



Telangana

National Deworming Day August 2017 Report



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Acronyms

ASHA:	Accredited Social Health Activist
AWC:	<i>Anganwadi</i> Centre
DoE:	Department of Education
DM&HO:	District Medical & Health Officer
WD&CW:	Women Development and Child Welfare
GoI:	Government of India
Govt:	Government
IEC:	Information, Education and Communication
IVR:	Interactive Voice Response
MoHFW:	Ministry of Health and Family Welfare
NHM:	National Health Mission
NDD:	National Deworming Day
PHC:	Primary Health Centre
RBSK:	<i>Rashtriya Bal Swasthya Karyakram</i>
STH:	Soil-Transmitted Helminths
TS:	Telangana State
TC:	Tele-caller
UTs:	Union Territories

Executive Summary

Contributing to the Government of India's National Deworming Day (NDD) initiative efforts, the state of Telangana implemented round four of NDD on August 10 followed by mop-up day on August 23¹. The state dewormed 88,94,065 children in the age group of 1-19 years across 31 districts in the state. This achievement is an outcome of exemplary leadership from the Department of Health in coordination with the Department of Education (DoE) and Department of Women Development and Child Welfare (WD&CW). Evidence Action provided technical assistance to the program, through funding support received from the Children's Investment Fund Foundation and Dubai Cares.

Table 1: Key Achievements of National Deworming Day August 2017

Indicators		Census target*	Program Target	Target as per Coverage report***	Coverage
Number of schools reporting coverage	Govt. schools	Not applicable	39,077	29,210	29,141
	Private Schools			11,865	11,724
Number of <i>anganwadis</i> reporting coverage		Not applicable	34,910	34,093	34,053
Number of enrolled children (classes 1-12) who were administered albendazole on NDD and mop-up day	Govt. schools	80,60,490	28,47,069	35,45,979	34,55,781
	Private Schools		37,42,276	36,92,286	35,66,651
Number of registered children dewormed (1-5 years) at AWCs on NDD and mop-up day		21,97,100	17,27,636**	14,13,913	13,42,425
Number of unregistered children dewormed (1-5 years) at AWCs on NDD and mop-up day		8,58,442	1,62,887**	1,65,358	1,52,843
Number of out-of-school children dewormed on NDD and mop-up day		9,91,198	16,58,189	3,92,193	3,76,365
Total number of children dewormed (1-19 years)		1,21,07,230	1,01,38,057	92,09,729	88,94,065

*Census target of 2011 extrapolated to year 2017, data source - department of Demography & Evaluation Section O/o Commissioner family welfare, Hyderabad. Note- Census target is based on age wise data and DISE data is as per class wise data
 ***anganwadi* registered children as per actual records at districts

¹ The mop-up day date was postponed due to launch and implementation of other ongoing program i.e. Measles rubella in the state

Evidence Action provided technical assistance to the state Government for the effective implementation of NDD in August, incorporating learnings like need for timely drug procurement, updation of functionaries contact database, and steps towards setting the program targets as per the census data, inclusion and strengthening of private schools and religious institutions engagement and monitoring of trainings to increase program coverage.

1. About National Deworming Day

The World Health Organization (WHO) estimates that 241 million children between the ages of 1 and 14 years are at risk of parasitic intestinal worms in India, known as soil-transmitted helminths (STH)². The GoI implemented the first NDD round in February 2015 and based on National level STH mapping, and WHO treatment guidelines, the GoI issued a notification to states recommending the appropriate treatment frequency based on prevalence data.

Figure 1: NDD Program Highlights



1.1 State Program Background

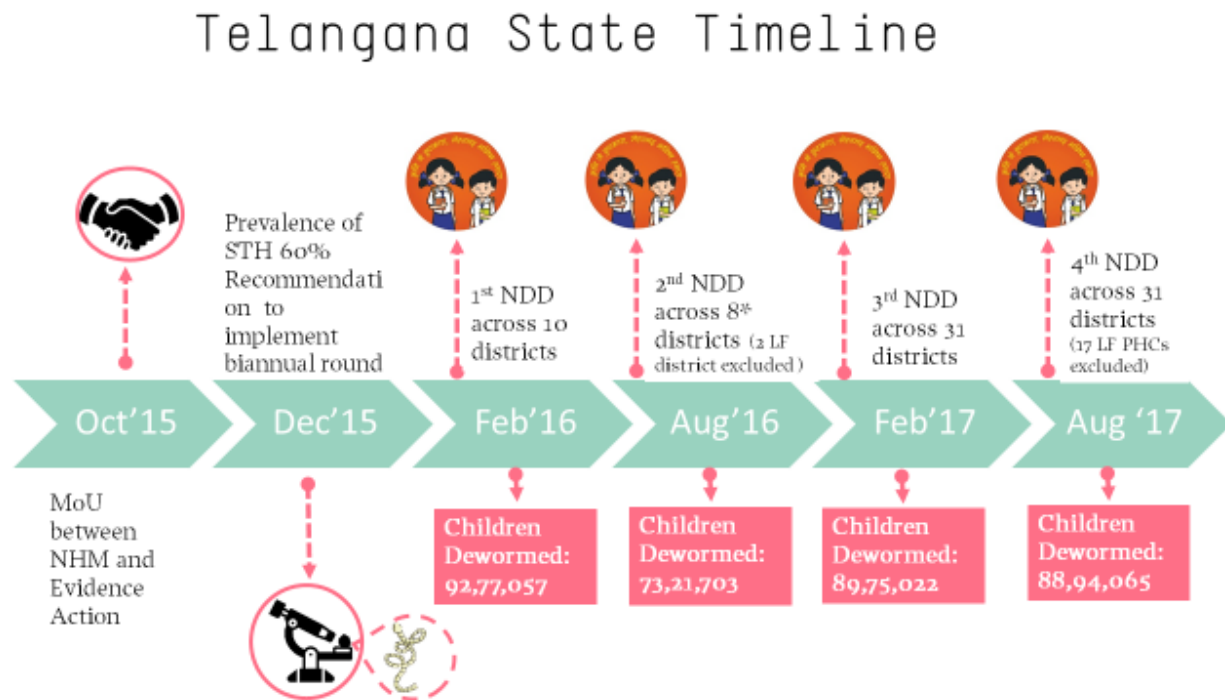
The state of Telangana has been implementing the NDD as per GoI’s operational guidelines. Telangana committed to implement bi-annual deworming round due to high prevalence rate of 60%³. For effective implementation, the state made deliberate efforts on timely drug procurement and inclusion of private schools and junior colleges for increase in coverage. The state took initiative in mitigating challenges like transportation of drug and IEC to

² NDD operational guidelines February 2016

³ As per STH prevalence and intensity survey conducted by National Institute for Cholera and Enteric Diseases –Indian Council of Medical Research, Kolkata (NICED), GfK Mode, and Evidence Action with support from Government of Telangana, in December 2015

districts through issuing directives and allocated *Rashtriya Bal Swasthya Karyakram (RBSK)* vehicles for all NDD related activities. Key milestones are stated in Figure 2 below.

Figure 2: Telangana Deworming Program Milestones



2. State Program Implementation

2.1 Policy and Advocacy

A program of such scale requires stakeholder convergence and collaborative efforts at each administrative and implementation level, which is imperative for effective implementation. The Department of Health led coordination with the Department of Education and Department of WD&CW, to achieve program goals through timely planning and implementation. Some of the key highlights of inter-departmental collaboration are represented in Figure 3 below.

Figure 3: Efforts towards Stakeholder Collaboration

June 6, State Task Force Meeting	July 31, National Review Meeting	June 16, State Joint Directives	District Coordination Committee Meeting	August 7, State Video Conference with Districts
<p>-Meeting under the chairmanship of Principal Secretary, Health.</p> <p>-Decisions for NDD August round, included increase program convergence of all line departments for NDD, strategies to cover out-of-school children with intensive community mobilization campaign and inclusion of all private schools and junior colleges.</p>	<p>-Meeting under the chairmanship of Joint Secretary, RMNCH+A, MoHFW, GoI</p> <p>-Review of NDD preparations across states</p> <p>-The platform was used for sharing strategies, action plans and bridging identified gaps for NDD August 2017 round.</p>	<p>-State-level joint directives signed by Principal Secretary - Health, Special Chief Secretary - Education and Secretary WD&CW issued to all districts</p>	<p>-Meetings conducted in all 31 districts under the chairmanship of District Collector</p> <p>-Discussion points were to ensure alignment with line departments, to ensure timely rollout of NDD district action plan and inclusion of private schools and junior colleges</p> <p>-Participation of all stakeholder departments, private school association</p>	<p>-To ensure that District Health Officials upload the NDD coverage report on the NDD Web/mobile application correctly and timely sharing with the ministry</p> <p>-To assess drug availability status and other preparations including adverse event management</p> <p>- All children in private school and junior colleges to be covered</p>

State-level review meeting with all districts was held on June 27 under the chairmanship of MD, NHM for review of NDD planning and implementation. The meeting was attended by all District Medical and Health Officers and District Immunization Officers. Increased engagement and ownership by the district administration in planning and implementation of the NDD was demonstrated through District Coordination Committee Meetings held across 31 districts, chaired by the District Collector from July 18 to August 2. The key agenda items in these meeting were to ensure coordination with line departments, to ensure timely rollout of NDD district action plan and inclusion of private schools and junior colleges for optimum coverage.

The state referred to the NDD 2017-18 financial guidelines for implementation of NDD activities and budget planning. Letters were released from state NHM to all District Collectors to ensure active participation of private schools in NDD program. This resulted in District Collectors issuing directives to private school managements to participate in NDD. As part of NDD preparations, Evidence Action worked with the state and adapted operational guidelines to the local context, defined timelines along with roles of concerned stakeholders for effective program planning and implementation.

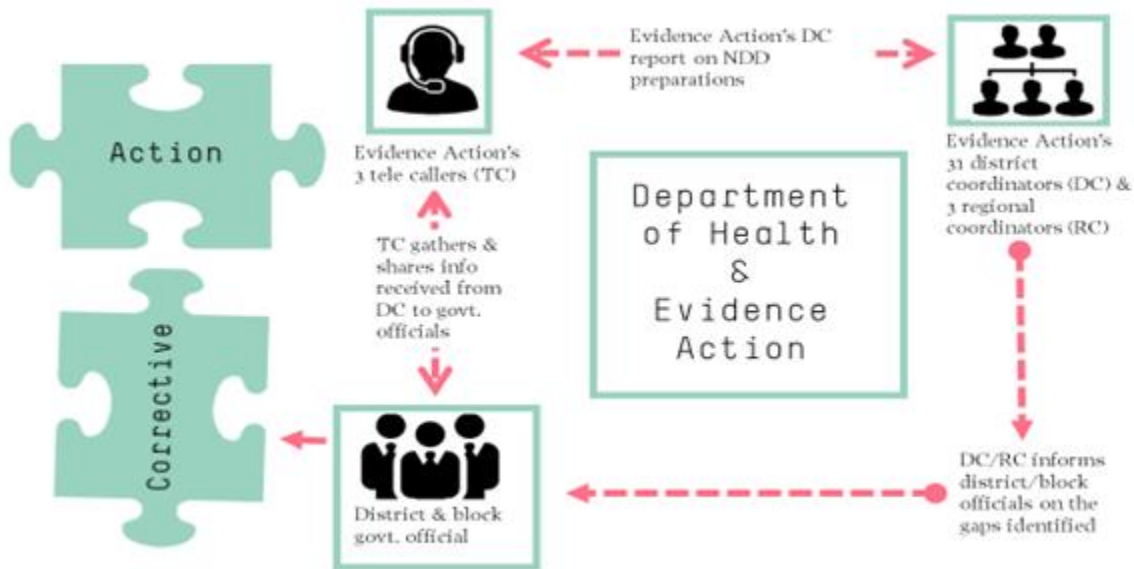
2.2 Program Management

Evidence Action’s state based team drafted a state specific operational plan in discussions with State Nodal Officer to lead program planning and implementation. Technical assistance was extended through a four membered state team, field-based three regional coordinators and short-term hires for three months, including 31 district coordinators and three tele-callers respectively. The regional and district coordinators supported district-level

preparations in coordination with district and block officials to plan for trainings, other logistics for program implementation and timely reporting of coverage report.

The state team assisted with program planning and coordinated with stakeholder departments to share real-time updates on program preparedness, implementation of different components and facilitate corrective actions. The tele-callers gathered real-time information from the field to assess the preparedness for NDD implementation through calls made to officials at district, divisions, schools and frontline functionaries to understand the processes and completion of program activities like-drug procurement, trainings, etc. The updates gathered through calls was shared through a daily tracker with the NHM to allow necessary actions across all program activities. Figure-4 gives an overview of the information flow between the Evidence Action team and district and division-level officials.

Figure 4: Evidence Action Facilitates Corrective Action



2.3 Drug Procurement, Storage, and Transportation

a) Drug Procurement: Taking learnings from the previous round, the state placed the procurement order three months in advance for timely delivery of drugs to districts. The state procured 1,01,20,065 albendazole (400mg) tablets and utilized the prior stock of 7,38,675 albendazole tablets in NDD August 2017 round. Four districts i.e. Sangareddy, Hyderabad, Medchal and Nalgonda requested NHM for additional requirement of 7,00,000 albenadazole tablets based on the revised district targets, which was provided timely to the districts. The drugs were tested at state-level through state empaneled labs of Drug Control Administration, Telangana, prior to distribution. Post the test results, they were transported to PHCs for integrated distribution during PHC-level trainings of frontline functionaries.

b) Drug Logistics and Distribution: The Department of Health managed the entire drug logistics and distribution till the PHC-level. Evidence Action supported the state with a drug bundling and distribution plan for the district, division, and PHC to streamline distribution of tablets to schools and *anganwadis* (Annexure A). This was approved and utilized further by the state. To align drug distribution with division-level trainings in accordance with NDD operational guidelines, Evidence Action supported the department by tracking drug availability at districts and lower level by tele-calling and sharing information with timely

updates to officials for corrective actions wherever required. Prior to the drug distribution at division-level, Department of Health led the bundling of NDD kits¹ at the district level. The NDD kits were distributed at the district-level for onward distribution to Department of Education and WD&CW functionaries at the division-level trainings.

c) Adverse Event Management: In line with the last NDD round, the state followed the adverse event management protocol from national guidelines. For both NDD and mop-up day, the state set up an adverse event management system engaging *Rashtriya Bal Swasthya Karyakram (RBSK)* teams, to effectively manage any adverse events in the field. The emergency helpline number, 104 was on alert to facilitate appropriate emergency response action by coordinating medical assistance from the nearest primary health centre. District medical officials were sensitized at monthly review meeting at state NHM to handle and report adverse events. In total, 6 mild adverse events were reported on NDD and no mild adverse events were reported on mop-up day. These mild adverse events were effectively managed as per adverse event management protocol which were circulated at cluster level trainings to ensure reporting of severe adverse event cases. No serious adverse event was reported in NDD August round.

d) Drug Recall: Evidence action supported Department of Health in tracking the data of leftover albendazole tablets following completion of NDD in all 31 districts (**Annexure B**). The drug recall status is presented in Table 2 below:

Table 2: State Drug Recall Status

Drug Recall NDD August 2017			
District level (N-31)		Division Level (N-66)	
Total tablets in strips where no tablet is used/missing	2,32,150	Total tablets in strips where no tablet is used/missing	9,47,150
Total tablets remaining in used strips (tablets still packed within the strip)	307	Total tablets remaining in used strips (tablets still packed within the strip)	49,611
Total number of tablets (Usable)	2,32,457	Total number of tablets (Usable)	9,96,761
Grand Total			12,29,218

The department of health will be directing districts and divisions to use the packed strips in the upcoming February 2018 round as per drug safety recommendation.

2.4 Public Awareness and Community Sensitization

The state adapted and translated the NDD IEC resource kit developed by Evidence Action for NHM, Government of India. Adaptations were made to the local context including translations with support from Evidence Action. The approved material was uploaded on state NHM [website](#).

The state department rolled out a mass media plan including TV spots⁴, radio spots, and newspaper advertisements. In



Figure 5: Testimonial from the field

⁴ TV spots and radio spots are short 30 sec advertisements that help generate awareness about NDD

August round, 2 newspaper ads were published per district contributing to a comprehensive awareness generation plan. The Department of Health undertook social media activities for the first time, customizing the content that Evidence Action developed in English and Telugu and posted on official NHM [Facebook](#) page in August 2017 round. MoHFW recommends using social media as it is a cost-effective medium and reaches to a wider section in the community.

The state NHM organized a press sensitization meeting on August 2, chaired by the Mission Director with the objective of informing media about the upcoming NDD round and to enhance their understanding of the need for deworming children. Approximately 50 media personnel attended the meeting from leading print, electronic, and digital media outlets. Evidence Action provided media kits that included NDD factsheet, program briefs and press note to all participants.

Platform	Timelines	Frequency
TV Spots	August 1 to 10 and 20 to 23	39 (on 5 channels)
Flash Advertisements	July 28 to August 10 and August 20 to 23	39(on 7 channels)
Radio Jingle	July 28 to August 10 and August 20 to 23	60 (on 7 channels)
Radio Spot	August 1 to 10 and 20 to 23	15 (on 7 channels)
Newspaper Advertisement	August 5 to 10 and 20 to 23	2 Ad/ district
Miking (Public Service Announcement)	August 1 to 10 and 20 to 23	All PHCs
Social Media	August 1 to 11	41 Posts (on Facebook) 378 Likes 108 Shares

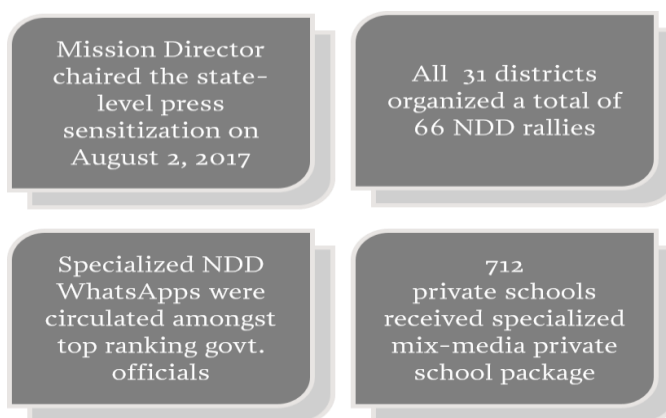
To boost private school engagement, Evidence Action developed a private school package consisting of WhatsApp messages, *prabhat pheri* banners, posters, and social media content. The Department of Health circulated the package to 712 private schools⁵ in the state via email, to support school-level awareness generation efforts.

The state department also circulated WhatsApp messages on key program information (designed by Evidence Action) to govt. officials for reinforcement in 29 WhatsApp groups. All 31 districts organized a total of 66 rallies to increase community interest towards NDD. These rallies were led by District officials⁶ with the participation of school children.

2.5 Training Cascade

a) Training and Distribution Cascade:

The training cascade as per the NDD guidelines was implemented from the state to all divisions and Block PHCs. In the cascade, the state trained 26,261 teachers from government and government-aided schools, 9,689 private school teachers, 35,040 *anganwadi* teachers and 26,421 ASHAs. District and division-level officials from stakeholder departments were also trained for effective planning, implementation and monitoring of the program.



NDD Highlights in Telangana

⁵ The database for private school was collected through tele-calling supported by Evidence Action

⁶ Out of 66 rallies at districts, 15 were led by District Collectors, 4 by Joint Collectors, 12 by DM&HOs and remaining 35 by Dy. DM&HOs/ MOs of Health department

Evidence Action supported the state-level master trainers training conducted on July 6 with the participation of 31 officials from Department of Health. Further preparations for organizing training at district, division and PHC-level were ensured and the cascade was conducted from July 18 to August 5 in 31 districts and 702 PHCs. Since there was a delay in printing of IEC material at state due to change in the mop-up day date, which hampered the schedule of district level trainings to facilitate integrated distribution. Evidence Action's district coordinators assisted district and division health officials to revise training schedules and coordinate with cluster-level officials, schools and *anganwadis* to ensure that trainings were completed before NDD and information was shared down the cascade to participants.

b) Training Resources: The Department of Health printed training resources including 45,500 teacher handouts, 40,500 AWW handouts, and 30,500 ASHA leaflets. Working towards integrated distribution of these resources during trainings, Evidence Action supported in drafting the training and IEC material bundling plan as per division requirements, enabling materials to be efficiently transported to all districts before trainings commenced. Process monitoring finding suggests, integrated distribution of NDD resource kit was significantly low (56% at schools and 66% at *anganwadis*). To improve this in upcoming rounds, it is recommended to ensure clear responsibilities are assigned for drug bundling at all levels, through the state-level directive. Necessary supervision is required for ensuring adequate drug and IEC bundling and distribution in a timely manner.

c) Training Reinforcement: Evidence Action supported the reinforcement of key messages by delivering bulk SMS to key government officials and frontline functionaries in stakeholder departments. Voice messages (IVR calls) to frontline functionaries (ASHA, school teachers and *anganwadi* teachers) were sent one day prior to NDD for mass awareness generation as shown in the table below. The key findings from process monitoring shows that reach of SMS has improved from 56% to 78% in schools and from 68% to 88% in *anganwadis* from the previous round to August 2017 round. However, the reach of reinforcement messages among the stakeholder departments is not optimum, this indicates gaps in updating contact database.

Table 3: Details on Training Reinforcement Messages Sent by Evidence Action and Stakeholder Departments for NDD August 2017

SMS Sent By	Total SMS Sent	IVRs Calls Made (to frontline functionaries)
Evidence Action	20,47,892	1,12,335
Stakeholder Departments (Health, Education and WD&CW)	6,22,853	Not applicable

d) Training Support and Quality Assurance:

For quality assurance of training sessions, Evidence Action administered pre and post-tests to participants at state-level training of trainers to measure knowledge retention of key messages. The findings and observations highlighting key messages, which needed to be reinforced at district trainings, were shared by Evidence Action with the Department of Health. Training monitoring of 31 districts and 84 PHCs, was conducted as per NDD training cascade to assess the quality of messages imparted during trainings using a standardized training monitoring checklist by regional coordinators and district coordinators. Real-time recommendations based on these assessments were shared with stakeholders to improve remaining scheduled trainings. Please find the key findings of state pre-post and training

monitoring at District and PHC level below in table 4. The detailed analysis is included in Annexure C.

Table 4: Key Findings of State Pre-Post and Training Monitoring at District and PHC

State Pre-Post*	District Training Monitoring	PHC-level Training Monitoring
Prior to the training, 45 % were not able to mention correct mop-up day. However after the training 100% participants reported correctly.	The participation from Education department was significantly low in 7 districts namely Janagaon, Jayashankar, Gadwal, Medchal, Nagar Kurnool, Nalgonda & Warangal (U). However, it was rectified in the next level of the cascade with reinforcement message and letters.	Participation of the teachers/head masters was increased in PHC level trainings.
35 % participants were not able to respond correctly to the prescribed dosages of albendazole for 2-3 years old children which improved to 97% during the post-test.	In 15% training the session on NDD application was not discussed by the trainer however it was covered by the Evidence Action team to ensure correct and timely reporting of NDD coverage.	The role of ASHA in mobilizing out of school children was not discussed at the training in Yadadri and Warangal rural.
The knowledge about reporting through NDD application among the participants was less. I.e. only 6% participants were able to respond correctly to the level of data entry and 19% mentioned correctly about data approval. However, in the post-test both the indicators were scaled up to 84 and 90% respectively (N22).	The lack of systematic and prior planning led to less attendance in the training.	Adverse events were not discussed in detail and so they were later reinforced through tele-calling and SMS.

2.6 Coverage Reporting

The NDD coverage reporting was completed using the NDD mobile/web application. The state was provided with 98 user IDs and passwords to all divisions for data entry and districts for approval in the NDD App/web page.

As per the coverage report, 88,94,065 children were dewormed against a target of 92,09,729. While reporting coverage, the state revised its target from 1,01,38,057 (determined prior to the NDD round) to 92,09,729 post NDD round during coverage reporting. The reason reported for change in targets is primarily because the districts did not agree with target determined by the state target based on the census. Another deviation observed is in the category of out-of-school children which was reduced by 12,65,996 children from its target of 16,58,189 to 3,92,193 children. Similar deviation is also observed in coverage of enrolled children at govt. schools and *anganwadis*. Such revisions to the target must be avoided for future rounds through greater coordination with the Department of Education and Department of WD&CW. Moving forward, it is imperative for the state to set targets equal to the census population that will allow understanding the actual reach of the program in the target population while engaging with districts.

3. 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 to implement the NDD. This includes assessing the extent to which processes are being followed, the extent to which coverage has occurred as planned and to make mid-course correction to improve program performance.

3.1 Process Monitoring

Evidence Action conducts process monitoring through telephone monitoring and physical verification through field visits by its staff and trained independent monitors.

Tele-calling and follow up actions: Evidence Action assessed program preparedness for the NDD round through three tele-callers who tracked the status of training, delivery and availability of drugs and IEC materials at the district, division, school and *anganwadi*-levels through tele-calling. They used pre-designed and standardized electronic tracking sheets to outline program gaps. The compiled tracking sheets were shared with the state government on daily basis to enable them to take rapid corrective actions as necessary, such as issuing departmental directives, holding a video conference to coordinate with officials, or sending reinforcement messages through SMS. Evidence Action’s district and regional coordinators made field visits to facilitate some of these corrective actions at the district and division-level. Post NDD, the tele-callers and district coordinators were engaged in collecting information regarding progress with coverage reporting, reiterating timelines to the officials.

Monitoring by an independent agency: Evidence Action with approval from the Government of Telangana assessed the processes and performance of the program through the hiring of independent survey agency - Karvy Insights Ltd. Total of 125 independent monitors were trained who observed program implementation on NDD and mop-up day. Real-time findings were shared with state government on the day of visits to enable immediate corrective actions.

For process monitoring, a total of 250 randomly selected schools (government and private schools) and 250 *anganwadis* were covered on NDD and mop-up day. For coverage validation, a total of 625 randomly selected schools and 625 randomly selected *anganwadis* were visited.

Monitoring visits by Evidence Action: In total, 370 visits were made by Evidence Action team at government schools, private schools and *anganwadis* on NDD and mop-up day. The detail note is placed in Annexure D.

Snapshot of M&E activities
I. Telephone Monitoring and Cross Verification
<ul style="list-style-type: none">• Tele-calling conducted across 702 PHCs in 31 districts of the state• 14,744 successful calls made during June, 2017-September, 2017• 5,654 calls to health functionaries including district and division-level officials and ANMs• 3,067 calls to WD&CW department (district, division-level officials, Lady Supervisor and <i>anganwadi</i> teacher)• 6,023 calls to education department (district, division-level officials, government and private schools)
II. Training Quality Assessment

<ul style="list-style-type: none"> • Pre-posttest was administered during master trainer's training at state-level in which 31 district-level officials from health department were trained • A total of 31 districts, 83 PHC's level training quality assessment was done using standard format
III. Field Monitoring Visits
<ul style="list-style-type: none"> • Total 370 monitoring visits by Evidence Action team were made in selected schools and <i>anganwadis</i> • NDD monitoring checklist provided in given in NDD operational guideline was administered • Real-time findings on key indicators were shared with the stakeholders on NDD and mop-up day
IV. Process Monitoring by Independent Monitors
<ul style="list-style-type: none"> • Process monitoring was conducted in all 31 districts on NDD and mop-up day • 125 trained independent monitors from the survey agency, visited 250 schools and 250 <i>anganwadis</i> • Data was collected electronically using CAPI as per tools developed by Evidence Action • Real-time findings on key indicators were shared with the stakeholders on NDD and mop-up day
V. Coverage Validation by Independent Monitors
<ul style="list-style-type: none"> • Coverage Validation was conducted in all 31 districts post mop-up day during August 29- September 6 • 125 trained independent monitors from the survey agency, visited 625 schools and 625 <i>anganwadis</i>

3.2 Assessing Treatment Coverage

The Monitoring and Evaluation activities carried out during NDD August 2017 round in Telangana, included coverage validation in each NDD district to gauge the accuracy of reported treatment coverage.

Coverage Validation: Coverage validation is an ex-post check of the accuracy of the reporting data and coverage estimates. The data was gathered through interviews with *anganwadi* teachers, headmasters/school teachers, and a sample of three students from three randomly selected classes in each of 625 sampled schools visited. The data was also gathered by checking registers and reporting forms at schools and *anganwadis*. This activity provided a framework to validate coverage reported by schools and *anganwadis* and to estimate the level of accuracy in the data by comparing the recounted numbers (based on the documentation available in schools and *anganwadis*) with numbers in reporting forms.

3.3 Key Findings

Process Monitoring findings highlight that 72% schools and 83% *anganwadis* visited have received training for the NDD Aug 2017 round and around 92% of schools and 98% of *anganwadis* conducted deworming either on NDD or mop-up day. Findings from coverage validation also reflect that 93% of schools and 99% of *anganwadis* dewormed children during NDD or mop-up day.

Of the total schools and *anganwadis* visited, around 88% of schools and 92% of *anganwadis* received NDD posters/banners. These findings show an increasing trend from February 2017 round. However, integrated distribution of NDD kits⁷ was found to be (56%) in schools and *anganwadis* (66%) which is same as previous round. Around 78% of schools and 88% *anganwadis* received training reinforcement messages through SMS. Awareness on the causes of worm infection (**Annexure E-Table 2**), possible adverse events, and adverse event

⁷Integrated distribution of NDD kits includes albendazole, banner/poster and handout/reporting forms and provided to schools and AWC during the trainings.

management practices (**Annexure E-Table 6**) were high among teachers and *anganwadi* teachers. Nevertheless, only 38% of teachers and 34% of *anganwadi* teachers reported the possibility of any adverse event among children after administration of albendazole tablets. Out of total sample, more than half of the teachers and *anganwadi* teachers were aware about processes for management of adverse events like laying down the child in open/shaded place or giving ORS/water.

Around 73% of sampled private schools (N=63) attended training for NDD. Out of total private schools visited, 87% received albendazole tablets, 79% received a banner/poster, and 75% received handouts/reporting forms. As evident that higher percentage of schools have received NDD materials as compared to the percentage of schools attended NDD training, indicates that few schools collected these materials outside of the NDD trainings. This could have been possible due to reinforcement SMS sent to private schools and follow-ups by Evidence action tele-callers, regional coordinators and district coordinators. SMS related to NDD were received by 59% of private school teachers/headmasters.

Table 5: Key Findings from Process Monitoring and Coverage Validation

Indicator	School		Anganwadi	
	(%)	N	(%)	N
Received SMS for current NDD round	78	250	88	250
Attended training for NDD	72	250	83	250
Integrated Distribution of albendazole tablets and IEC materials ⁸	56	250	66	250
Schools/ <i>anganwadis</i> conducting deworming	93	625	99	625
Children consumed tablet ⁹	99	1,720	NA	NA
Followed correct recording protocol	68	583	72	621
Copy of reporting form was available for verification	46	583	44	621
State-Level verification factor ¹⁰	64	46,618	110	7,296
Estimated NDD coverage	82 ¹¹	NA	104 ¹²	NA

Findings from Coverage Validation: The data revealed that 68% of schools and 72% of *anganwadis* followed correct protocols for recording the number of children dewormed. However, around 18% of schools and 18% of *anganwadis* did not adhere to any recording protocol. A substantial proportion of *anganwadi* teachers did not have a list of unregistered preschool-age children (37%) and out-of-school children (25%). Only 46% of schools and 44% of *anganwadis* had a copy of their reporting form post submission, though they were instructed to retain a copy as per NDD guidelines. Findings from coverage validation revealed that 82% ASHA shared the list of unregistered and out-of-school children with *anganwadi* teachers, which indicates the scope of improvement for upcoming rounds. Further, 75% ASHAs responded to conduct meetings with parents to inform about NDD, efforts should be made to enhance community mobilization activities.

⁸ Integrated distribution of NDD kits includes albendazole, banner/poster and handout/reporting forms and provided to schools and AWC during the trainings.

⁹ Based on child interview conducted in schools during coverage validation

¹⁰ 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=276) where deworming was conducted and copy of reporting form was available for verification.

¹¹ 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*.

¹² This was estimated by implying state-level verification factor on government reported coverage for AWC.

Further, interviews of children (N=1,750) at schools indicate that 98% of them received albendazole tablet and 92% of these children who received the tablet reported to consume the tablets under supervision of teachers. This indicates that despite challenges in reporting and documentation of NDD coverage data, majority of the children present on NDD or mop-up day consumed the albendazole tablet on either on NDD or mop-up day.

The state government reported 97% coverage in school and 95% for 1-5 years registered children in *anganwadis*. Through coverage validation, attempts were made to understand the maximum number of children that could have been dewormed in the schools and *anganwadis*. We estimated NDD treatment coverage in schools considering maximum attendance of children on NDD and mop-up day. Coverage validation data showed that 93% of schools conducted deworming on either NDD or mop-up day, maximum of 98% of children were in attendance, 98% of children received albendazole tablet out of which 92% reported to consume albendazole tablet under supervision. Taking these factors into account, 82% ($0.93 \times 0.98 \times 0.98 \times 0.92$) of enrolled children could have been dewormed in the schools. Since no child interview is conducted in *anganwadis*, we applied verification factor of 1-5 years registered children from coverage validation data on government reported coverage for the same category. Our estimate 104% (1.10×0.95) was closer to government reported coverage for registered children in *anganwadis* which depicts good quality of coverage reported data. The detailed tables with process monitoring results and coverage validations are attached herewith (Annexure E and F).

3.4 Trend of Key Indicators Over Round

To understand the changes in selected indicators from NDD February 2016 to NDD August 2017 round, indicators are presented in graphical form below. Figure 5 shows that percentage of headmaster/teachers attended NDD trainings has increased in August 2017 round (72%) from previous rounds but remains substantially low. The major reason attributed to this as per PMCV data is due to delay in organizing lower cascade of NDD trainings and in communicating the PHC training dates and venue to the line department. However, training attendance has been stagnant for *anganwadis* during February and August 2017 round (83%). To maximize the attendance in trainings, timely communication to be issued by DM&HO to line departments about training dates and venue well in advance to further inform front line functionaries. It is crucial that all PHC-level trainings are completed as per the pre-determined schedules and complete at least ten days prior to NDD leaving sufficient time for the teachers to train other teachers at the schools and for teachers and *anganwadi* teachers to mobilize community and spread awareness on the program. State to make stringent review and follow up of districts for ensuring the same.

Figure 5: Comparison of training indicators for school/*anganwadi* February 2016 and August 2017 round

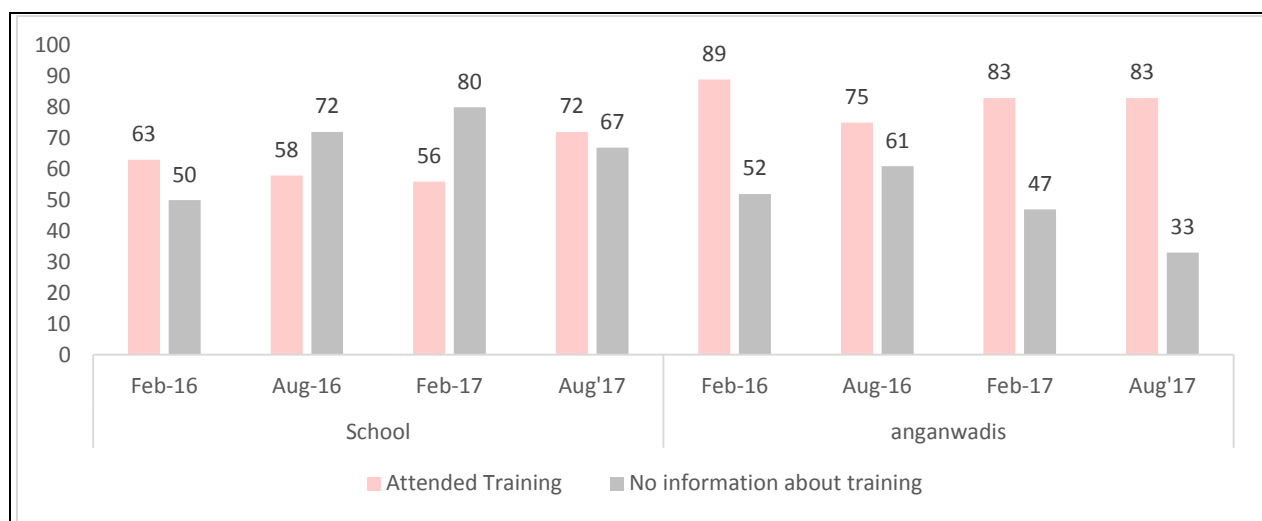


Figure 6: Comparison of key indicators in Schools during February 2016 and August 2017 round

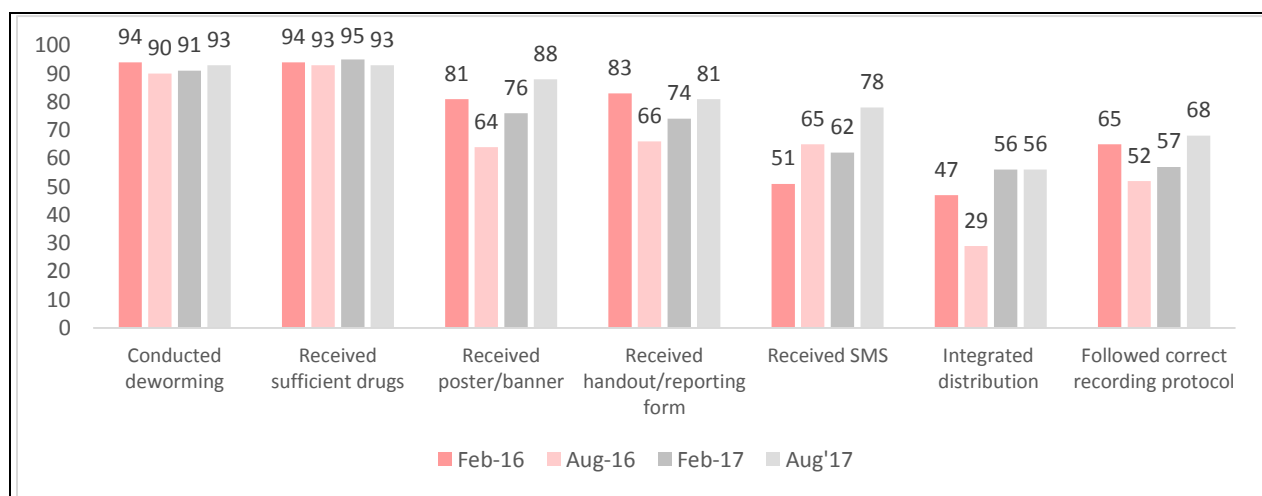
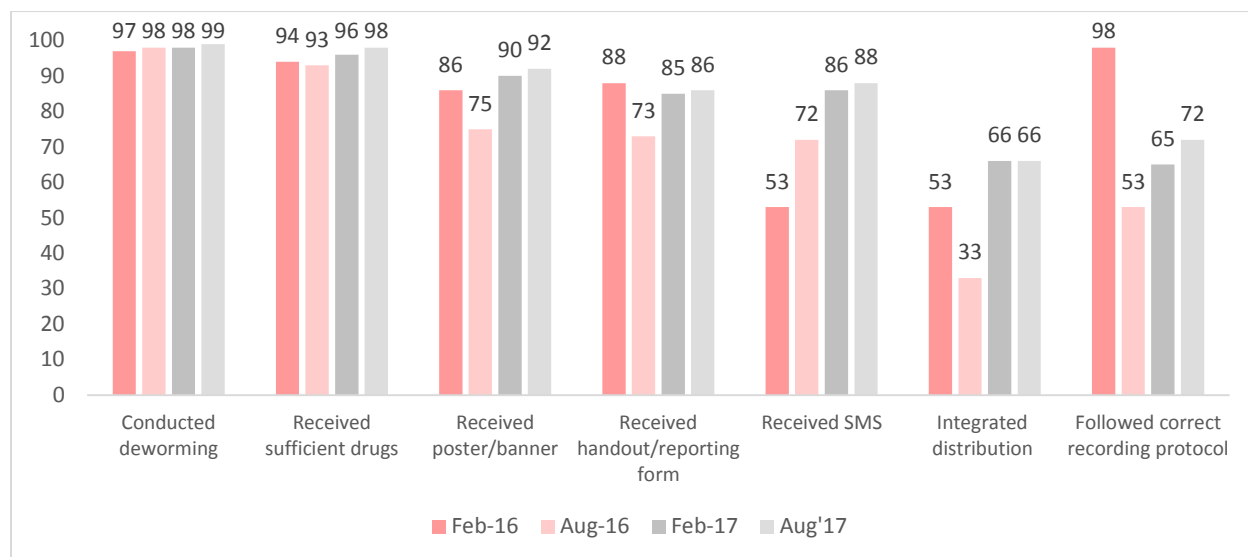


Figure 6 and 7 presents trend in selected indicators during February 2016 to August 2017 for schools and *anganwadis* respectively. Both the figures depicts that indicators like NDD implementation and drug sufficiency remain high as more than 90% across various NDD rounds in the state. During February 2017 to August 2017 round, the percentage of schools that received poster/banner and handout/reporting form increased by 12 percentage points and 7 percentage point respectively. The integrated distribution has been stagnant for both schools and *anganwadis* from NDD February 2017 to NDD August 2017 i.e. 56% and 66% respectively which is significantly low. This could be due to gaps in drug, IEC bundling and distribution at district and beyond.

While the percentage of schools that received, SMS increased by 16 percentage points, the percentage of *anganwadis* received SMS has increased only by 2% in the state. Though training reinforcement SMS were sent for alerting training dates for district division and PHC-level stakeholders, however, contact database continues to be challenge impacting the overall delivery of the SMS to the teachers, *anganwadis*. This is still not optimum which indicates gap in updated contact databases. Although percentage of schools and *anganwadis*

that followed correct recording protocol increased from the previous round, it is overall level still quite low. This could be partly attributed due to delayed and rushed district-level trainings that impacted the quality of sessions in training at PHC level as well.

Figure 7: Trend of Key Indicators in Anganwadis During February 2016 and August 2017



4. Recommendations

It is critical to conduct consistent high coverage program in all 31 districts of the state in each round to bring down worm prevalence and slow the reinfection rates. Therefore, continued and consistent efforts need to be made towards high-quality program twice a year as mandated. Reaching out to the last child will be crucial to bring impact.

1. Findings from process monitoring suggests, participation of school during training is less than 75%, which hampers distribution of drugs, IEC and training material in the NDD kit and their subsequent availability at school. To improve the gap observed timely communication to be shared by DM&HO to line departments about training dates and venue well in advance to frontline functionaries. This can be incorporated in program directives and through reinforcement messages from the state.
2. PHC-level training to be implemented as per the pre-determined schedules and complete at least ten days prior to NDD leaving sufficient time for intensive community mobilization activities as per plan. State to make stringent review and follow up of districts for ensuring the same.
3. For a high quality program, setting targets as per census and reporting coverage against the targets set prior to the NDD round is important. Undermining (or reducing) targets reflects a false picture of the coverage with the reduced targets. This need to be taken into consideration with all future NDD rounds through engagement with stakeholder departments across all levels.
4. State has mitigated the challenge faced in the previous round regarding the transportation of Drug and IEC material to districts by issuing directive and allocating *RBSK* vehicles for all other NDD activities. It is recommended to continue this as a best practice in upcoming rounds to ensure a high-quality program implementation.
5. Findings from process monitoring and coverage validation indicate scope for improvement in engagement of ASHAs in the community mobilization and listing of

unregistered and out-of-school children. It is recommended that a state-level directive from ASHA resource cell to PHC MO for timely engagement and efforts of ASHA for community mobilization including information on incentive. ASHA orientation on the NDD program and its benefits are to be initiated in advance so that they include appropriate messaging during home visits, mother meetings and other health education efforts.

6. Trends regarding following recording protocol from previous rounds to August 2017 shows an increase in schools and *anganwadis*, however this continues to be significantly low. This could improve in upcoming rounds, by ensuring quality and timely completion of trainings at all levels. In addition, placing appropriate emphasis on recording protocols during trainings is likely to improve the quality of coverage data in next round NDD.

5. Annexure

Annexure A	District and PHC-wise Drug Bundling Plan
Annexure B	Drug Recall Letter
Annexure C	Training Quality report on Pre-Post Test and training monitoring assessment
Annexure D	Note on Monitoring visit on NDD and mop-up day
Annexure E	Process Monitoring Tables
Annexure F	Coverage Validation Tables

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