Evidence Action

Deworm the World Initiative

Independent Monitoring of National Deworming Day in Jharkhand 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 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; coverage validation is an ex-post check of the accuracy of the reporting data and coverage estimates to verify government-reported treatment figures.

In 2018, Jharkhand observed the August round of NDD on August 10, followed by mop-up day on August 24. Fieldwork for process monitoring was conducted on August 10 and August 24, while coverage validation in the state was conducted during August 30 to September 5.

Survey Methodology

Using a two-stage probability sampling procedure, across all 24 districts Evidence Action sampled 200 schools (158 government schools and 42 private schools) and 200 *anganwadis* for process monitoring visits during NDD and mop-up days, and 500 schools (418 government schools, 66 private schools and 16 Madarsa) and 501 *anganwadis* for coverage validation. Through a competitive review process, Evidence Action hired an independent survey agency to conduct process monitoring and coverage validation. Evidence Action designed and finalized survey tools with approvals from the Jharkhand government. One combined tool was used for process monitoring 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 tw two-days of separate training for process monitoring and coverage validation of 100 surveyors and 20 supervisors at Ranchi. 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 on it, 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.

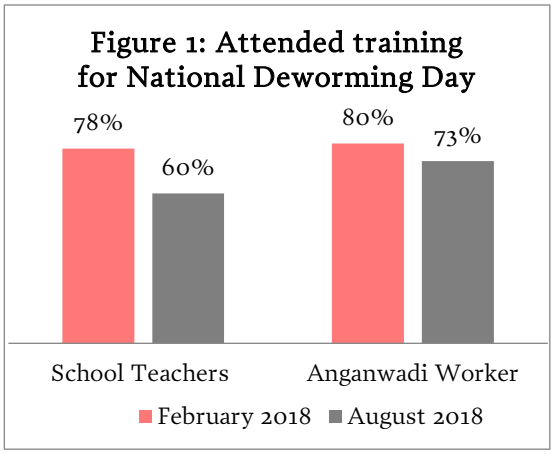
Appropriate quality assurance measures were taken to ensure that the data collected was accurate, consistent and authenticated. For example, teachers and *anganwadi* workers

(AWW) were asked to sign a participation form with an official stamp to authenticate the surveyor visits to schools or *anganwadis*. Further, consent based electronic thumb impressions of all survey respondents including headmasters, teachers, *anganwadi* workers, ASHAs and children were also collected for verification purposes. 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 inconsistencies observed and ensured timely corrective actions. Analysis was done using STATA and Microsoft Excel.

Key Findings

Training

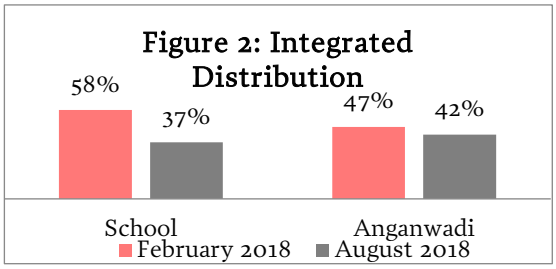
Prior to each NDD round, teachers and AWWs are trained on NDD related processes and protocols to facilitate effective implementation. NDD guidelines mandates schools and *anganwadis* to attend training for every NDD round, irrespective of whether they attended training in earlier rounds. Sixty percent of teachers and 73% of AWWs attended training for August 2018 NDD round, which is a decrease of 18 percentage point in teacher's trainings and seven percentage points in AWW training compared to the February 2018 round (Figure1). However, private school training attendance is 58% which is an increase of seven percentage points from the last round (Annex- Table PM7).



Among those who did not attend the training, 53% of teachers and 52% 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 which is an improvement of 13 percentage points compared to the February 2018 round (Annex- Table PM1). Forty-four percent of teachers and 43% of AWWs reported that they did not receive an SMS about NDD. A sub-optimal delivery of SMS to teachers and AWWs may be due to the lack of an updated database of mobile numbers (Annex- Table PM1).

Integrated Distribution of NDD Kit at Trainings

Integrated distribution of the NDD kit was 37% for schools and 42% for *anganwadis.* There is a decline of 21 percentage points in schools and five percentage points in *anganwadis* compared to the February 2018 round (Figure 2). The low level of integrated distribution could be attributed to delays in printing and distribution of IEC,training material and drug



distribution to districts. In 19 districts, IEC printing and therefore integrated distribution was affected due to engagement of the district level officials in the Measles Rubella and Aspirational districts program. Nevertheless, 84% of schools and 90% of *anganwadis* reported to receive albendazole tablets (Annex-Table PM4). Sixty-five percent of schools and 72% of *anganwadis* received posters/banners, while 63% of schools and 71% of *anganwadis* received handouts/reporting forms (Annex-Table PM4). Ninety-four percent of schools and *anganwadis* reported having received sufficient drugs for deworming (Annex-Table PM3). Despite a low level of integrated distribution, tablets and IEC materials reached the majority of schools and *anganwadis;* further indicating the state government's commitment to the program

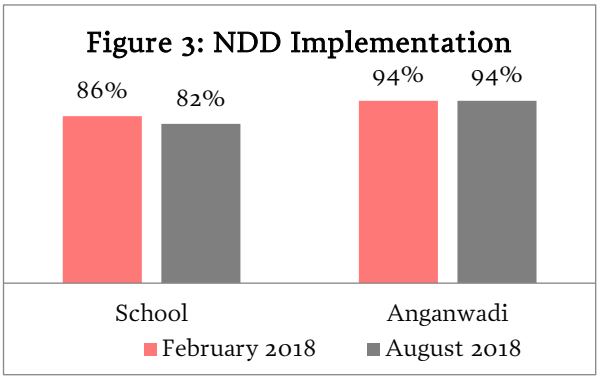
Among the sampled private schools, 67% of schools received deworming tablets and among those, 91% reported having received sufficient quantities. Further, 42% of private schools covered during process monitoring received posters/banners and 36% received handouts/reporting forms (Annex Table PM7).

Source of Information about the Recent Round of NDD

Newspaper was the most reported source of information in schools (45%) and training in *anganwadis* (36%) on NDD program. Thirty-one percent of schools and 32% of *anganwadis* reported that they received information about NDD through SMS. Twenty-four of schools and 22% of *anganwadis* reported hearing about NDD from television. Radio and WhatsApp messages were the least effective sources of information about NDD for the round (Annex Table PM1).

NDD Implementation

Eighty-two percent of schools and 94% of *anganwadis* conducted deworming on NDD. This represents a four percentage point decline in conducted deworming in schools as compared to the February 2018 round (Figure 3). One of the most commonly cited reasons for schools not conducting deworming was that they did not receive information about NDD (Annex- Table CV1). Out of all the schools and *anganwadis* visited during process monitoring, surveyors were able to observe deworming activities in only 93% of schools and 91% of *anganwadis* (Annex- Table PM5).



Adverse Events- Knowledge and Management

Interview with headmasters/teachers and AWWs reveals a low level of awareness (38% in schools and 35% in *anganwadis*) regarding potential adverse events due to deworming and understanding of the appropriate protocols to follow in case of such events. Mild abdominal pain was listed as a side effect by 88% of teachers and 84% of AWWs, followed by vomiting (80% in schools and 87% in *anganwadis*). Further, 76% of teachers

and 77% of AWWs were aware to make a child lie down in an open/shaded place in the case of any symptoms of adverse events, and 50% of schools and 51% of *anganwadis* aware to give ORS/water. Forty-four percent of schools and 30% of AWWs aware to observe the child for at least two hours. Further, 65% of schools and 71% of *anganwadis* reported knowing the need to call a Primary Health Center (PHC) doctor if symptoms persisted (Annex- Table PM6). Findings necesitate further emphasis on adverse event management protocols during training of teachers and *anganwadi* workers.

Recording Protocol

Thirty-two percent of schools and 33% of *anganwadis* followed the correct recording protocol (single and double ticks). Around 11% of schools and 18% of *anganwadis* carried out partial recording[1]. Fifty-seven percent of schools and 50% of *anganwadis* did not follow any protocol to record the information of dewormed children (Annexure- Table CV3). Further, as per NDD guidelines, all schools and *anganwadis* are supposed to retain a copy of reporting forms. Although 78% of headmasters and 87% of AWWs were aware to retain the reporting form (Annex-Table PM2), during coverage validation it was observed that only 29% of schools and 33% of *anganwadis* retained the copy of reporting forms for verification (Annex –Table CV1).

Accredited Social Health Activists (ASHAs) known as Sahiyas in the state are required to prepare a list of out-of-school children and children unregistered in *anganwadis* and submit it to *anganwadi* workers. However, only 27% 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). This may be attributed to the engagement of the *Sahiyas* in several other flagship program like Measles Rubella Campaign, IDCF and *Ayushmen Bharat* etc. There is a need for reinforcement and monitoring among *Sahiyas* by the concerned officials at the state, district and block level. Of the Sahiyas interviwed during coverage validation (who were available at the *anganwadis* at the time of surveyors visit), 55% reported to prepare the list of unregistered and out-of-school children. Out of these only 70% had shared it with the AWWs. Only eight percent of Sahiya s 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[2] are common indicators to measure the accuracy of reported treatment values for neglected tropical disease control programs[3]. Coverage validation also gives us an idea about record keeping and data management at the service delivery point. The verification factor was estimated

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

[2]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.

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

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 0.58, indicating that on average, for every 100 dewormed children reported by the school, fifty-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 0.61, indicating that on an average; for every 100 dewormed children reported by the *anganwadi,* sixty-one 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 0.49, 0.80, and 0.84 respectively for *anganwadis* (Annex- Table CV3). The data suggests over reporting of coverage figures, particularly for registered 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 (96%) and consumed (100%) the albendazole tablet on either NDD or mop-up day.

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 82% of schools conducted deworming on either NDD or mop-up day (Annex-Table CV1), a maximum of 82% of children were in attendance (Annex-Table CV3), 96% of children received an albendazole tablet, and 95% of children reported to consume the tablet under supervision (Annex-Table CV4). Considering these factors, 61%[4] (0.82*0.82*0.96*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 45% (0.91*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 process monitoring and coverage validation exercise.

1. Training participation of teachers and *angawadi* workers in the current NDD round declined from the previous February 2018 round. While training is a prerequisite for the smooth implementation of NDD, it will also ensure the timely distribution

[4] This was estimated on the basis of NDD implementation status (82%), maximum attendance on NDD and mop-up day (82%); children received albendazole (96%) and supervised drug administration (95%). In absence of children interview in *Anganwadis*, the government reported coverage was adjusted by implying state level verification factor.

of drugs and IEC materials to schools and *angawadis*. Delays/ rescheduling of trainings should be avoided at all counts by effective planning and coordination between the key stakeholder departments. District/Block level officials must also ensure private school teachers' participation during trainings to further improve training attendance and subsequently strengthen the program.

2. Integrated distribution is an important part of the NDD program; it is cost-effective, eases logistical concerns and ensures quality service efforts. Integrated distribution has shown significant decline as compared to the last round and requires efforts to strengthen timely drug procurement, printing of IEC materials, and aligning the distribution cascade of NDD kits with trainings. .
3. Adherence to correct recording protocol in schools and *anganwadis* is comparatively low from the previous round. Awareness regarding retaining a copy of reporting forms declined among teachers and *anganwadi* workers as well. 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 protocols for teachers and *anganwadi* workers can also be organized during block level trainings to make them aware of the recording procedure.
4. As *Sahiyas* play an important role in NDD, efforts are required for their active involvement in the program. During training, more emphasis should be given in sensitizing them regarding their role in mobilizing unregistered pre-school age children and out-of-school children and spreading awareness on deworming benefits. Reminder SMSs should be sent to them regarding their wider participation in NDD and information on their incentives. As findings show, a lower proportion of *Sahiyas* received incentives for the February 2018 NDD round. Timely disbursement of incentives can help motivate *Sahiyas* engagement in the program.
5. Coverage validation findings showed a significant decrease in estimated coverage in both schools and *anganwadis*. This could be attributed to a decrease in the maximum attendance in schools and a decrease in the verification factor for 1-5 registered children in *anganwadis*. Emphasis should be given to maintain high attendance on NDD days to achieve maximum NDD coverage in schools. Moreover, proper record management can further increase the verification leading to improved coverage.

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

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

Sample Details	Number
Total number of NDD districts in the state	24
Number of districts covered under process monitoring and coverage validation	24
Number of trained monitors deployed during process monitoring	100
Number of blocks[5] covered during process monitoring	100
Total number of schools covered	200
• Number of government schools covered[6]	158
• Number of private schools covered	42
Total number of *anganwadis* covered[7]	200
Number of trained surveyors deployed during coverage validation	100
• Number of blocks in the state	261
• Number of blocks in NDD districts	261
Number of blocks[8] covered through coverage validation	100
Total number of schools covered	500
• Total number of government schools covered[9]	418
• Total number of private schools covered	66
• Madarasa	16
• Total number of *anganwadis* covered[10]	501

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	200	119	60	200	146	73
Ever attended training for NDD[11]	200	129	65	200	153	77
Never attended training for NDD	200	71	36	200	47	23
Reasons for not attending current NDD round training (Multiple Response)						
Location was too far away	81	1	1	54	5	9
Did not know the	81	43	53	54	28	52

[5]These are sampled blocks selected from UDISE data.
[6]These are the actual schools covered during NDD and Mop-Up Day visits. Numbers given in subsequent tables (numerator and denominator) are weighted
[7]These are the actual *Anganwadi* covered during NDD and Mop-Up Day visits. Numbers given in subsequent tables (numerator and denominator) are unweighted.
[8]These are sampled blocks selected from U-DISE data, 2016-17.
[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 tanning in past.

Indicators	School			*Anganwadi*		
	Denominator	Numerator	%	Denominator	Numerator	%
date/timings/venue						
Busy in other official/personal work	81	3	4	54	5	9
Attended deworming training in the past	81	10	12	54	7	13
Not necessary	81	5	7	54	2	4
No incentives/no financial support	81	4	5	54	1	2
Trained teacher that provided training to other teachers in their schools						
All other teachers	119	78	65	Not Applicable		
Few teachers	119	19	16	Not Applicable		
No (himself/herself only teacher)	119	13	11	Not Applicable		
No, did not train other teachers	119	9	8	Not Applicable		
Source of information about current NDD round (Multiple Response)						
Television	200	48	24	200	44	22
Radio	200	24	12	200	30	15
Newspaper	200	89	45	200	59	30
Banner	200	55	28	200	59	30
SMS	200	62	31	200	63	32
Othersschool/teacher/*anganwadi* worker	200	44	22	200	60	30
WhatsApp message	200	34	17	200	11	6
Training	200	62	31	200	71	36
Others[12]	200	26	13	200	19	10
Received SMS for current NDD round	200	112	56	200	114	57
Probable reasons for not receiving SMS[13]						
Changed Mobile number	78	9	12	64	15	23
Other family members use this number	78	3	4	64	4	6
Number not registered to receive such messages	78	12	15	64	6	9
Don't know	78	44	57	64	33	52
Others[14]	78	10	13	64	6	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	200	163	81	200	166	83
Different ways a child can get worm infection (Multiple Response)						
Not using sanitary latrine	163	127	78	166	121	73
Having unclean surroundings	163	119	73	166	128	77
Consume vegetables and fruits without washing	163	110	67	166	108	65

[12] Other includes: No information, received information about NDD during BRC meeting and office.
[13] 10 Schools and 22 *Anganwadis* reported that they don't know about receiving the SMS and reasons were not asked to them.
[14] Other includes: Network issue, lost phone, No information.

Having uncovered food and drinking dirty water	163	99	61	166	82	49
Having long and dirty nails	163	97	60	166	89	54
Moving in bare feet	163	92	56	166	94	57
Having food without washing hands	163	91	56	166	84	51
Not washing hands after using toilets	163	64	39	166	53	32
Awareness about all the possible ways a child can get a worm infection[15]	163	28	17	166	21	13
Perceives that health education should be provided to children	200	193	97	200	188	94
Awareness about correct dose and right way of administration of albendazole tablet						
1-2 years of children (Crush the half tablet between two spoons and administer with water)	Not Applicable			200	158	79
2-3 years of children (Crush one full tablet between two spoons, and administer with water)	Not Applicable			200	108	54
3-5 years of children (one full tablet and child chewed the tablet properly)	Not Applicable			200	158	79
6-19 years of children (one full tablet and child chewed the tablet properly)	200	192	96	200	196	98
Awareness about non oadministration of albendazole tablet to sick child						
Will administer albendazole tablet to sick child	200	28	14	200	19	10
Will not administer albendazole tablet to sick child	200	172	86	200	181	91
Awareness about consuming albendazole tablet						
Chew the tablet	200	196	98	200	197	99
Swallow the tablet directly	200	4	2	200	3	2
Awareness about consuming albendazole in school/*anganwadi*	200	193	97	200	197	99
Awareness about the last date (August 22, 2018) for submitting the reporting form	200	58	29	200	59	30
Awareness about the revised last date (August 29, 2018) for submitting the reporting	200	7	4	200	7	4

[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.

form						
Awareness about submission of reporting forms to ANM	200	120	60	200	143	72
Awareness to retain a copy of the reporting form	200	156	78	200	174	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	200	71	36	200	74	37
Yes, already done	200	52	26	200	69	35
Yes, after sometime	200	28	14	200	13	7
No, will not administer today	200	50	25	200	44	22
Schools/*anganwadis* conducted deworming on either of the day[16]	200	161	81	200	170	85
Schools/*anganwadis* conducted deworming on NDD[17]	100	80	80	100	83	83
Schools/*anganwadis* conducted deworming on Mop-Up Day[18]	100	70	70	100	73	73
Reasons for not conducting deworming						
No information	49	25	50	44	15	34
Albendazole tablet not received	49	11	22	44	11	25
Already dewormed	49	12	24	44	15	34
Others[19]	49	2	4	44	3	7
Attendance on NDD[20]	18727	11913	64	Not Applicable		
Attendance on Mop-Up Day[21]	27934	17419	62	Not Applicable		
***Anganwadis* having list of unregistered/out-of-school children**	Not Applicable			200	90	45
Out-of-school children (Age 6-19 years) administered albendazole tablet	Not Applicable			200	142	71

[16]Schools/*anganwadis* administered albendazole 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: Some mis-happening happened, don't know.
[20]Based on those schools visited on NDD
[21]Based on those schools visited on Mop-Up Day

Unregistered children (Age 1-5 years) administered albendazole tablet	Not Applicable			200	143	72
Sufficient quantity of albendazole tablets[22]	168	158	94	180	169	94

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	200	168	84	200	180	90
Poster/banner	200	123	62	200	143	72
Handouts/ reporting form	200	126	63	200	142	71
Received all materials	200	105	53	200	118	59
Items verified during Independent Monitoring						
Albendazole tablet	168	152	90	180	162	90
Poster/banner	123	107	87	143	122	85
Handouts/ reporting form	126	114	91	142	120	85
Received all materials	105	92	87	118	100	85
No of school teachers/*anganwadi* worker attended training and received items during training						
Albendazole tablet	117	100	85	139	119	86
Poster/banner	95	89	94	114	103	90
Handouts/ reporting form	93	86	92	119	109	92
Received all materials	105	73	70	118	84	71
Integrated Distribution of albendazole tablet IEC and training materials[23]	200	73	37	200	84	42

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

Indicators	Schools			*Anganwadi*		
	Denominator	Numerator	%	Denominator	Numerator	%
Deworming activity was taking place	71	66	93	74	67	91

[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.

Albendazole tablets were administered by						
Teacher/headmaster	66	65	99	67	7	10
Anganwadi worker	66	0	0	67	55	82
SAHIYA	66	1	1	67	4	6
ANM	66	0	0	67	1	1
Student	66	0	0	67	0	0
Teacher/*Anganwadi* worker asked children to chew the tablet	71	70	99	74	72	97
Followed any recording protocol[24]	123	106	86	143	126	88
Protocol followed						
Putting single/double tick	106	92	87	126	97	77
Put different symbols	106	9	8	126	7	6
Prepare the separate list for dewormed	106	5	5	126	22	17
Visibility of poster/banner during visits	123	95	77	143	113	79

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	200	76	38	200	69	35
Awareness about possible adverse events (Multiple Response)						
Mild abdominal pain	76	67	88	69	58	84
Nausea	76	44	58	69	44	64
Vomiting	76	61	80	69	60	87
Diarrhea	76	34	45	69	35	51
Fatigue	76	25	33	69	22	32
All possible adverse event[25]	76	11	14	69	14	20
Awareness about mild adverse event management						
Make the child lie down in open and shade/shaded place	200	151	76	200	154	77

[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.

[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.

Give ORS/water	200	99	50	200	101	51
Observe the child at least for 2 hours in the school	200	87	44	200	59	30
Don't know/don't remember	200	25	13	200	33	17
Awareness about severe adverse event management						
Call PHC or emergency number	200	129	65	200	141	71
Take the child to the hospital /call doctor to school	200	128	64	200	122	61
Don't know/don't remember	200	18	9	200	16	8
Available contact numbers of the nearest ANM or MO oPHC	200	141	71	200	155	78
Sahiya present in *Anganwadi* center	Not Applicable			200	102	51

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

Indicators[26]	Denominator	Numerator	%
Attended training for current round of NDD	33	19	58
Received albendazole tablets	33	22	67
Sufficient quantity of albendazole tablets	22	20	91
Received poster/banner	33	14	42
Received handouts/ reporting form	33	12	36
Received SMS for current NDD round	33	15	45
Albendazole administered to children	33	18	55
Reasons for not conducting deworming			
No information	16	13	81
Albendazole tablets not received	16	3	19
Apprehension of adverse events	16	0	0
Others	16	0	0
Albendazole tablet administered to children by teacher/headmaster[27]	6	6	100
Perceive that health education should be provided to children	33	30	91
Awareness about correct dose and right way of albendazole administration	33	31	94

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

Awareness about non oadministration of albendazole tablet to sick child	33	31	94
Opinion of occurrence of an adverse event after taking albendazole tablet	33	5	15
Awareness about occurrence of possible adverse events			
Mild abdominal pain	5	5	100
Nausea	5	2	40
Vomiting	5	5	100
Diarrhea	5	3	60
Fatigue	5	3	60
Awareness about mild adverse event management			
Let the child rest in an open and shaded place	33	19	58
Provide clean water to drink/ORS	33	12	36
Observe the child at least for 2 hours in the school	33	10	30
Available contact numbers of the nearest ANM or MO-PHC	33	23	70
Followed correct[28] recording protocol	11	10	91

Table PM8: Indicators on MDM and Hygiene August 2018

Indicators	**Schools**		
	Denominator	**Numerator**	**%**
Covered under MDM	200	159	80
Send daily update from MDM	159	139	87
Aware to send NDD updates through MDM platform	159	109	69
Source of information for NDD updates through MDM platform			
Training	109	75	69
SMS	109	46	42
IVRS	109	20	18
Departmental communication	109	31	28
Others[29]	109	8	7

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]**	500	410	82	501	470	94
	Percentage of conducted deworming in Government schools	*439*	*383*	*87*	*Not Applicable*		

[28]Correct recording protocol implies putting single tick (✓) on NDD and double tick (✓✓) for all those children administered albendazole tablets.
[29] Other include: Already know from last round, BRC meeting.
[30]Schools and *anganwadis* that conducted deworming on NDD or mop-up day.

	Percentage of conducted deworming in Private schools	*61*	*27*	*44*	*Not Applicable*		
1a	Percentage of school and *anganwadis* administered albendazole on day of - **(Multiple Response)**						
	a. National Deworming Day	410	378	92	470	428	91
	b. Mop-up day	410	273	67	470	319	68
	c. Between NDD and mop-up day	410	94	23	470	112	24
	d. Both days (NDD and mop-up day)	410	269	66	470	309	66
1b	**Reasons for not conducting deworming**						
	a. No information	90	68	76	31	20	65
	b. Drugs not received	90	16	18	31	7	22
	c. Apprehension of adverse events	90	3	3	31	3	10
	d. Others[31]	90	3	3	31	1	3
2	**Percentage of schools and *anganwadis* left over with albendazole tablet after deworming**	410	205	50	470	192	41
2a	**Number of albendazole tablets left after deworming**						
	a. Less than 50 tablets	205	142	69	192	143	74
	b. 50-100 tablets	205	37	18	192	35	18
	c. More than 100 tablets	205	25	12	192	14	7
3	**Copy of filled-in reporting form was available for verification**	410	118	29	470	157	33
	Copy of filled-in reporting form was available for verification in Government schools	*383*	*114*	*30*	*Not Applicable*		
	Copy of filled-in reporting form was available for verification in Private schools	*27*	*5*	*17*	*Not Applicable*		
3a	**Reasons for non-availability of copy of reporting form[32]**						
	a. Did not received	280	123	44	301	138	46
	b. Submitted to ANM	280	107	38	301	117	39
	c. Unable to locate	280	29	10	301	24	8
	d. Others[33]	280	21	8	301	22	7
4	**Percentage of *Anganwadi* center where SAHIYA administered albendazole**	Not Applicable			470	324	69

[31]Other includes: Never administered in college, Unavailability of drugs in Madarsa, not ready to show any document.

[32] In 12 schools and 12 *anganwadis* blank reporting form was available,

[33]Other includes: With B.R.C, Not available in school, on school file, kept at home, Submitted to block, With Headmaster and Headmaster was in meeting, reporting form misplaced, Sevika absent, kept with supervisor, etc.

5	*Anganwadis* having list of unregistered children (aged 1-5 years)	Not Applicable	470	129	27
6	*Anganwadis* having list of out-of-school children (aged 6-19 years)	Not Applicable	470	130	28

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

Sr. No.	Indicators	*Anganwadis*		
		Denominator	Numerator	%
1	Sahiya[34] conducted meetings with parents to inform about NDD	198	181	91
2	Sahiya prepared list of unregistered and out-of-school children	198	110	56
3	SAHIYA shared the list of unregistered and out-of-school children with *anganwadis* teacher[35]	110	77	70
4	SAHIYA administered albendazole to children	198	171	86
5	SAHIYA received incentive for NDD Feb 2018 round	198	17	9

Table CV3: Recording protocol, verification factor and school attendance

Sr.No.	Indicators	Schools/Children			*Anganwadis/Children*		
		Denominator	Numerator	%	Denominator	Numerator	%
1	Followed correct[36] recording protocol	410	131	32	470	153	33
2	Followed partial[37] recording protocol	410	44	11	470	84	18
3	Followed no[38] recording protocol	410	234	57	470	233	50
	Followed correct recording protocol in Government schools	*383*	*126*	*33*	*Not Applicable*		
	Followed correct	*27*	*5*	*19*	*Not Applicable*		

[34] 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.

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

[36]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.

[37]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.

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

	recording protocol in Private schools						
4	**State-level verification factor[39] (children enrolled/registered)**	16563	9625	58	12333	7498	61
	a. Children registered with *anganwadis*	Not Applicable			8038	3966	49
	b. Children unregistered with *anganwadis*(Aged 1-5)	Not Applicable			2167	1736	80
	c. Out-of-school children (Aged 6-19)	Not Applicable			2128	1796	84
5	**Attendance on previous day of NDD (children enrolled)**	113516	78131	69	Not Applicable		
6	**Attendance on NDD (children enrolled)**	113516	80611	71	Not Applicable		
7	**Attendance on mop-up day (children enrolled)**	113516	77764	69	Not Applicable		
8	**Children who attended on both NDD and mop-up day (children enrolled)**	113516	64973	57	Not Applicable		
9	**Maximum attendance of children on NDD and mop-up day[40] (Children enrolled)**	113516	93402	82	Not Applicable		
10	**Estimated NDD coverage**[41][42]	61			45		
11	***Estimated NDD coverage in Government schools***	*65*			*Not Applicable*		
12	***Estimated NDD coverage in Private schools***	*32*			*Not Applicable*		

Table CV4: Description on children (6-19 years) interviewed in the schools (n=410) during coverage validation

Sr.No	Indicators	Denominator	Numerator	%

[39]Ratio of recounted value of the dewormed children to the reported value. This calculation is based on only those schools (n=118) and *anganwadis* (n=157) where deworming was conducted and copy of reporting form was available for verification.

[40]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.

[41] 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.*

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

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1	**Children received albendazole tablets**	1230	1175	96
2	**Children aware about the albendazole tablets**	1175	1052	90
	Source of information about deworming among children (Multiple response)			
3	a. Teacher/school	1052	1032	98
	b. Television	1052	135	13
	c. Radio	1052	80	8
	d. Newspaper	1052	131	12
	e. Poster/Banner	1052	164	16
	f. Parents/siblings	1052	142	13
	g. Friends/neighbors	1052	113	11
4	**Children aware about the worm infection**	1175	760	65
5	**Children awareness about different ways a child can get worm infection (Multiple response)**			
	a. Not using sanitary latrine	760	457	60
	b. Having unclean surroundings	760	520	68
	c. Consume vegetables and fruits without washing	760	427	56
	d. Having uncovered food and drinking dirty water	760	378	50
	e. Having long and dirty nails	760	466	61
	f. Moving in bare feet	760	429	56
	g. Having food without washing hands	760	393	52
	h. Not washing hands after using toilets	760	206	27
6	**Children consumed albendazole tablet**	1175	1172	100
7	**Way children consumed the tablet**			
	a. Chew the tablet	1172	1093	93
	b. Swallow tablet directly	1172	79	7
8	**Supervised administration of tablets**	1172	1115	95
9	**Reasons for not consuming albendazole tablet**			
	a. Feeling sick	3	0	0
	b. Afraid of taking the tablet	3	0	0
	c. Parents told me not to have it	3	2	67
	d. Do not have worms so don't need it	3	0	0
	e. Did not like the taste	3	1	33