after taking albendazole tablet	35	19	54
Awareness about occurrence of possible adverse events			
Mild abdominal pain	19	16	84
Nausea	19	12	63
Vomiting	19	14	74
Diarrhea	19	11	58
Fatigue	19	4	21
Awareness about mild adverse event management			
Let the child rest in an open and shaded place	35	20	57
Provide clean water to drink/ORS	35	16	46
Contact the ANM/nearby PHC	35	23	66
Available contact numbers of the nearest ANM or MO-PHC	35	28	80
Followed correct[29] recording protocol	21	15	71

[26]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

[27]Others include School Closed.

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

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

Findings from Coverage Validation Data -Uttarakhand, 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[30]	406	401	99	408	406	100
	Percentage of conducted deworming in Government schools	313	313	100	Not Applicable		
	Percentage of conducted deworming in Private schools	93	88	95	Not Applicable		
1a	Percentage of school and *anganwadis* administered albendazole on day of - (Multiple Response)						
	a. National Deworming Day	401	394	98	406	398	98
	b. Mop-up day	401	166	41	406	153	38
	c. Between NDD and mop-up day	401	45	11	406	31	8
	d. Both days (NDD and mop-up day)	401	163	41	406	148	36
1b	Reasons for not conducting deworming						
	a. No information	5	2	40	2	1	50
	b. Drugs not received	5	1	20	2	1	50
	c. Apprehension of adverse events	5	2	40	2	0	0
	d. Others	5	0	0	2	0	0
2	Percentage of schools and *anganwadis* left over with albendazole tablet after deworming	401	170	42	406	161	40
2a	Number of albendazole tablets left after deworming						
	a. Less than 50 tablets	170	159	93	161	158	98
	b. 50-100 tablets	170	45	3	161	2	1
	c. More than 100 tablets	170	46	4	161	1	1
3	Copy of filled-in reporting form was available for verification	401	250	62	406	191	47
	Copy of filled-in reporting form was available for verification in Government schools	313	208	66	Not Applicable		
	Copy of filled-in reporting form was available for verification in Private schools	93	42	48	Not Applicable		
3a	Reasons for non-availability of copy of reporting form[31]						

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

	a. Did not received	144	63	44	208	70	34
	b. Submitted to ANM	144	60	42	208	110	53
	c. Unable to locate	144	8	6	208	6	3
	d. Others[32]	144	13	9	208	22	11
4	Percentage of *Anganwadi* center where ASHA administered albendazole	Not Applicable			406	255	63
5	*Anganwadis* having list of unregistered children (aged 1-5 years)	Not Applicable			406	104	26
6	*Anganwadis* having list of out-of-school children (aged 6-19 years)	Not Applicable			406	47	12

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

Sr. No.	Indicators	Anganwadis		
		Denominator	Numerator	%
1	ASHA[33] conducted meetings with parents to inform about NDD	92	90	98
2	ASHA prepared list of unregistered and out-of-school children	92	32	35
3	ASHA shared the list of unregistered and out-of-school children with *angnawadis* worker[34]	32	22	69
4	ASHA administered albendazole to children	92	67	73
5	ASHA received incentive for NDD February 2018 round	92	7	8

Table CV3: Recording protocol, verification factor and school attendance

Sr. No.	Indicators	Schools/Children			Anganwadis/Children		
		Denominator	Numerator	%	Denominator	Numerator	%
1	Followed correct[35] recording protocol	401	95	24	406	110	27
2	Followed partial[36] recording protocol	401	56	14	406	76	19

[31]In 7 schools and 7 *anganwadis* blank reporting form was available.
[32]Other includes not received, at headmasters' home, don't want share, locked, *Anganwadi* worker changed, lost, don't remember, submitted to ICDS, ASHA Facilitator, etc.
[33]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.
[34] Based on sub-sample who reported to prepare the said list
[35]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.
[36]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.

3	Followed no[37] recording protocol	401	250	62	406	220	54
	Followed correct recording protocol in Government schools	313	76	24	Not Applicable		
	Followed correct recording protocol in Private schools	88	19	22	Not Applicable		
4	State-level verification factor[38] (children enrolled/registered)	18895	8921	47	4985	2864	57
	a. Children registered with *anganwadis*	Not Applicable			4181	2061	49
	b. Children unregistered with *anganwadis* (Aged 1-5)	Not Applicable			438	473	108
	c. Out-of-school children (Aged 6-19)	Not Applicable			366	330	90
5	Attendance on previous day of NDD (children enrolled)	35119	26324	75	Not Applicable		
6	Attendance on NDD (children enrolled)	35119	30133	86	Not Applicable		
7	Attendance on mop-up day (children enrolled)	35119	28531	81	Not Applicable		
8	Children who attended on both NDD and mop-up day (children enrolled)	35119	25824	74	Not Applicable		
9	Maximum attendance of children on NDD and mop-up day[39] (Children enrolled)	35119	32840	94	Not Applicable		
10	Estimated NDD coverage[40][41]	88			44		
11	Estimated NDD coverage in Government schools	91			Not Applicable		
12	Estimated NDD coverage in Private schools	80			Not Applicable		

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

[38]Ratio of recounted value of the dewormed children to the reported value. This calculation is based on only those schools (n=250) and *anganwadis* (n=191) where deworming was conducted and copy of reporting form was available for verification.

[39]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.

[40] 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.*

[41]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=401) during coverage validation

Sr.No.	Indicators	Denominator	Numerator	%
1	Children received albendazole tablets	1203	1186	99
2	Children aware about the albendazole tablets	1186	1104	93
	Source of information about deworming among children (Multiple response)			
3	a. Teacher/school	1104	1102	100
	b. Television	1104	41	4
	c. Radio	1104	28	3
	d. Newspaper	1104	47	4
	e. Poster/Banner	1104	106	10
	f. Parents/siblings	1104	21	2
	g. Friends/neighbors	1104	14	1
4	Children aware about the worm infection	1186	861	73
5	Children awareness about different ways a child can get worm infection (Multiple response)			
	a. Not using sanitary latrine	861	321	37
	b. Having unclean surroundings	861	543	63
	c. Consume vegetables and fruits without washing	861	437	51
	d. Having uncovered food and drinking dirty water	861	394	46
	e. Having long and dirty nails	861	504	59
	f. Moving in bare feet	861	452	53
	g. Having food without washing hands	861	411	48
	h. Not washing hands after using toilets	861	187	22
6	Children consumed albendazole tablet	1186	1182	100
7	Way children consumed the tablet			
	a. Chew the tablet	1182	1088	92
	b. Swallow tablet directly	1182	94	8
8	Supervised administration of tablets	1182	1132	96
9	Reasons for not consuming albendazole tablet			
	a. Feeling sick	4	2	50
	b. Afraid of taking the tablet	4	1	25
	c. Parents told me not to have it	4	0	0
	d. Do not have worms so don't need it	4	1	25
	e. Did not like the taste	4	0	0