Evidence Action

Deworm the World Initiative

Independent Monitoring of National Deworming Day in Uttar Pradesh February, 2018

REPORT

May 2018

Background

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

Uttar Pradesh observed the February 2018 round of NDD on February 10, followed by mop-up day on February 15. Fieldwork for process monitoring was conducted on February 10 and 15, while coverage validation in the state was conducted February 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 28 districts Evidence Action selected 250 schools (160 government schools and 90 private schools) and 250 *anganwadis* for process monitoring visits during NDD and mop-up days; 625 schools (395 government schools and 230 private schools) and 625 *anganwadis* were selected for coverage validation. Through a competitive review process, Evidence Action hired an independent survey agency to conduct process monitoring and coverage validation. Evidence Action designed and finalized survey tools with approvals from Uttar Pradesh's government. One combined tool was used for process monitoring at schools and *anganwadis* on NDD and mop-up day, and one each for schools and *anganwadis* for coverage validation.

Implementation

Prior to the survey, Evidence Action conducted a comprehensive training of master trainers who further conducted a two-day training of 125 surveyors and 25 supervisors. The training included an orientation on NDD, the importance of independent monitoring, details of the monitoring formats including CAPI practices and survey protocols, and practical sessions. Each surveyor was allotted one school and one *anganwadi* for process monitoring on NDD and mop-up day, and subsequently five schools and five *anganwadis* for coverage validation. Surveyors were provided with a tablet computer, charger, printed copy of monitoring formats as backup, and albendazole tablets for demonstration during data collection. The details of sample schools were shared with them one day before the commencement of fieldwork to ensure that monitors did not contact schools and *anganwadis* in advance, as this could cause bias in the results.

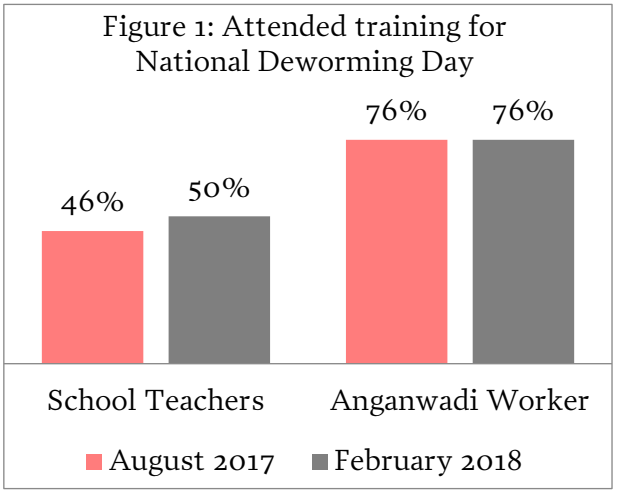
Appropriate quality assurance measures were taken to ensure that the data collected was accurate, consistent and authenticated. For example, teachers and *anganwadi* workers (AWWs) were asked to sign a participation form with an official stamp to authenticate surveyor visits to schools or *anganwadis*. Further, photographs of schools and *anganwadis* were also collected to authenticate the location 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

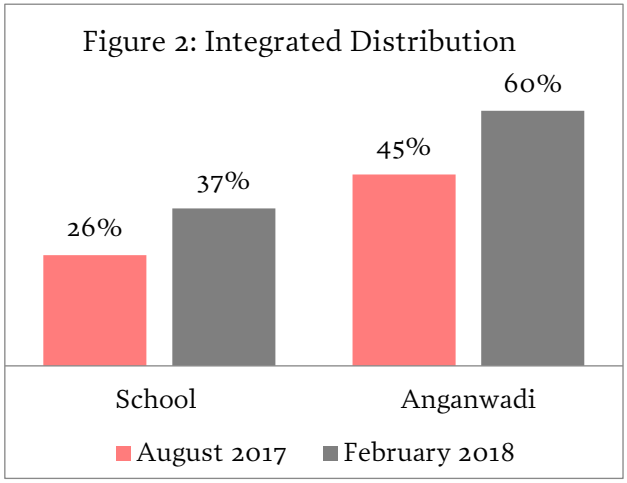
Prior to each NDD round, teachers and *anganwadi* workers are trained on NDD related processes and protocols to facilitate effective implementation. 50% of teachers and 76% AWWs attended training for February 2018 NDD round; all schools and *anganwadi* workers are mandated to attend training for every NDD round, irrespective of whether they attended training in earlier rounds. A marginal increase in school trainings was observed in comparison to the August 2017 round (Figure 1). Attendance of private schools remained low in training (19%) (Annex- Table PM7).



Among those who did not attend the training, 47% of teachers and 44% of *anganwadi* workers 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, 62% of teachers provided training to other teachers at their schools (Annex- Table PM1). Approximately 53% of teachers and 45% of AWWs reported that they did not receive an SMS about NDD (Annex Table PM1). 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 at Trainings

Although mandated in the NDD guidelines, integrated distribution of the NDD kit, including banners, posters, and reporting forms, was sub-optimal for both schools (37%) and *anganwadis* (60%), but rates have improved compared to the August 2017 round for both (Figure 2). The low level of integrated distribution is partly attributed to delays in printing and distribution of IEC and training material, and delayed distribution of drugs to districts. Drug availability and their distribution at schools and *anganwadis* was ensured by the Cluster Resource Coordinator at schools, Lady Supervisors at *anganwadis,* and *Rasthriya Bal Suraksha Karyakram*



teams, leading to 72% of schools and 97% *anganwadis* reporting to have received deworming tablets.

Fifty-six percent of schools and 82% of *anganwadis* received posters/banners, while 58% schools and 86% of *anganwadis* received handouts/reporting forms (Annex-Table PM4). Ninety-eight percent of schools and 94% of *anganwadis* reported having received sufficient drugs for deworming (Annex-Table PM3).

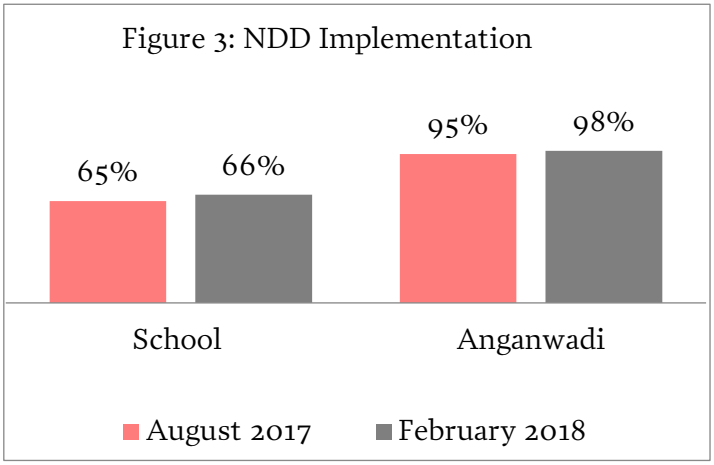
Among the sampled private schools, 42% received deworming tablets and among those, 93% reported having received sufficient quantity. Further, 26% of the private schools covered during process monitoring received posters/banners and 28% received handouts/reporting forms. The corresponding figures for the August 2017 round were 24% for both posters/banners and 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 on NDD; thirty-nine percent of schools and 41% of *anganwadis* reported that they received information about NDD through SMS. Training was the second reported source of information in schools (29%) and *anganwadis* (44%) on NDD. Eighteen percent of schools and 34% of *anganwadis* reported hearing about NDD from other teachers and AWWs. Radio was the least effective source of information about NDD for the current round (Annex Table PM1).

NDD Implementation

The percentage of schools that conducted deworming remained low (66%; 415 out of 625) in the February 2017 NDD round and only two-third of total schools implemented NDD program. In the February 2018 round, monitoring data found that almost all *anganwadis* (98%) conducted NDD, a slight increase over August 2017 (Figure 3). One of the most commonly cited reasons for schools not conducting deworming was that they did not receive information about NDD. Out of all the schools and *anganwadis* visited during process monitoring, surveyors were able to observe deworming activities in only 51% of schools and 77% of *anganwadis* (Annex- Table PM5).



Adverse Events- Knowledge and Management

Interviews with headmasters/teachers and AWWs reveals a moderate degree of awareness (43% in schools and 58% in *anganwadis*) regarding potential adverse events due to deworming. A considerable knowledge gap was observed on appropriate protocols to follow

in the case of such events. Vomiting was listed as a side effect by 85% of teachers and 86% of *anganwadi* workers, followed by mild abdominal pain (77% in school and 81% in *anganwadi*). Further, 73% of teachers and 84% 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 31% schools and 30% *anganwadis* knew to give ORS/water. Only 19% of schools and 22% of *anganwadis* workers knew to observe the child for at least two hours. Further, 63% of schools and 76% of *anganwadis* reported the need to call a PHC doctor if symptoms persisted (Annex- Table PM6). Findings necesitate emphasis on adverse event management protocols during training of teachers and AWWs.

Recording Protocol

More than half of schools (54%) and *anganwadis* (60%) followed the correct (single and double ticks) recording protocol. Around 12% of schools and 17% of *anganwadis* carried out partial recording. Thirty-four percent of schools and 23% of *anganwadis* did not follow any recording protocol (Annexure- CV3). The findings from process monitoring suggests that 68% of schools and 96% of *anganwadi* workers were aware of the recording protocol requirement (Annex –Table PM2). Further, per NDD guidelines, all schools and *anganwadis* are supposed to retain a copy of reporting forms; however, only 64% of schools and 68% of *anganwadis* retained a copy for verification (Annex –Table CV1).

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 AWWs. However, only 41% of *anganwadis* reported to have the list of unregistered (1-5 years) children and 76% reported having the list of out-of-school children (6-19 years). Of the ASHAs interviwed during coverage validation (who were available at the *anganwadis* at the time of surveyors visit), 52% reported to prepare the list of unregistered and out-of-school children. Out of these 52%, only 68% had shared it with the AWWs and only a mere 5% of ASHA workers reported receiving incentives for the last round of NDD (Annex –Table CV2).

Coverage Validation

Coverage validation provides an opportunity to assess the accuracy of reported data and verify government-reported treatment figures. Verification factors[1] are common indicators to measure the accuracy of reported treatment values for neglected tropical disease control programs.[2] Coverage validation also gives us an idea about record keeping and data management at the service delivery point. The verification factor was estimated on the basis of the availability of a copy of reporting forms at schools and *anganwadis*. The state-level verification factor for school enrolled children was 0.48, indicating that on an average, for every 100 dewormed children reported by the school, forty-eight 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 1.12,

[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.*

indicating that on an average, for every 100 dewormed children reported by the *anganwadi,* one hundred and twelve were verified through available documents (Annex CV3).

However, category-wise verification factors for registered (1-5 years), unregistered (1-5 years) and out-of-school (6-19 years) children were 0.91, 1.77, and 1.51 respectively for *anganwadis* (Annex CV3). The data suggests under reporting 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 87% coverage in schools and 89% coverage for 1-5 years registered children in *anganwadis*, attempts were made to understand the maximum number of children that could have been dewormed at schools and *anganwadis* through coverage validation data. The NDD treatment coverage in schools was estimated considering the maximum attendance of children on NDD dates. Coverage validation data showed that 66% of schools conducted deworming on either NDD or mop-up day (Annex-Table CV1), a maximum of 73% of children were in attendance (Annex-Table CV3), 97% of children received an albendazole tablet, and 96% of children reported to consume the tablet under supervision (Annex-Table CV4). Considering these factors, 45%[3] (0.66*0.73*0.97*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 81% (0.89*0.91) 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 and coverage validation exercise:

1. Training is a crucial component of NDD, linked to the distribution of drugs, IEC and training materials through the NDD kit. Integrated distribution facilitates the availability of the NDD kit at schools and *anganwadis*. Block trainings must be planned and communicated to teachers and AWWs in advance, and tracked and monitored by the respective departments at the district and block levels. Effective planning and coordination between stakeholder departments should aim to avoid delays or rescheduling of training. Stakeholder departments can reference daily tele-

[3] This was estimated on the basis of NDD implementation status (66%), maximum attendance on NDD and mop-up day (73%), children received albendazole (97%) and supervised drug administration (96%). In absence of children interview in *Anganwadis*, the government reported coverage was adjusted by implying state level verification factor.

calling trackers shared by Evidence Action for real-time updates, sharing and facilitation of gaps with districts and blocks to improve training attendance.

2. The supply chain of NDD related material should be strengthened. Gaps in delivery of IEC materials, as identified as per experiences in past rounds, should be addressed to ensure timely and adequate distribution of NDD kits to all schools and *anganwadis* during training.

3. The appropriate departments must update the contact database of department functionaries. This will help in relaying NDD related information both prior to and on the day of throughSMS and telecalling.

4. While adherence to correct recording protocol has increased for both schools and *anganwadis,* this needs to be strengthened further through reinforcement SMS, increased participation at trainings, and practical sessions on recording protocols at training. The availability of a copy of reporting forms directly affects the evaluation of reported coverage data. This should also be reiterated at the trainings of teachers and AWWs.

5. Maximum attendance of children at schools declined by 11 percentage points between the August 2017 and February 2018 rounds (from 84% to 73%). Emphasis must be given to maintain a high level of school attendance on NDD days to achieve high coverage. The Department of Education needs to ensure maximum attendance of children in schools on NDD and mop-up day by sending directives to district and block level education officials, sensitization during school assemblies, scheduling household visits by teachers, and sending reinforcement messages to teachers by using WhatsApp groups and regular SMS platforms.

6. Engagement with ASHAs at the planning stages of the program is crucial. The role of ASHAs in mobilizing unregistered and out-of-school children must be discussed in detail during trainings at all levels of the cascade to ensure ASHAs understand their role in NDD. Field level activities performed by ASHAs such as community mobilization should to be initiated well in advance and provide sufficient time for community mobilization activities.

Annexure

Table PM 1: Training and source of information about NDD among teachers/headmasters and *anganwadi* workers, February2018

Indicators	School			*Anganwadi*		
	Denominator	Numerator	%	Denominator	Numerator	%
Attended training for current round of NDD	250	125	50	250	191	76
Ever attended training for NDD[4]	250	132	53	250	198	79
Never attended training for NDD	250	118	47	250	52	21
Reasons for not attending NDD training (Multiple Response)						
Location was too far away	125	8	7	59	3	5
Did not know the date/timings/venue	125	59	47	59	26	44
Busy in other official/personal work	125	9	7	59	12	20
Attended deworming training in the past	125	7	6	59	7	12
Not necessary	125	8	7	59	1	2
No incentives/no financial support	125	1	1	59	0	0
Trained teacher that provided training to other teachers in their schools						
All other teachers	125	78	62	NA	NA	NA
Few teachers	125	24	19	NA	NA	NA
No (himself/herself only teacher)	125	7	6	NA	NA	NA
No, did not train other teachers	125	16	13	NA	NA	NA
Source of information about current NDD round (Multiple Response)						

[4] 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	%
Television	250	50	20	250	57	23
Radio	250	12	5	250	21	8
Newspaper	250	49	20	250	42	17
Banner	250	22	9	250	37	15
SMS	250	97	39	250	102	41
Other school/teacher/*anganwadi* worker	250	46	18	250	86	34
WhatsApp message	250	49	20	250	30	12
Training	250	73	29	250	109	44
Others	250	64	26	250	37	15
Received SMS for current NDD round	250	116	47	250	137	55
Probable reasons for not receiving SMSs						
Changed Mobile number	134	29	22	113	22	19
Other family members use this number	134	7	5	113	28	25
Number not registered to receive such messages	134	56	42	113	31	27
Others	134	42	31	113	32	28

Table PM 2: Awareness about NDD among teachers/headmasters and *anganwadi* workers, February2018

Indicators	School			*Anganwadi*		
	Denominator	Numerator	%	Denominator	Numerator	%
Awareness about the ways a child can get worm infection	250	204	81	250	223	89
Different ways a child can get worm infection (Multiple Response)						
Not using sanitary latrine	204	94	46	223	91	41
Having unclean surroundings	204	155	76	223	172	77
Consume vegetables and fruits without washing	204	136	67	223	138	62
Having uncovered food and drinking dirty water	204	123	60	223	114	51
Having long and dirty nails	204	118	58	223	126	57
Moving in bare feet	204	114	56	223	141	63
Having food without washing hands	204	138	68	223	140	63
Not washing hands after using toilets	204	83	41	223	97	43
Awareness about all the possible ways a child can get a worm infection[5]	204	21	10	223	20	9
Perceives that health education should be provided to children	250	234	94	250	240	96
Awareness about correct dose and right way of administration of albendazole tablet						

[5]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.

1-2 years of children (Crush the half tablet between two spoons and administer with water)	NA	NA	NA	250	222	89
2-3 years of children (Crush one full tablet between two spoons, and administer with water)	NA	NA	NA	250	107	43
3-5 years of children (one full tablet and child chewed the tablet properly)	NA	NA	NA	250	223	89
6-19 years of children (one full tablet and child chewed the tablet properly)	250	240	96	250	246	98
Awareness about non-administration of albendazole tablet to sick child						
Will administer albendazole tablet to sick child	250	14	6	250	11	4
Will not administer albendazole tablet to sick child	250	236	94	250	239	96
Awareness about consuming albendazole tablet						
Chew the tablet	250	243	97	250	249	100
Swallow the tablet directly	250	7	3	250	1	0
Awareness about consuming albendazole in school/*anganwadi*	250	243	97	250	247	99
Awareness about the last date (February 22, 2018) for submitting the reporting form	250	71	28	250	101	40
Awareness about submission of reporting forms to ANM by February 22, 2018	250	73	29	250	138	55
Awareness to retain a copy of the reporting form	250	170	68	250	239	96

Table PM 3: 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	250	135	54	250	205	82
Yes, already done	250	19	8	250	19	8
Yes, after sometime	250	15	6	250	10	4
No, will not administer today	250	81	32	250	16	6
Schools/*anganwadis* conducted deworming on either of the day[6]	250	173	69	250	242	97
Schools/*anganwadis* conducted deworming on NDD[7]	124	88	71	124	118	95
Schools/*anganwadis* conducted deworming on Mop-Up Day[8]	126	81	65	126	116	92
Reasons for not conducting deworming						
No information	77	52	68	16	5	31
Albendazole tablet not received	77	14	18	16	1	6
Apprehension of adverse events	77	2	2	16	1	6
Others[9]	77	9	12	16	1	6

[6]Schools/*anganwadis* administeredalbendazole tablet to children either on NDD or Mop-Up Day
[7]Based on the samples visited on NDD.
[8]Based on the samples visited on Mop-Up Day only.
[9]School administer the albendazole tablet to children a day before holiday, children/student absent, postponed due to festival.

Attendance on NDD[10]	24690	13351	54	NA	NA	NA
Attendance on Mop-Up Day[11]	27692	17652	64	NA	NA	NA
***Anganwadis* having list of unregistered/out-of-school children**	NA	NA	NA	250	103	41
Out-of-school children (Age 6-19 years) administered albendazole tablet	NA	NA	NA	250	191	76
Unregistered children (Age 1-5 years) administered albendazole tablet	NA	NA	NA	250	196	78
Sufficient quantity of albendazole tablets[12]	180	176	98	243	229	94

Table PM4: Integrated distribution of albendazole tablets and IEC materials, February2018

Indicators	Schools			*Anganwadi*		
	Denominator	Numerator	%	Denominator	Numerator	%
Items received by school teacher and anganwadi worker						
Albendazole tablet	250	180	72	250	243	97
Poster/banner	250	140	56	250	205	82
Handouts/ reporting form	250	145	58	250	215	86
Received all materials	250	126	51	250	192	77
Items verified during Independent Monitoring						

[10]Based on those schools conducted deworming on NDD
[11]Based on those schools conducted deworming on Mop-Up-Day
[12] This indicator is based on the sample that received albendazole tablet.

Albendazole tablet	180	170	95	243	231	95
Poster/banner	140	134	95	205	191	93
Handouts/ reporting form	145	137	94	215	203	94
Received all materials	126	118	94	192	174	91
No of school teachers/anganwadi worker attended training and received items during training						
Albendazole tablet	123	111	90	190	182	96
Poster/banner	104	95	91	167	162	97
Handouts/ reporting form	111	102	92	172	167	97
Received all materials	126	92	73	192	150	79
Integrated Distribution of albendazole tablet IEC and training materials[13]	250	92	37	250	150	60

Table PM5: Implementation of deworming activity and observation of monitors, February2018

Indicators	Schools			*Anganwadi*		
	Denominator	Numerator	%	Denominator	Numerator	%
Deworming activity was taking place	135	127	94	205	192	94
Albendazole tablets were administered by						

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

Teacher/headmaster	135	134	99	205	3	1
Anganwadi worker	135	1	1	205	197	96
ASHA	135	0	0	205	4	2
ANM	135	0	0	205	1	0
Student	135	0	0	205	0	0.0
Teacher/Anganwadi worker asked children to chew the tablet	135	128	95	205	198	97
Followed any recording protocol[14]	155	122	79	224	193	86
Protocol followed						
Putting single/double tick	122	98	80	193	135	70
Put different symbols	122	6	5	193	2	1
Prepare the separate list for dewormed	122	18	15	193	56	29
Visibility of poster/banner during visits	140	111	79	205	174	85

[14]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.

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	250	108	43	250	144	58
Awareness about possible adverse events (Multiple Response)						
Mild abdominal pain	108	83	77	144	117	81
Nausea	108	61	56	144	90	63
Vomiting	108	92	85	144	124	86
Diarrhea	108	23	21	144	35	24
Fatigue	108	29	27	144	29	20
All possible adverse event[15]	108	3	3	144	9	6
Awareness about mild adverse event management						
Make the child lie down in open and shade/shaded place	250	183	73	250	209	84
Give ORS/water	250	78	31	250	76	30
Observe the child at least for 2 hours in the school	250	47	19	250	55	22

[15]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.

Don't know/don't remember	250	54	22	250	28	11
Awareness about severe adverse event management						
Call PHC or emergency number	250	158	63	250	191	76
Take the child to the hospital /call doctor to school	250	114	46	250	132	53
Don't know/don't remember	250	43	17	250	7	3
Available contact numbers of the nearest ANM or MO-PHC	250	176	71	250	226	90
Asha present in Anganwadi center	NA	NA	NA	250	129	52

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

Indicators[16]	Denominator	Numerator	%
Attended training for current round of NDD	93	17	19
Received albendazole tablets	93	39	42
Sufficient quantity of albendazole tablets	39	36	93
Received poster/banner	93	24	26
Received handouts/ reporting form	93	26	28
Received SMS for current NDD round	93	28	31
Albendazole administered to children	93	32	34

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

Reasons for not conducting deworming			
No information	60	41	68
Albendazole tablets not received	60	11	19
Apprehension of adverse events	60	1	2
Others[17]	60	7	11
Albendazole tablet administered to children by teacher/headmaster[18]	24	24	100
Perceive that health education should be provided to children	93	81	87
Awareness about correct dose and right way of albendazole administration	93	88	95
Awareness about non-administration of albendazole tablet to sick child	93	2	2
Opinion of occurrence of an adverse event after taking albendazole tablet	93	33	36
Awareness about occurrence of possible adverse events			
Mild abdominal pain	33	27	81
Nausea	33	18	55
Vomiting	33	27	83
Diarrhea	33	11	34
Fatigue	33	11	32
Awareness about mild adverse event management			
Let the child rest in an open and shaded place	93	54	58
Provide clean water to drink/ORS	93	20	22

[17]Deworming will be conducted on 17th, Head Teacher is absent, Some Family Issue, Due to Board Exam , Parents not allowed

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

Contact the ANM/nearby PHC	93	41	44
Available contact numbers of the nearest ANM or MO-PHC	93	44	47
Followed correct[19] recording protocol	17	11	63

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

Sr. No	Indicators	Schools			*Anganwadis*		
		Denominator	Numerator	%	Denominator	Numerator	%
1	**Percentage of schools/*anganwadis* conducted deworming[20]**	625	415	66	625	614	98
	Percentage of government schools conducted deworming	*366*	*337*	*92*	*Not Applicable*		
	Percentage of private schools conducted deworming	*259*	*78*	*30*	*Not Applicable*		
1a	Percentage of school and *anganwadis* administered albendazole on day of - **(Multiple Response)**						
	a. National Deworming Day	415	397	96	614	603	98
	b. Mop-up day	415	352	85	614	555	90
	c. Between NDD and mop-up Day	415	39	9	614	45	7
	d. Both days (NDD and mop-up day)	415	346	83	614	550	90
1b	**Reasons for not conducting deworming**						
	a. No information	210	157	75	11	6	53

[19]Correct recording protocol implies putting single tick (✓) on NDD and double tick (✓✓) for all those children administered albendazole tablets.
[20]Schools and *anganwadis* that conducted deworming on NDD or mop-up day.

	b. Drugs not received	210	34	16	11	3	25
	c. Apprehension of adverse events	210	11	5	11	1	8
	d. Others[21]	210	8	4	11	2	14
2	**Percentage of schools and *anganwadis* left over with albendazole tablet after deworming**	415	201	48	614	281	46
2a	**Number of albendazole tablets left after deworming**						
	a. Less than 50 tablets	201	145	72	281	222	79
	b. 50-100 tablets	201	31	15	281	51	18
	c. More than 100 tablets	201	24	12	281	8	3
3	**Copy of filled-in reporting form was available for verification**	415	267	64	614	419	68
	Copy of filled-in reporting form was available for verification in Government school	337	237	70	*Not Applicable*		
	Copy of filled-in reporting form was available for verification in Private school	78	30	38	*Not Applicable*		
3a	**Reasons for non-availability of copy of reporting form[22]**						
	a. Did not receive	121	65	54	137	42	31
	b. Submitted to ANM	121	28	23	137	63	46
	c. Unable to locate	121	13	11	137	16	12
	d. Other[23]	121	14	12	137	16	11

[21] Other includes mainly strike of *anganwadi* worker and no incentives for deworming.
[22] In 74 schools and 58 *anganwadis* blank reporting form was available.
[23]Other includes mainly kept at home, given to ASHA, submitted to CDPO/supervisor, and misplaced.

4	Percentage of *Anganwadi* center where ASHA administered albendazole	Not Applicable	614	314	51
5	*Anganwadis* having list of unregistered children (aged 1-5 years)	Not Applicable	614	182	30
6	*Anganwadis* having list of out-of-school children (aged 6-19 years)	Not Applicable	614	200	33

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

Sr. No.	Indicators	*Anganwadis*		
		Denominator	Numerator	%
1	ASHA[24] conducted meetings with parents to inform about NDD	341	320	94
2	ASHA prepared list of unregistered and out-of-school children	341	178	52
3	ASHA shared the list of unregistered and out-of-school children with *angnawadis* teacher[25]	178	121	68
4	ASHA administered albendazole to children	341	322	94
5	ASHA received incentive for NDD Aug 2017 round	341	18	5

[24] Surveyors were instructed to call ASHA at *anganwadi* centers during coverage validation and collect relevant information. Surveyors could only cover those ASHA's who were able to join for interview because it was not mandatory for ASHA's to attend.
[25]Based on sub-sample who reported to prepare the said list.

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

Sr. No.	Indicators	Schools/Children			*Anganwadis /Children*		
		Denominator	Numerator	%	Denominator	Numerator	%
1	**Followed correct[26] recording protocol**	415	222	54	614	371	60
2	**Followed partial[27] recording protocol**	415	50	12	614	101	17
3	**Followed no[28] recording protocol**	415	143	34	614	142	23
	Followed correct recording protocol in government school	337	198	59	*Not Applicable*		
	Followed correct recording protocol in private school	78	24	31	*Not Applicable*		
4	**State-level verification factor[29] (children enrolled/registered)**	32,300	15,497	48	46405	51912	112
	a. Children registered with *anganwadis*	Not Applicable			32430	29357	91
	b. Children unregistered with	Not Applicable			5610	9938	177

[26]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.

[27]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.

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

[29]Ratio of recounted value of the dewormed children to the reported value. This calculation is based on only those schools (n=267) and *anganwadis* (n=419) where deworming was conducted and copy of reporting form was available for verification.

	anganwadis (Aged 1-5)						
	c. Out-of-school children (Aged 6-19)	Not Applicable			8365	12617	151
5	**Attendance on previous day of NDD (children enrolled)**	106,559	65,251	61	Not Applicable		
6	**Attendance on NDD (children enrolled)**	106,559	67,187	63	Not Applicable		
7	**Attendance on mop-up day (children enrolled)**	106,559	65,358	61	Not Applicable		
8	**Children who attended on both NDD and mop-up day (Children enrolled)**	106,559	56,063	53	Not Applicable		
9	**Maximum attendance of children on NDD and mop-up day[30] (Children enrolled)**	106,559	78,208	73	Not Applicable		
10	**Estimated NDD coverage[31],[32]**	45			81		
11	***Estimated NDD coverage in government school***	62			*Not Applicable*		

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

12	*Estimated NDD coverage in private school*	21	*Not Applicable*

Table CV4: Description on children (6-19 years) interviewed in the schools (n=415) during coverage validation

Sr. No.	Indicators	Denominator	Numerator	%
1	**Children received albendazole tablets**	1,245	1208	97
2	**Children aware about the albendazole tablets**	1,208	1122	93
	Source of information about deworming among children (Multiple response)			
3	a. Teacher/school	1,122	1104	98
	b. Television	1,122	105	9
	c. Radio	1,122	68	6
	d. Newspaper	1,122	85	8
	e. Poster/Banner	1,122	184	16
	f. Parents/siblings	1,122	77	7
	g. Friends/neighbors	1,122	20	2
4	**Children aware about the worm infection**	1,208	884	73
5	**Children awareness about different ways a child can get worm infection (Multiple response)**			
	a. Not using sanitary latrine	884	426	48
	b. Having unclean surroundings	884	589	67
	c. Consume vegetables and fruits without washing	884	501	57
	d. Having uncovered food and drinking dirty water	884	396	45
	e. Having long and dirty nails	884	472	53

	f. Moving in bare feet	884	334	38
	g. Having food without washing hands	884	366	41
	h. Not washing hands after using toilets	884	104	12
6	**Children consumed albendazole tablet**	1,208	1,202	100
7	**Way children consumed the tablet**			
	a. Chew the tablet	1,202	1,110	92
	b. Swallow tablet directly	1,202	92	8
8	**Supervised administration of tablets**	1,202	1,160	96
9	**Reasons for not consuming albendazole tablet**			
	a. Feeling sick	6	2	28
	b. Afraid of taking the tablet	6	4	72
	c. Parents told me not to have it	6	0	0
	d. Do not have worms so don't need it	6	0	0
	e. Did not like the taste	6	0	0