

Tripura August 2016 NDD Program Report

Executive Summary

Contributing to the Government of India's National Deworming Day, the State of Tripura implemented the third round of *anganwadi* and school-based mass deworming on August 10, followed by mop-up day on August 18, 2016. In this round, the state dewormed 916,058 children in the age group of 1-19 years in all eight districts. This achievement is an outcome of exemplary leadership from the Directorate of Family Welfare and Preventive Medicine in coordination with the Department of Education, Social Welfare and Education (SW & SE). Evidence Action's Deworm the World Initiative provided key technical assistance for program planning, implementation and monitoring, through funding received from the Children's Investment Fund Foundation and Dubai Cares.

Table 1: Key Achievements of National Deworming Day (NDD) August 2016¹

Indicators		Achievement
Total number of children targeted		10,92,834
Total number of Government schools reporting coverage		4,408
Total number of private schools reporting coverage		253
Total number of anganwadis (AWCs) reporting coverage		9,555
No of enrolled children (classes 1-12) dewormed	Government Schools	5,38,319
	Private Schools	68,735
Number of registered children dewormed (1 to 5 years) at AWCs		2,70,488
Number of unregistered children dewormed (1 to 5 years) at AWCs		7,314
Number of out-of-school children (6-19 years) dewormed		31,202
Total number of children dewormed (1-19 years)		9,16,058

Evidence Action provided technical assistance for the successful planning and implementation of NDD August 2016, guided by learnings from previous round. In the August treatment round, the state dewormed 916,058 children across all 8 districts, in the age group of 1-19 years. In both the rounds, the state included private schools across all implementing districts, which was facilitated with issuance of official directives to District magistrates from the state level.

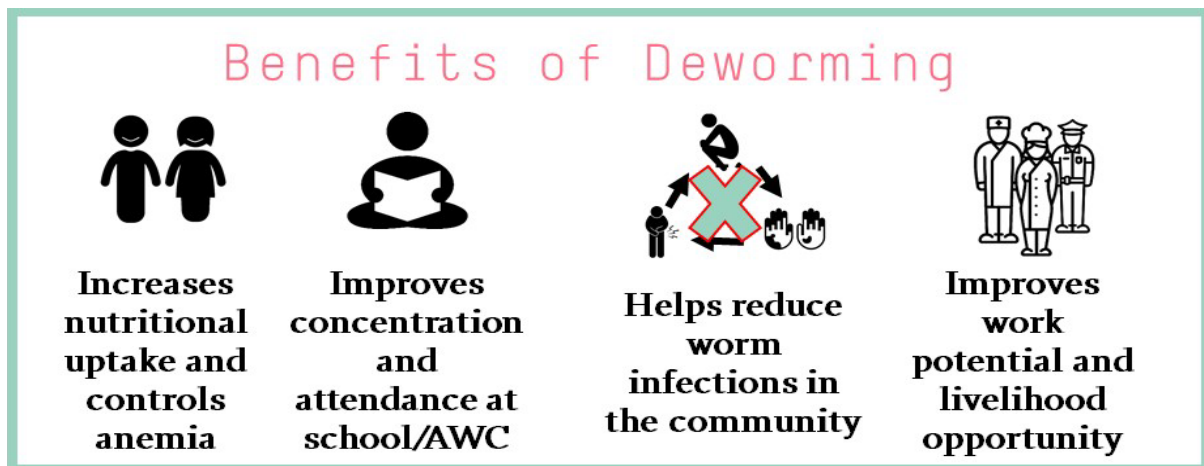
¹Based on the data submitted by Government of Tripura to Ministry of Health and Family Welfare, Government of India dated October 04, 2016

1. Program background

1.1 Benefits of deworming

A large body of rigorous scientific evidence from around the world provides a strong rationale for mass deworming in places where prevalence of soil-transmitted helminths (STH) is at least 20%. Worm infections pose a serious threat to children's health, education, and productivity. Some of the benefits of deworming are shown below in Figure 1.

Figure 1: Benefits of deworming

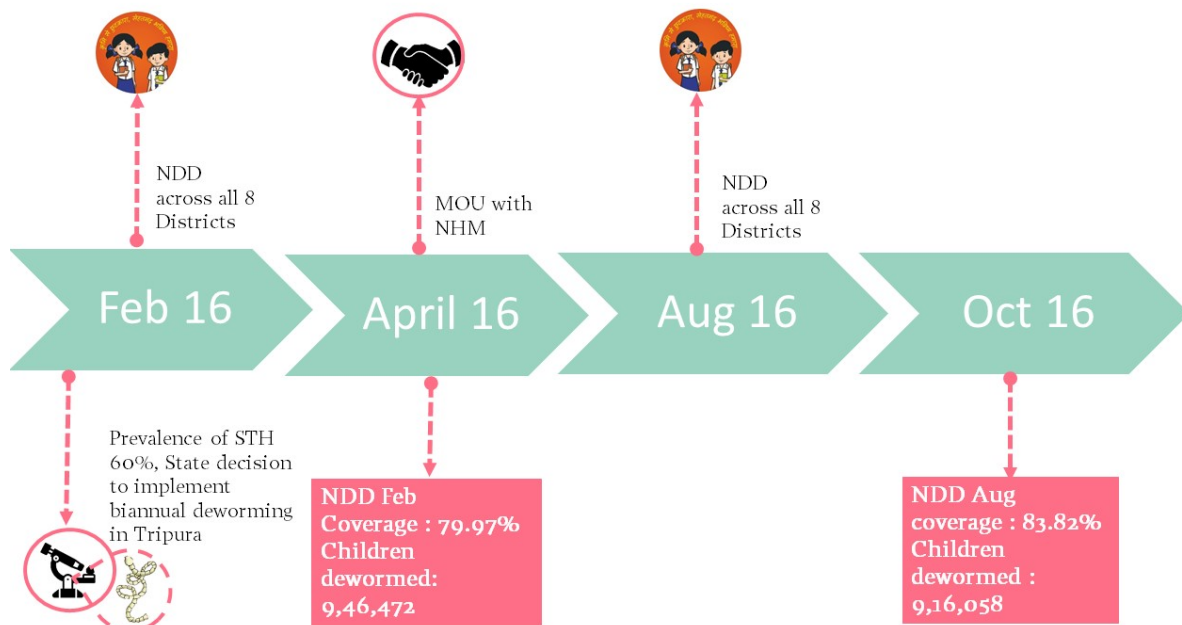


1.2 State program Background - Tripura history

In early 2016, prevalence survey conducted by Evidence Action showed that STH prevalence among school-aged children in Tripura state is approximately 60%. In accordance with the World Health Organization's guidelines, the state decided to implement mass treatment with a single dose of albendazole twice per year. As supported by a strong and diverse body of rigorous evidence, the state aimed to deliver treatment through the cost-effective and scalable infrastructure of school and including *anganwadis*.

Deworming activities are implemented under the Government of India's (GoI) National Deworming Day program. Key milestones are shown in Figure 2 below, and more information about NDD is provided in Section 2.

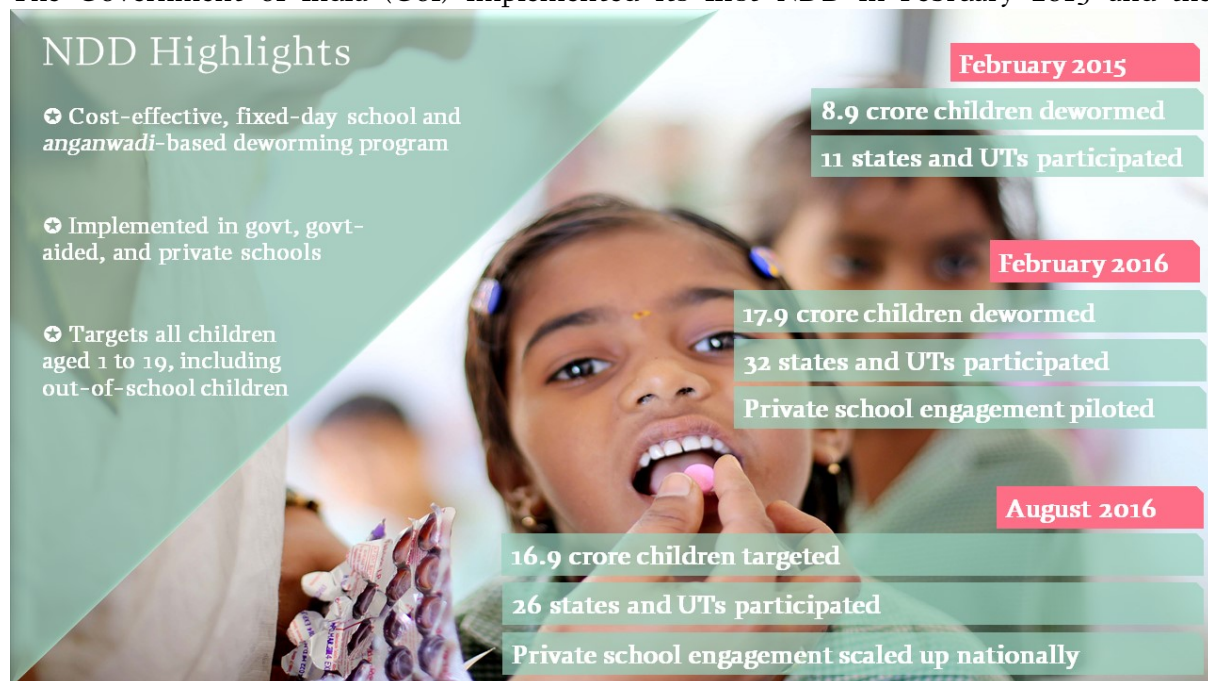
Figure 2: Tripura deworming program milestones



2. About National Deworming Day

Figure 3: NDD program highlights

The Government of India (GoI) implemented its first NDD in February 2015 and the



program has achieved high coverage at large scale since its inception. Based on national level STH mapping², as well as WHO treatment guidelines, the GoI issued a notification to states to recommend the appropriate frequency of deworming. Prevalence data and global best-practice guidelines indicated that 27 states and UTs, including Tripura, should

² Prevalence mapping was led by the National Centre for Disease Control (NCDC) and partners

deworm children twice per year. The state prepared for biannual treatment round in August 2016 (**Annexure A**).

In Tripura during the August round of NDD, the program targeted all children between 1-19 years, regardless of their enrollment status, at *anganwadi* centers (AWCs), government schools and government aided schools in all eight districts. In all eight districts, out-of-school children were treated through AWCs and children enrolled in private schools were targeted as well, bringing the overall target to 10,92,834 children.

3. NDD August 2016 Program Implementation

3.1 Policy and advocacy

Successfully implementing a program of such scale required stakeholder collaboration at each administrative and implementation level. The Department of Health led coordination with Department of Education and Social Welfare & School Education to achieve coordinated program planning and implementation. The main points of inter-departmental collaboration are displayed in Figure 4 below.

Figure 4: Efforts towards Stakeholder collaboration

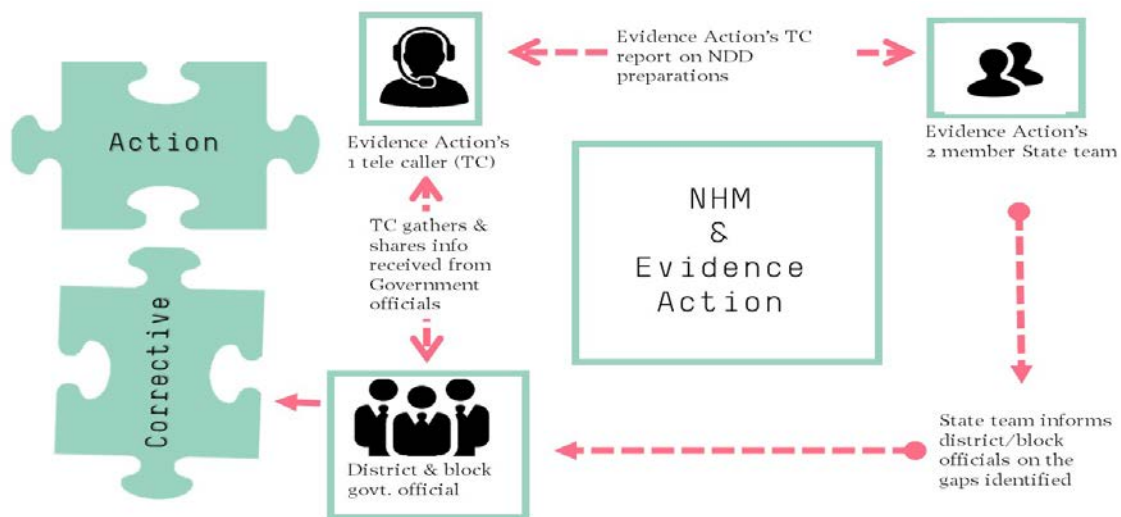
24 June,, State steering committee meeting	5 July, National review meeting, New Delhi	19 July, State level Inter Sectoral Cordination Committee meeting	1 August, Video Conference with MoHFW, GoI
<ul style="list-style-type: none"> • Discussion on Prevalence survey • Consensus on Private school engagement 	<ul style="list-style-type: none"> • Review of NDD preparations • State shared its experience on inter departmental coordination • Assessment of state's preparedness for August round 	<ul style="list-style-type: none"> • Change in dates of mop up day • Target finalization for August NDD • Discussion on field implementation plan for August NDD • Inclusion of private schools reiterated 	<ul style="list-style-type: none"> • Letter issued to all District Magistrates for ensuring coverage of all private schools in NDD

All eight districts further conducted District Coordination Committee Meetings (DCCM) under the chairmanship of District Collectors during which stakeholders reviewed preparation activities for the program and assigned roles for improved inter-departmental coordination. Key decisions for program implementation were disseminated along with meeting minutes in the eight districts. The state referred to the NDD 2016 financial guidelines to plan its NDD budgets (**Annexure B**).

3.2 Program Management

Evidence Action’s technical assistance was provided primarily through a two-member state based team and a tele-caller. The state team assisted with program planning in advance of NDD, and also coordinated with stakeholder departments to share real time updates on program implementation and facilitate corrective actions. Figure 5 gives an overview of the information flow between the Evidence Action team and district or block officials.

Figure 5: Evidence Action’s corrective action mechanism



3.3 Drug Procurement, Distribution, and Management of Adverse Events

a) Drug Procurement: All school-age and preschool-age children were treated with albendazole tablet (400 mg) on NDD. In order to cover all children in the target age group, the state procured approximately 10,00,000 albendazole tablets. In addition, the state used approximately 3,65,000 tablets from existing stock. Prior to drug distribution, the Directorate of Family Welfare and Preventive Medicine ensured laboratory testing of samples at the state level for quality assurance.

b) Drug Logistics and Supply: The Department of Health, together with the Department of Education and SW&SE, managed the entire drug logistics and distribution at all levels. Evidence Action worked closely with Department of Health to align drug distribution with block-level training in accordance with NDD operational guidelines. **Department of Health ensured drug bundling and its distribution**, to health functionaries at the district level trainings for onward distribution to Education and SW&SE before the block level training. The kits included drugs, IEC materials, and training handouts along with reporting forms.

c) Adverse Event Management: The state also set up an adverse event management system engaging field functionaries Multi-Purpose Workers (MPWs) and Multi-Purpose Supervisors (MPSs), to effectively manage any adverse events at schools and *anganwadis*. To provide guidance on functionaries’ roles and responsibilities to respond to and report on adverse events, trainings at all levels included focused messaging on adverse event

management. Eleven (six from North district and five from Dhalai district) adverse events were reported during NDD August 2016 and all were managed effectively.

3.4 Public Awareness and Community Sensitization

The state adapted and translated the NDD resource kit developed by Evidence Action for the Government of India. IEC materials included in the kit were designed to increase community awareness on the benefits of deworming, and were disseminated based on the timelines and target audiences specified by the NDD operational guidelines. For instance, the Department of Health printed materials such as posters and banners that were displayed at schools and AWCs. As per the community sensitization strategy, the Department of Health conducted state-wide outreach activities such as newspaper advertisements, radio spots, TV spots, and miking (illustrated in Figure 6 below).

These varied public awareness efforts were essential, as sensitization of children and families helps build comfort and compliance with deworming, alleviates worries related to adverse events, and leads to greater program acceptance and coverage.

Figure 6: NDD 2016 IEC campaign activities



3.5 Training Cascade

The block level trainings for frontline functionaries were held on August 6, only four days prior to NDD, due to delays in drug procurement. All efforts were made to carry out integrated distribution of drugs and materials at the trainings.

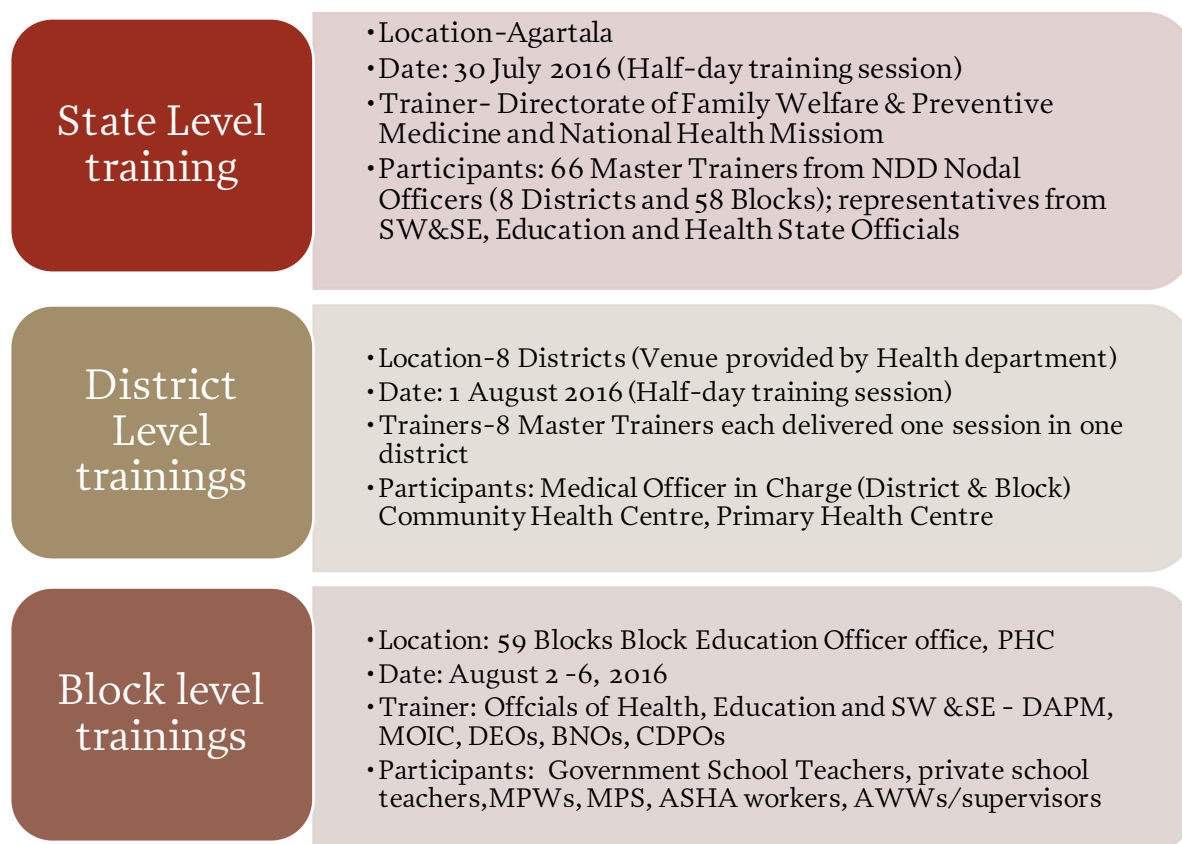
Training Cascade: Through the cascade, the state trained 4,468 government and government-aided teachers, 266 private school teachers, 9,659 AWWs, and 7,270 ASHAs.³

³NDD coverage report submitted by state to GOI.

District and block level officials from all nodal departments implementing the program were also trained.

Training Resources: The Department of Health, Medical & Family Welfare printed training resources including **1,50,000** handouts for teachers, **2,00,000** handouts for *anganwadi* workers, and **10,000** leaflets for ASHAs.

Figure 7: Training Cascade and Participation



Training Reinforcement: Evidence Action supported the reinforcement of key messages from the training sessions by delivering bulk SMSs to functionaries, as shown in the table below.

Table 2: Details on training reinforcement messages NDD Aug 2016

	Total SMSs
Health	73,728
Education	26,5370
SW&SE	23,0615
Private Schools	18,157

Training Support: Evidence Action supported the state to ensure high-quality training sessions by conducting pre- and post-test assessments at 17 block level trainings to test participants' knowledge of key messages.

4. Monitoring and Evaluation

Monitoring, learning, and evaluation is a key component of Evidence Action’s technical assistance to the government and enables an understanding of the extent to which schools, *anganwadis*, and the health system are prepared and able to implement the deworming activities effectively. This includes assessing the program and providing feedback during its preparation stage, while activities are ongoing, and after completion of program processes to guide mid-course corrections and to improve future performance based on the learnings.

4.1 Process Monitoring

Figure 8: Monitoring activities before, during, and after NDD

The aim of process monitoring is to assess the preparedness of schools, *anganwadis*, and health systems to implement NDD and the extent to which they have followed correct processes. Being prepared and adhering to best practices can ensure a high-quality NDD program. Evidence Action conducts process monitoring through telephone monitoring and cross verification, as well as physical verification through field visits.

Pre-deworming activities	<ul style="list-style-type: none">• Preparatory monitoring• Training quality assessment
Activities during deworming	<ul style="list-style-type: none">• Process monitoring -Aug 10 & 18• Monitoring by Evidence Action and government
Post-deworming activities	<ul style="list-style-type: none">• Rapid coverage monitoring - Aug 11 & 12• Coverage reporting• Coverage validation -Aug 23- Sep 06*

* Coverage validation was planned during Aug 23-27, but it was extended due to political instability in the state.

Tele-calling and follow-up actions: Evidence Action assessed program preparedness prior to NDD through a tele-caller who tracked the implementation status of planned training sessions, tracked the delivery and availability of drugs, and followed up if and when IEC materials reached the district, block, and school and *anganwadi*. The tele-caller used pre-designed and standardized electronic tracking sheets to outline issues identified and addressed during calls. These tracking sheets were shared with the state government on a daily basis to enable them to take rapid corrective actions as necessary. These corrective actions include issuing departmental directives, video conferencing, and sending reinforcement messages through SMSs.

Monitoring by an independent agency: Evidence Action also assessed the process and performance of the program by hiring an independent research agency whose trained monitors observed deworming processes on NDD and mop-up day. The real time findings were shared with state governments on the day of visits to enable immediate corrective actions.

Sample size: For process monitoring, a total of 320 randomly schools (government and private schools) and 160 nearby *anganwadis* were covered on NDD and mop-up day. For coverage validation, a total of 400 randomly selected schools and 400 randomly selected *anganwadis* were covered.

Figure 9: Key process monitoring activities

Key activities in process monitoring	
I. Telephone Monitoring and Cross Verification	
<ul style="list-style-type: none">• 2,701 successful calls made during July-September 2016• 551 calls to AWWs• 1,031 calls to government/government-aided schools including private schools• 3,428 calls to district block level officials	
II. Field Monitoring Visits	
<ul style="list-style-type: none">• 113 monitoring visits: 80 by state government officials and 33 by Evidence Action state staff in selected schools and <i>anganwadis</i>• Monitors administered the checklist given in NDD guidelines	
III. Process Monitoring by Independent Monitors	
<ul style="list-style-type: none">• Process monitoring was conducted in seven districts on NDD & mop up day• 80 trained monitors from independent agency hired by Evidence Action visited 320 schools and 160 <i>anganwadis</i>• Data collected electronically on tools developed by Evidence Action	

4.2 Assessing treatment coverage

Two activities carried out during the August 2016 round of NDD in Tripura were aimed at assessing treatment coverage. These included a rapid coverage assessment to estimate whether coverage was sufficient in potential low coverage areas, and a coverage validation exercise to gauge the accuracy of reported treatment figures.

Rapid Monitoring of Treatment Coverage: Evidence Action conducted a rapid treatment coverage exercise using the “Coverage Supervision Tool” developed by the World Health Organization (WHO). This exercise was carried out during the August round of NDD to understand performance in areas reporting poor coverage during the previous round in February, with the aim to develop an immediate action plan to improve coverage on mop-up day. The areas of focus included three districts of the state: Shepahijala, Unakoti and West Tripura. In each district, 20 children aged 1-19 years from 20 villages/enumeration areas were interviewed as per WHO guideline⁴. The results revealed that all three districts had inadequate coverage in terms of drugs received and compliance with treatment, which implies the coverage was below the WHO target threshold of 75%. These findings, along with recommendations for the state to ensure intensive and focused interdepartmental coordination and effective community mobilization through community based workers-ASHAs, were shared with the state government prior to mop-up day for the necessary corrective actions.

⁴Rapid Monitoring of Treatment Coverage in Neglected Tropical Disease Programs, Coverage Supervision Tool, World Health Organization Working Draft, February 2016.

Coverage Validation: Coverage validation is an ex-post check of the accuracy of the reporting data and coverage estimates. Coverage validation data was gathered through interviews with *anganwadi* workers, headmasters/teachers, and a sample of three students (in three randomly selected classes) in each selected school, and by checking registers and reporting forms in the sampled schools. These activities provided a framework to validate coverage reported by schools and *anganwadis* and to calculate the level of accuracy in the data by comparing the recounted numbers (based on the documentation available in schools and *anganwadis*) with numbers reported in schools and *anganwadi* reporting forms that are aggregated at the block and district levels.

4.3 Key Findings

Process monitoring findings highlight that 96% of schools and 94% of *anganwadis* received training for the NDD and around 96% of schools and 98% of *anganwadis* reported conducting deworming on the day of visit. However, coverage validation demonstrated that 98% of schools and all *anganwadis* visited had dewormed children during deworming or mop-up day. Around 94% of schools and 97% of *anganwadis* received NDD posters and banners. However, integrated distribution of NDD kits⁵ was only 58% in teachers and 57% in AWWs. Around 52% of schools and 43% of *anganwadis* received training reinforcement messages through SMS. Awareness of the causes of worm infection was high among teachers and AWWs (**Annexure C - Table 1**), however, only 39% of schools and 41% of *anganwadis* were aware about possibility of any adverse event among children after consuming albendazole tablets. Further, a substantial proportion of school teachers and *anganwadi* workers were aware about adverse event management. (**Annexure C - Table 5**)

All the private school teachers (n=12) covered during process monitoring reported being trained for NDD. All of them had sufficient drugs for deworming, and received a banner/poster, while 92% had received handout/reporting forms. SMSs related to NDD were received by 50% of private school teachers/principals.

Table 3: Key findings

Key Findings from Process Monitoring and Coverage Validation		
Indicator	School (%)	<i>Anganwadi</i> (%)
Attended training for NDD	9	96.3
Schools/ <i>anganwadis</i> conducted deworming	95.5	97.6
Received training reinforcement SMS for current NDD round	52.2	43.1
Integrated distribution of albendazole tablets & IEC materials	58.4	56.9
Reported any adverse events	14.2	11.5
Copy of reporting form was available for verification	85.7	82.4
Followed correct recording protocol	69.1	66.6
State level verification factor ⁶	0.71	0.85
State level inflation rate ⁷	38.9	17.4
Children consumed tablet	99.3	NA
Estimated NDD coverage	59-79	74

⁵Integrated distribution of NDD kits includes albendazole, banner/poster and handout/reporting forms and provided to schools and AWC during the trainings.

⁶Ratio of recounted value of the dewormed children to the reported value.

⁷Proportion of over reported dewormed children against total verified children in schools and *anganwadis*.

Coverage validation data revealed that only 69% of schools and 67% of *anganwadis* followed correct protocols for recording the number of children dewormed. Majority of the *anganwadi* workers did not have a list of unregistered preschool-age children (93%) and out-of-school children (74%), which they were instructed to gather in order to estimate the overall target for this group of children. Around 86% of schools and 36% of *anganwadis* kept a copy of their reporting form post submission, as per the reporting protocols. Coverage validation of treatment figures for enrolled children exhibited high inflation (39%; verification factor of 0.72. Verification factors are further explained below.). Similarly, the state level inflation rates for *anganwadi* registered children and out-of-school children were 19% and 16% respectively, with corresponding verification factors of 0.84 and 0.86 respectively. There was no inflation in reporting of unregistered children in *anganwadis*. Further, interviews with children in schools indicated that 99% of them received a deworming tablet. This indicates that despite challenges in reporting and documentation of coverage data, almost all the children present on NDD or MUD received albendazole tablets.

Attempts were also made to understand the maximum number of enrolled children that could have been dewormed in the schools. School data suggests that on an average, we could verify 72% of total coverage numbers reported by schools. Applying this verification factor on government reported coverage, it is estimated that 59% of children could have been dewormed in the schools. Further, coverage validation data showed that 98% of schools did deworming on either NDD or mop-up day and a maximum of 82% of the total school enrolled children were in attendance. Moreover, 99% of children interviewed reported to have received the albendazole, and 99% of these reported to consume it under supervision. Based on these factors, 75% of children could have been dewormed in the schools. This indicates that NDD coverage most likely lies between 59-79% in the state of Tripura. This range falls below the WHO target of treating 75% of the target population.

In the case of *anganwadis*, on average, we could verify 85% of total coverage reported by *anganwadi* workers. Applying this verification factor to government reported coverage, we estimate that approximately 74% of targeted children could have been dewormed in the *anganwadis*. The detailed tables of results on process monitoring and coverage validations are attached herewith (**Annexure D Appendix I**).

5. Recommendation

- 1 Delay in procurement of drugs and IEC materials delayed plans for integrated distribution to the functionaries. For future rounds, efficient planning in early procurement of drugs and IEC may improve timely distribution of NDD kits as per the NDD operational guidelines. This will be critical to a high quality, high coverage program.
- 2 Because only 52% of teachers and 43% of *anganwadi* workers received training reinforcement SMSs, there is urgent need to update the contact information database to enable key information to reach teachers and *anganwadi* workers.
- 3 74% of *anganwadi* centers did not have a list of out-of-school children, which was recommended in order to more accurately estimate the target figure of children in an entire community. Therefore, greater involvement of ASHAs in mobilizing

out-of-school children and spreading awareness on deworming benefits is required. This may be facilitated by increased participation in block level trainings, and specific directive from the state to all administrative levels for ASHA engagement and incentives for mobilization

- 4 Coverage validation data suggest that due emphasis on recording protocols during the training is likely to improve the quality of coverage data in the next round. Training and reinforcement messages shared through SMS need to increase focus on the importance of correct reporting protocols and maintaining correct and complete documentation. Additionally, trainers should ensure that teachers and headmasters understand the directive to maintain a copy of reporting forms in schools so that the data available for coverage validation is more robust.