

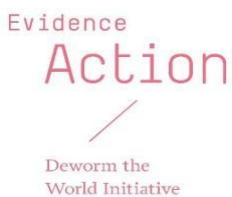


Telangana

National Deworming Day
February 2017



Photo Credit: Evidence Action



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ACRONYMS

ASHA:	Accredited Social Health Activist
AWC:	<i>Anganwadi</i> Centre
AWW:	<i>Anganwadi</i> Worker
CIFF:	Children's Investment Fund Foundation
DoE:	Department of Education
DC:	District Coordinator
DM&HO:	District Medical & Health Officer
DQA:	Data Quality Assessment
WD&CW:	Women Development and Child Welfare
GoI:	Government of India
Govt:	Government
ICDS:	Integrated Child Development Services
IEC:	Information, Education and Communication
IVR:	Interactive Voice Response
MEO:	Mandal Education officer
NHM:	National Health Mission
NDD:	National Deworming Day
NHM:	National Health Mission
PHC:	Primary Health Centre
PIP:	Program Implementation Plan
PMCV:	Process Monitoring and Coverage Validation
RBSK:	<i>Rashtriya Bal Swasthya Karyakram</i>
RCs:	Regional Coordinators
DCs:	District Coordinators
STH:	Soil Transmitted Helminths
TS:	Telangana State
TC:	Tele-caller
UTs:	Union Territories
WHO:	World Health Organization

Executive Summary

Contributing to the Government of India's National Deworming Day (NDD) initiative, the state of Telangana implemented the third round of NDD on February 10, 2017 followed by mop-up day on February 15, 2017. In this round, the state dewormed 89,75,022 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 key technical assistance to the program, through funding support received from the Children's Investment Fund Foundation (CIFF) and Dubai Cares.

Table 1: Key Achievements of National Deworming Day February 2017¹

Indicators		Census Targets	Program Target ²	Targets as per Coverage report ³	Coverage
Number of schools reporting coverage		Not applicable	41,053	39,077	38,549
Number of <i>anganwadis</i> reporting coverage		Not applicable	33,443	34,910	34,884
Number of enrolled children (classes 1-12) who were administered albendazole on NDD and mop-up day	Govt. schools	38,30,680 ⁴	28,47,069	33,30,740	32,53,831
	Private Schools	42,29,810	37,42,276	37,58,874	36,54,862
Number of registered children dewormed (1-5 years) at AWCs on NDD and mop-up day		21,97,100	17,27,636	15,35,588	14,42,097
Number of unregistered children dewormed (1-5 years) at AWCs on NDD and mop-up day		8,23,000	1,62,887	2,01,477	1,89,127
Number of out-of-school children dewormed on NDD and mop-up day		9,91,198 ⁵	9,58,189	4,50,935	4,35,105
Total number of children dewormed (1-19 years)		1,20,97,588	94,38,057	92,77,614	89,75,022

*Source: Report submitted by National Health Mission, Telangana State to Government of India (Annexure A)

Evidence Action provided comprehensive technical assistance for the effective implementation of NDD in February 2017, at both the state and national-level. At the national-level, 34 states conducted NDD in February 2017, targeting 340 million children. At the state-level, in Telangana, learnings from the previous round/s were incorporated to guide program implementation including strategies for increased program coverage such as focus on

¹Based on the report submitted by National Health Mission TS to Government of India on March 20, 2017

² Targets finalized prior to NDD during SCCM

³ Program Targets based on Coverage report

⁴ Data of schools and enrolment is as per DISE 2015-16

⁵ Data for Out-of-School is based on reported coverage from districts in NDD Feb 2016 NDD

setting the program targets as per the Census data, enhanced inclusion and strengthening of private schools including religious institutions⁶ and quality monitoring of trainings.

Program Background

1.1 Benefits of deworming

A large body of rigorous scientific evidence from around the world provides a strong rationale for mass deworming⁷ for STH control programs. Using existing platforms of schools and pre-schools for mass deworming is a cost-effective way to reach high coverage in children. Worm infections pose a serious threat to children’s health, education, and productivity. Some of the benefits of deworming are shown below in Figure 1⁸.

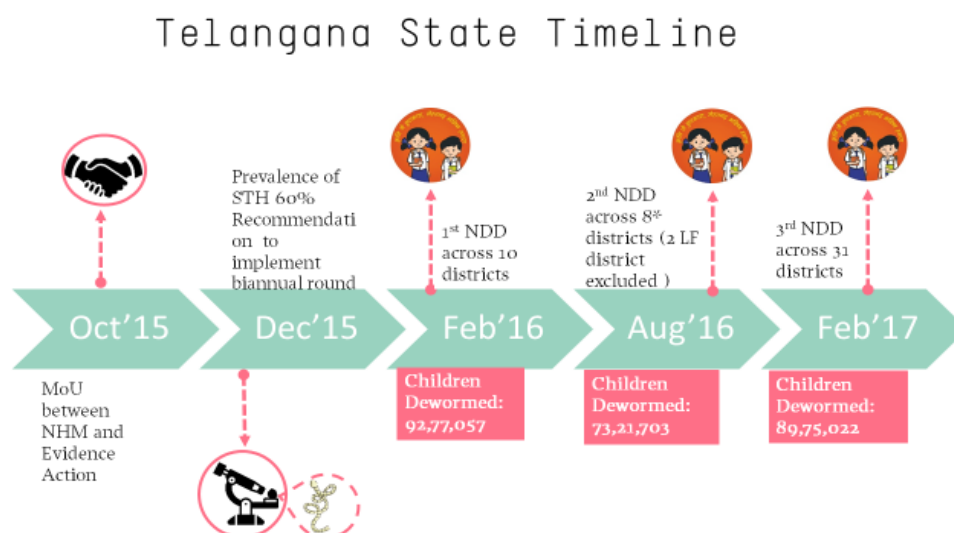
Figure 1: Benefits of deworming



1.2 State Program Background

School and *anganwadi*-based NDD program in Telangana is being implemented in the state since February 2016, with the state following GoI’s NDD operational guidelines. Below find the key milestones achieved under the program.

Figure 2: Telangana deworming program milestones



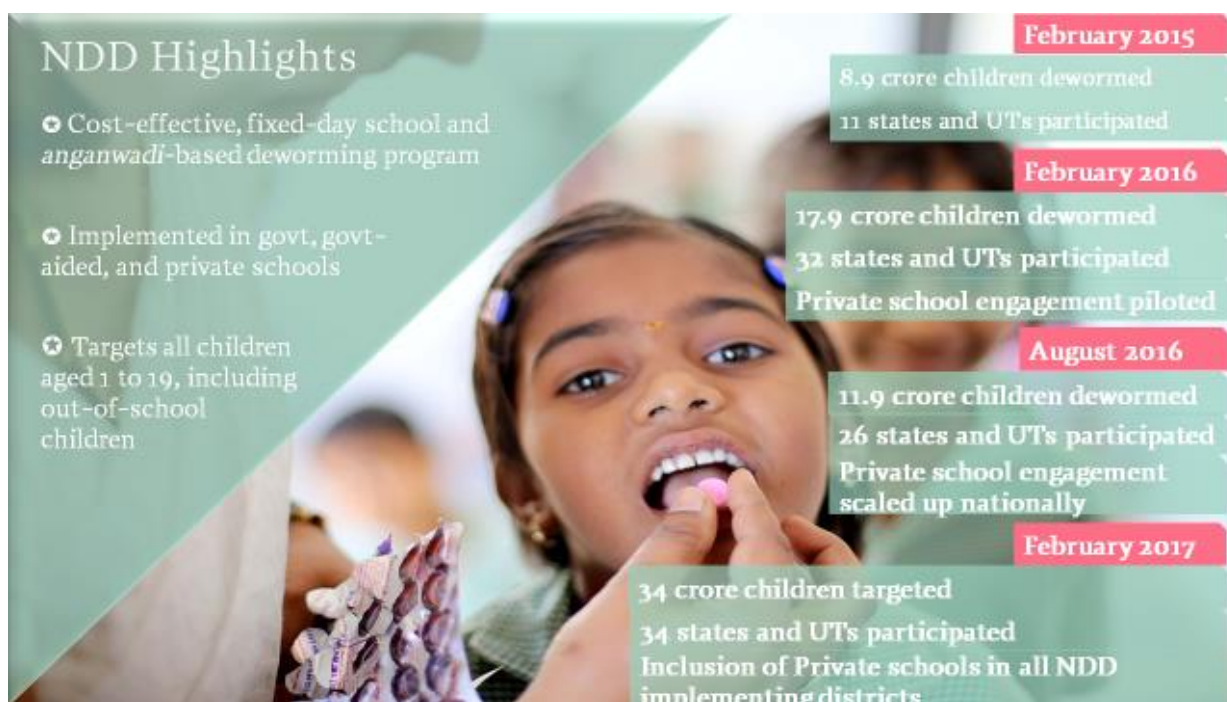
⁶ 377 Madrasas, 275 Catholic schools and 204 unregistered schools

⁷ <http://www.povertyactionlab.org/publication/deworming-best-buy-development>

⁸ “Helminth control in school-age children- A guide for managers of control programmes”: WHO, 2011

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 achieved high coverage at large scale since its inception. Based on national-level STH mapping, as well as WHO treatment guidelines, the GoI issued a notification to states recommending appropriate treatment frequency based on prevalence data. The state of Telangana is required to conduct bi-annual deworming due to high prevalence of 60%.

3. State Program Implementation

3.1 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 Departments of Education and WD&CW, to achieve program goals through timely planning and implementation. Some of the key highlights of inter-departmental collaboration is displayed in Figure 4 (given on the next page).

Figure 4: Efforts towards Stakeholder collaboration

22 December State Task-Force meeting	23 December, National review meeting, Delhi	31 December, State-level joint directives	District Coordination Committee Meetings	8 February, State video conference with districts
<ul style="list-style-type: none"> - Meeting under the chairmanship of Principal Secretary-Health - Decision on NDD date, drug procurement, participation of Private schools - IEC assessment findings shared to increase commitment for community mobilization 	<ul style="list-style-type: none"> -Review of NDD preparations across States - Assessment of state's preparedness for Feb round 	<ul style="list-style-type: none"> -State-level Joint Directives signed by Principal Secretary - Health, Special Chief Secretary - Education and Secretary WD&CW issued to all districts 	<ul style="list-style-type: none"> -Meetings conducted in all 31 districts under the chairmanship of District Collectors -Participation of all stakeholder departments, private school association 	<ul style="list-style-type: none"> -To assess drug availability status and other preparations including adverse event management - All children in Private school and Junior colleges to be covered

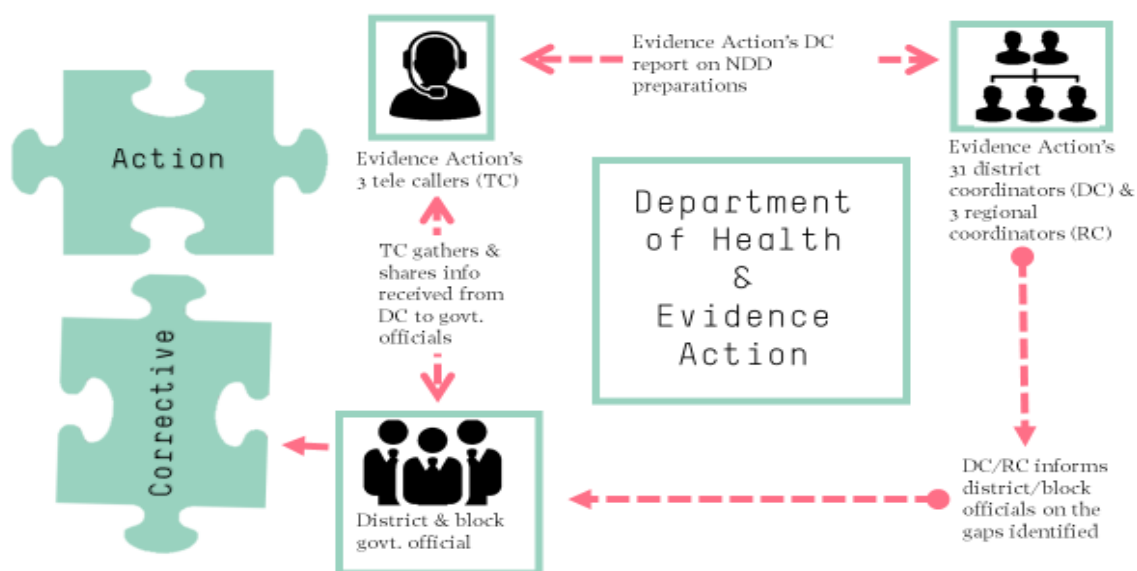
Keeping in view the learning from NDD 2016 rounds, and scaling up the program across the country, the MoHFW organized a national-level **video conference** under the chairmanship of Joint Secretary on February 2, 2017 with participation from states and union territories. The platform was used for sharing strategies, action plans and bridging identified gaps for NDD February 2017 round. Prior to this, the state taskforce meeting was held on December 22, 2017, under the chairmanship of Principal Secretary-Health with participation from key stakeholders to review NDD preparedness and address gaps and concern areas if any. Key decisions were taken for reaching out-of-school children, timely transportation of drugs to district, engagement of ASHAs, teachers, and AWWs for NDD, engagement of private school's management, and participation of private school's association in state and district-level meetings. State-level Joint Directives signed by Principal Secretary - Health, Special Chief Secretary - Education and Secretary WD & CW were issued to all districts on December 31, 2016. Steps were suggested to strengthen coordination amongst the stakeholder departments. District review meeting was held on February 4, 2017, under the chairmanship of Commissioner Health and Family welfare for review of NDD planning and implementation. The meeting was attended by all the District Medical Health Officers and District Information Officers. A state-level video conference was held on February 8, 2017 which was attended by district nodal officials. Key discussion was held to ensure that District Health Officials upload the NDD coverage report on the NDD Web/mobile application correctly and share timely with the ministry. Further, to effectively orient the officials on the program protocols, Department of Health designated nodal officers (DM&HOs) in each participating district were called for a state-level meeting on February 8 which was jointly led by the Department of Health and Evidence action. Increased engagement and ownership by district administration in the planning and implementation of the NDD was demonstrated through District Coordination Committee Meetings held across 31 districts, with most of these meetings chaired by the District Collector. The state referred to the NDD 2016-17 financial guidelines for implementation of NDD activities and budget planning for NDD 2017-2018.

As part of NDD preparations, Evidence Action worked with the state and adapted operational guidelines for the state, defined timelines along with roles of concerned stakeholders for effective program planning and implementation.

3.2 Program Management

Evidence Action’s technical assistance was extended through a four-membered state team, field-based regional coordinators and short-term hires for three and four months such as 31 district coordinators and three tele-callers respectively. Teams were trained on program strategy and components to build a common understanding to enable effective delivery of outputs. 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, training etc. The updates gathered through calls was shared on a daily basis with the NHM to allow necessary actions across all program activities. Figure 5 gives an overview of the information flow between the Evidence Action team and district and division-level officials.

Figure 5: Evidence Action’s facilitates corrective action



3.3 Drug Procurement, Storage and Transportation

a) **Drug Procurement:** The state procured approximately 79,56,825 albendazole (400mg) tablets and utilized prior stock of 22,81,495 albendazole tablets in the February, 2017 round. However, timely drug procurement order for albendazole (400mg) was a challenge as the order got delayed by one month due to delay in payments released to TSMSIDC of previous round the drug procurement was placed in the last week of November, 2016 which impacted the quality and timelines of all other program activities. Before distribution, a sample of newly procured drugs were tested in state-approved laboratories to assure quality and safety. Moving forward, the state must place the procurement order at least three months in advance of the NDD round in order for timely drug bundling and distribution from district to lowest level of the cascade.

b) Drug Logistics and Distribution: The Department of Health managed the entire drug logistics and distribution till the PHC-level, with Evidence Action developing the district and block-wise drug bundling and distribution plan to streamline distribution of tablets to schools and *anganwadis* (**Annexure B.1**). This was approved and utilized further by the state. To align drug distribution with division-level training 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. The regional coordinators and district coordinators played a key role coordinating with the respective departments for integrated distribution at trainings. Prior to the drug distribution at division-level, Department of Health ensured bundling of NDD kits that included drugs and all program materials such as IEC materials, training handouts and reporting forms. The NDD kits were distributed to health functionaries at the district-level for onward distribution to Department of Education and WD&CW functionaries at the division-level training. The drug distribution at PHC-level was delayed by almost one month and was completed in the last few days before the NDD, i.e., Feb 7, 2017. Kamareddy, Bhupalpalli and Hyderabad were the only three districts that delayed the PHC-level drug distribution on Feb 7,2017 due to unavailability of vehicle for transportation of drugs. Rest of the districts completed drug distribution prior to PHC level trainings i.e. before Feb 5,2017.

c) Adverse Event Management: The state adapted the adverse event management protocol from NDD operational guidelines and set up an adverse event management system engaging *Rashtriya Bal Swasthya Karyakram (RBSK)*⁹ teams, to effectively manage any adverse events in the field. Additionally, emergency helpline number (104) was put on alert to facilitate appropriate emergency response action by coordinating medical assistance from the nearest primary health centre (**Annexure B.2**). Evidence Action provided training to 104 helpline team members for preparation to respond to any during adverse events on NDD and mop-up day. In addition, all district medical officials were sensitized at state-level meeting to handle and report adverse events. The protocol and reporting format on adverse event were circulated at the cluster trainings to ensure reporting of severe adverse event cases. No severe adverse events were reported in the NDD February 2017 round.

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

Table 2: Drug Recall status in the state

Total sealed boxes left (each box consisted 500 Albendazole tablets)	1,463
Loose albendazole tablets left	7175
Total albendazole tablets left	7,38,675

3.4 Public Awareness and Community Sensitization

The state adapted the NDD resource kit developed by Evidence Action for the GoI. The Department of Health at the state displayed all IEC and training material on their website¹⁰.

⁹ RBSK) is an important initiative aiming at early identification and early intervention for children from birth to 18 years to cover 4 'D's viz. Defects at birth, Deficiencies, Diseases, Development delays including disability.

¹⁰ <http://chfw.telangana.gov.in/getInfo.do>

IEC materials in the kit were designed to increase community awareness on the benefits of deworming, and were disseminated based on the plan and target audiences specified by the NDD operational guidelines. The Department of Health printed posters for display at schools and *anganwadis*. This was felt essential as sensitization of children and families help in increasing attendance and turnout of children in schools and *anganwadis* on NDD leading to greater program coverage.

92,500 posters and 92,000 banners were printed for display at schools, *anganwadis* and PHCs. About 1,49,500 FAQs were printed for reference to all stakeholders. In addition, the state broadcasted mass and mid-media activities designed by Evidence Action and customized as per state context. This included TV spot, radio spot, TV talk show, TV scrolls, flash advertisement on local TV channels, radio jingles, dandora and newspaper advertisements. The details of the campaign are given in Figure 6. Further breakdown of awareness generation activities is annexed (Annexure D.1).

Figure 6: NDD 2017 new initiatives in Training and Community Mobilization



For additional visibility for the NDD program, Evidence Action piloted distribution of flyers with newspapers in Medchal district which was selected based on high number of private schools. 1.80 lakh flyers were inserted into Telugu and English language newspapers: *Eenadu*, *Sakshi*, *Andra Jyothi*, *Andra Prabha*, and *Deccan Chronicle*. The feedback received from district officials and other stakeholders on use of newspaper flyers was appreciated. However, the effectiveness remains to be captured.

For NDD February 2017 the MoHFW invested in rolling out an intensive communications campaign (Annexure D.2). Though, the Health department did not engage in any social media activity, the WD&CW department posted 5 times on their Facebook page on February 8 2017. These posts included infographics, testimonial videos, and a photograph, that Evidence Action had provided. Further, press sensitization was conducted at state and district-level during NDD. In addition, the NHM led the state-level inauguration and marked the launch of the program with wide coverage in the media. Simultaneously, district launch events were planned at schools. These public awareness efforts are essential for sensitization of community

members, including children and families, helps build certitude with deworming, alleviates worries related to adverse events, and leads to greater coverage.

In addition to state-level efforts, at the national-level, there was extensive engagement, with MoHFW spending over INR 5,65,56,800¹¹ nationally for the NDD mass media campaign. For a campaign-based program, it is crucial that all stakeholders leverage the platforms at their end for enhanced community awareness and greater program impact.

In order to continue to improve awareness and community mobilization activities in each round, Evidence Action carried out a NDD communications campaign assessment from May to August 2016. The assessment conducted in Bihar, Telangana and Maharashtra was designed to understand how target groups perceived the various components of the campaign.

In Telangana the assessment was conducted in Mahbubnagar and Nizamabad districts with school-going and out-of-school children; functionaries; parents; and government officials. The findings from the assessment in the state indicates a need to roll out a more robust campaign, run over certain period of time consistently over each NDD round to increase overall awareness on the benefits of deworming and boost program coverage.

Findings and recommendations were presented at the National Review Meeting in December 2016, and with the state-level stakeholders during the State Taskforce Committee Meeting. Moving forward, the state must refer to these findings to design for an effective campaign and effective use of resources in future rounds.

The salient findings of the assessment from the state revealed that the overall recall of NDD communication campaign was found to be low:

1. Overall, recall of NDD communication campaigns is found to be low (9%).
2. Of those who recalled, community members and school-going children shared that the campaign was informative.
3. 94% of out-of-school children had not heard of the campaign at all.
4. Mass media (TV, radio, newspaper) did not get any recall, but qualitative findings show respondents find mass media platforms to be highly effective source of information

Recommendations to strengthen campaign in next round:

1. Media – Mix to be designed to reach different target groups and communities
2. Community Mobilization campaign needs to start at least a month before NDD to sensitize the community about the program well in advance.
3. Continued investment in IEC campaign necessary in order to improve awareness and recall over time as it has been observed that recall increases over several rounds.
4. Intensive and sustained mass media efforts are recommended to better reach out to untapped groups, such as out-of-school children.
5. Understanding of the role of field functionaries in community mobilization should be boosted.
6. Campaign needs to be customized to reach out-of-school and private school children.

¹¹ DD national relayed the NDD 30 second spot eight times a day from February 6, 2017 to February 13, 2017. The 30 second TV spot was aired on DD Raipur, six times a day from February 6, 2017 to February 13, 2017. The 30 sec radio spot was aired on My FM 94.3, a private radio channel, 15 times a day for 10 days. Prasar Bharti also relayed the 30 sec radio spot, 3 times a day, for 8 days from February 6, 2017 to February 13, 2017.

3.5 Training Cascade

a) Training Cascade: The training cascade as per the NDD guidelines was implemented from the state to all divisions including 126 clusters, and 536 PHCs between January, 15 and February 8, 2017. In the cascade, the state trained 26,321 teachers from government and government-aided schools, 8,489 private school teachers, 32,533 AWWs, and 26,039 ASHAs.¹² District and division-level officials from stakeholder departments were also trained for effective planning, implementation and monitoring of the program.

Evidence Action supported the state-level master trainers training conducted on December 19, 2017 with participation of Health department officials. Further preparations for organizing trainings at district, division and PHC-level were ensured and the cascade was conducted from Jan 19 to Feb 7, 2017 in 31 districts, 66 divisions and 702 PHCs. Since the supply of drugs at cluster and PHC-level was delayed, the PHC-level trainings were delayed 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 48,500 teacher handouts, 40,500 AWW handouts, and 21,500 ASHA leaflets (**Annexure E.1**). 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.

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 front line functionaries (ASHA, School teachers and *anganwadi* teachers) were sent one day prior to NDD for mass awareness generation as shown in the table below.

Table 2: Details on training reinforcement messages sent by Evidence Action and Stakeholder Departments for NDD February 2017

SMS sent by	Total SMSs sent	IVRs calls made (to frontline functionaries)
Evidence Action	13,85,419	97,339
Stakeholder Departments (Health, Education and WD&CW)	6,23,540	Not Applicable

d) Training Support and Quality Assurance: Pre-post-test administration at state-level and training monitoring checklist was administered across division and block-level trainings to supervise the quality of NDD trainings and provide real time inputs for improvements if any. Evidence Action's regional coordinators and district coordinators who attended the trainings provided supportive supervision to all 31 district-level trainings and 64 division trainings using the checklist. The purpose was to ascertain that key messages were covered (**Annexure E.2**). Following were the key findings and reinforcements undertaken:

¹² NDD coverage report submitted by state to GOI.

- Of 31 district trainings, participation of all three departments was observed in 28 districts. Limited participation from Education Department was observed in four districts namely Nalgonda, Jangoan, Rangareddy and Jagitayala.
- Participation of the teachers/head masters was significantly low in PHC-level trainings. The training quality assessment data revealed that total participants were 5052 in 75 PHC-level training among which only 23% (1147) were from Education department. The major gaps were identified in Nalgonda, Jangoan, Rangareddy and Jagitayala.
- The role of ASHA in mobilizing out-of-school children was not discussed at the training in Yadadri and Warangal rural. Adverse events were not discussed in detail so they were later reinforced through tele-calling and SMS.
- Significant delay in conducting PHC-level training cascade hampered the timely integrated distribution. Later, corrective actions were facilitated by the Collectors for timely distribution of drugs and IEC in those districts. Close co-ordination with the Department of Health led to wider dissemination of drugs and IEC materials.

4. Monitoring and Evaluation

Evidence Action places great emphasis on understanding the extent to which the schools, *anganwadis* as well as the health system is prepared to implement mass scale deworming through a fixed NDD approach. This includes assessing the extent to which processes are being followed, and the extent to which coverage has happened. As part of our technical assistance, we design, monitor and evaluate NDD round through robust monitoring systems to measure success of intended program objectives.

4.1 Process Monitoring

Evidence Action conducts process monitoring through telephone monitoring and cross verification, as well as 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 independent agency: Evidence Action with support from the Government of Telangana assessed the performance of the program through hiring of independent survey agency - Karvy Insights Ltd. The trained monitors observed program implementation on NDD and mop-up day. Process monitoring assessed the preparedness of schools, *anganwadis*, and health systems to implement NDD and the extent to which they have followed recommended protocols to ensure a high-quality program. Real time findings were shared with state government on the day of visits to enable immediate corrective actions.

For process monitoring, a total of 252 randomly selected schools (government and private schools) and 248 *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, 390 visits were made by Evidence Action national, state and field team of District coordinators at government schools, private schools and *anganwadis* on NDD and mop-up day. The detail note is placed in (Annexure F).

Snapshot of M&E activities	
I. Telephone Monitoring and Cross Verification	
<ul style="list-style-type: none"> • Tele-calling conducted across 66 divisions in 31 districts of the state • 11,373 successful calls made during December,2016–March, 2017 • 3,375 calls to health functionaries including district and division-level officials and ANMs • 3,913 calls to WD&CW department (district, division-level officials, Lady Supervisor, and AWW) • 4,085 calls to education department (district, division-level officials, government and private schools) 	
II. Training Quality Assessment	
<ul style="list-style-type: none"> • Pre-post test was administered during master trainer's training at state-level • A total of 31 districts, 23 divisional and 69 PHC's level training quality assessment was done using standard format 	
III. Field Monitoring Visits	
<ul style="list-style-type: none"> • Total 390 monitoring visits by Evidence Action staff were made in selected schools and <i>anganwadis</i> • NDD monitoring checklist given in NDD implementation 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 & mop-up day • 125 trained independent monitors from an independent survey agency, visited 252 schools and 248 <i>anganwadis</i> • Data was collected electronically using Tablet PC (CAPI) as per the 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 February 21-28, 2017 • 125 trained independent monitors from an independent survey agency, visited 625 schools and 625 <i>anganwadis</i> 	

4.2 Assessing treatment coverage

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

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/webpage.

As per the coverage report 89,75,022 children were dewormed against a target of 92,77,614. While reporting coverage, the state revised its target from 1,20,97,588 (determined prior to the NDD round) to 92,77,614 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 census. Another deviation observed is in the category of out-of-school children which was reduced by 5,40,263 children from its target of 9,91,198 to 4,50,935 children. Similar deviation is also observed in coverage of enrolled children at the *anganwadi* centres. Such revisions to the target must be avoided for future rounds through greater coordination with the Department of WD& CW for providing listing of out-of-school children to maximize efforts for greater outreach to out-of-school children on NDD and

mop-up day (**Annexure G**). 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.

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 from three randomly selected classes in each of 625 sampled schools visited. Additional data was 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.

4.3 Key Findings

Process Monitoring findings highlight that 56% schools and 83% *anganwadis* received training for the recent round of NDD and around 88% of schools and 98% of *anganwadis* conducted deworming either on NDD or mop-up day. Findings from coverage validation also reflect that 91% of schools and 98% of *anganwadis* dewormed children during NDD or mop-up day.

Of the total schools and *anganwadis* visited around 76% of schools and 90% of *anganwadis* received NDD posters/banners. However, integrated distribution of NDD kits¹ was found to be (56%) in schools and *anganwadis* (66%). Around 62% of schools and 86% *anganwadis* received training reinforcement messages through SMS. Awareness on the causes of worm infection (**Annexure H-Table 1**), possible adverse events, and adverse event management practices (**Annexure H-Table 5**) were high among teachers and *anganwadi* workers. Nevertheless, only 40% of teachers and 44% of *anganwadi* workers 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* workers were aware about processes for management of adverse events like laying down the child in open/shaded place or giving ORS/water.

Around 34% of sampled private schools (N=73) attended training for NDD. Out of total private schools visited, 63% received albendazole tablets, 48% received a banner/poster, and 47% 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 40% of private school teachers/headmasters.

Table 9: Key Findings from Process Monitoring and Coverage Validation

Indicator	School		<i>Anganwadi</i>	
	(%)	N	(%)	N
Received SMS for current NDD round	62	252	86	248
Attended training for NDD	56	252	83	248

Integrated Distribution of albendazole tablets and IEC materials ¹³	56	252	66	248
Schools/ <i>anganwadis</i> conducting deworming	88	625	98	625
Children consumed tablet	99	1608	Not Applicable	Not Applicable
Followed correct recording protocol ¹⁴	56	567	65	610
Copy of reporting form was available for verification	50	567	44	610
State-Level verification factor ¹⁵	58	49878	76	18239
State-Level inflation rate ¹⁶	73	28750	31	13892
Estimated NDD coverage based on verification factor	56	-	71	-
Estimated NDD coverage based on school attendance	73	-	Not Applicable	Not Applicable

Findings from coverage validation: The data revealed that 56% of schools and 65% of *anganwadis* followed correct protocols for recording the number of children dewormed. However, around 35% of schools and 20% of *anganwadis* did not adhere to any recording protocol. A substantial proportion of *anganwadi* workers did not have a list of unregistered preschool-age children (64%) and out-of-school children (80%). Only 50% 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. In addition, the findings indicate high inflation (73%; verification factor of 0.58) for enrolled children against the treatment figures. Similarly, the state-level inflation rate was 74% (VF=0.36) for *anganwadi* registered children and 55% (VF=0.81) for out-of-school children. The high inflation rate indicates lack of proper documentation at schools and *anganwadi* centres of children dewormed. A deflation of 3% (VF=0.03) was observed for unregistered children at *anganwadi* centres indicating under reporting. Further, interviews with children indicate that 95% of them received deworming tablet, indicating that despite challenges in reporting and documentation of coverage data, majority of the children present on NDD or mop-up day consumed albendazole tablet.

Further, interviews of children (N=1,700) at schools indicate that 95% of them received albendazole tablet and 90% 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 94% 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*. Coverage validation findings suggest that on an average, we could verify only 58% of treatment figures reported by schools and 76% for *anganwadis*. Applying these verification factors to respective government reported coverage, it is estimated that 56% (58% of 97) children could have been dewormed in

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

¹⁴ Correct recording protocol includes schools where all the classes put single tick (✓) on NDD and double tick (✓✓) on mop-up day to record the information of dewormed children.

¹⁵ Ratio of recounted value of the dewormed children to the reported value. This calculation is based on only those schools (n=286) and *anganwadis* (n=267) where deworming was conducted and copy of reporting form was available for verification.

¹⁶ Proportion of over reported dewormed children against total verified children in schools and *anganwadis*.

the schools and 71% (76% of 94) in *anganwadis*.

Further, we have also estimated NDD treatment coverage in schools considering maximum attendance of children on NDD dates. Coverage validation data showed that 91% of schools conducted deworming on either NDD or mop-up day, maximum of 81% of children were in attendance, 95% of children received albendazole tablet and 90% of them reported to consume albendazole tablet under supervision. Taking these factors into account, 73% ($0.91 \times 0.94 \times 0.95 \times 0.90$) of enrolled children could have been dewormed in the schools. The detailed tables with process monitoring results and coverage validations are attached herewith (Annexure H and I).

4.4 Trend of key indicators over the round

To understand the changes in selected indicators from NDD February 2016 to NDD February 2017 round, indicators are presented in graphical form below. Figure 9 shows that percentage of headmaster/teachers attended NDD trainings remains low during both NDD August 2016 (59%) and NDD February 2017 (56%) round. The major reason attributed to this as per PMCV data is due to lack of effective communication on training dates and venue to the school teachers. However, training attendance has improved by nine percentage points for *anganwadi* during February 2017 round i.e. from 74% in Aug 2016 to 83% in Feb 2017. PHC-level trainings where teachers and *anganwadi* workers are trained were delayed in this round due to delayed drug availability and distribution. Though directives were released at block-level for these trainings, due to paucity of time (trainings completing a day before NDD), not all teachers/*anganwadis* could be trained, as also reflecting in the state coverage report. It is crucial that all PHC-level trainings are completed as per the pre-determined schedules and complete at a minimum of a week in advance to the NDD date (if delayed from training schedule) leaving sufficient time for the teachers to train other teachers at the schools and for teachers and *anganwadi* workers to mobilise community and spread awareness on the program.

Fig.9: Comparison of training indicators for school/*anganwadi* February 2016 and February 2017 round

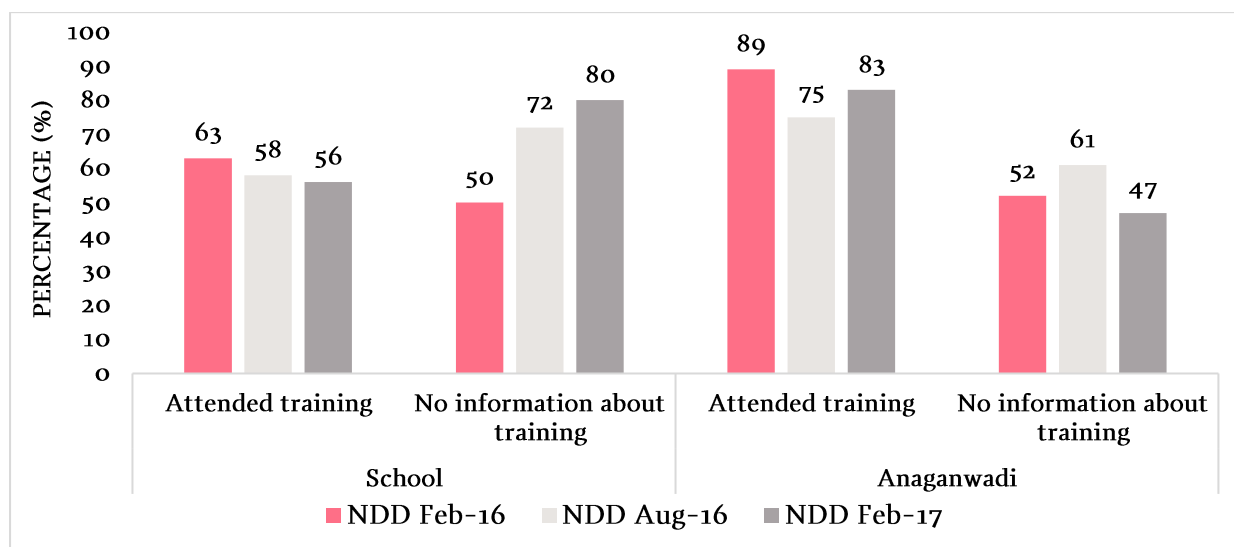


Fig 10: Comparison of key indicators in Schools during February 2016 and February 2017 round

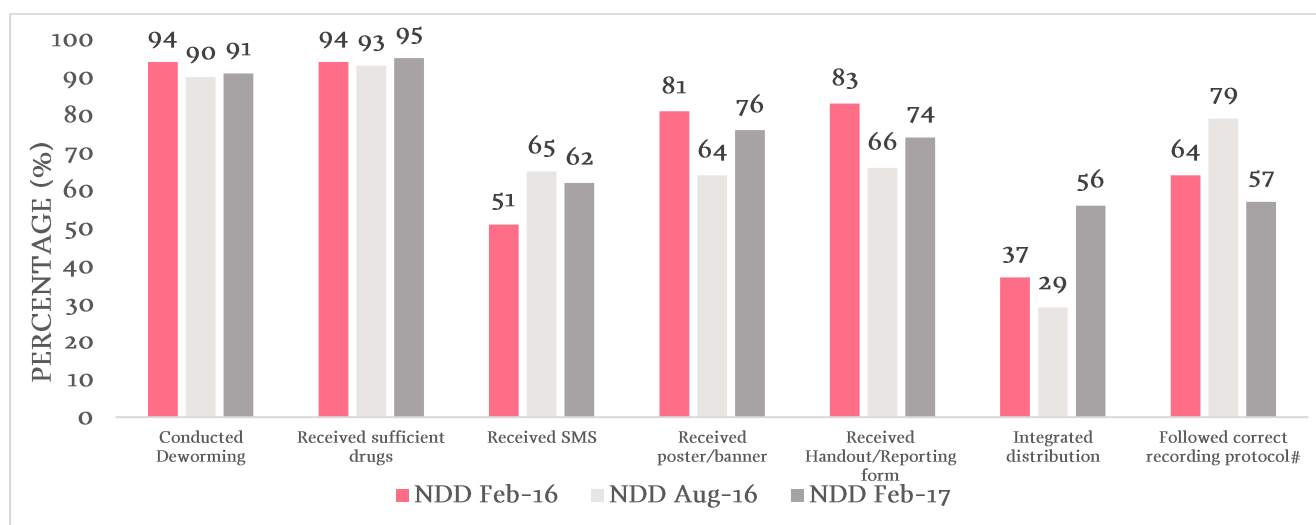
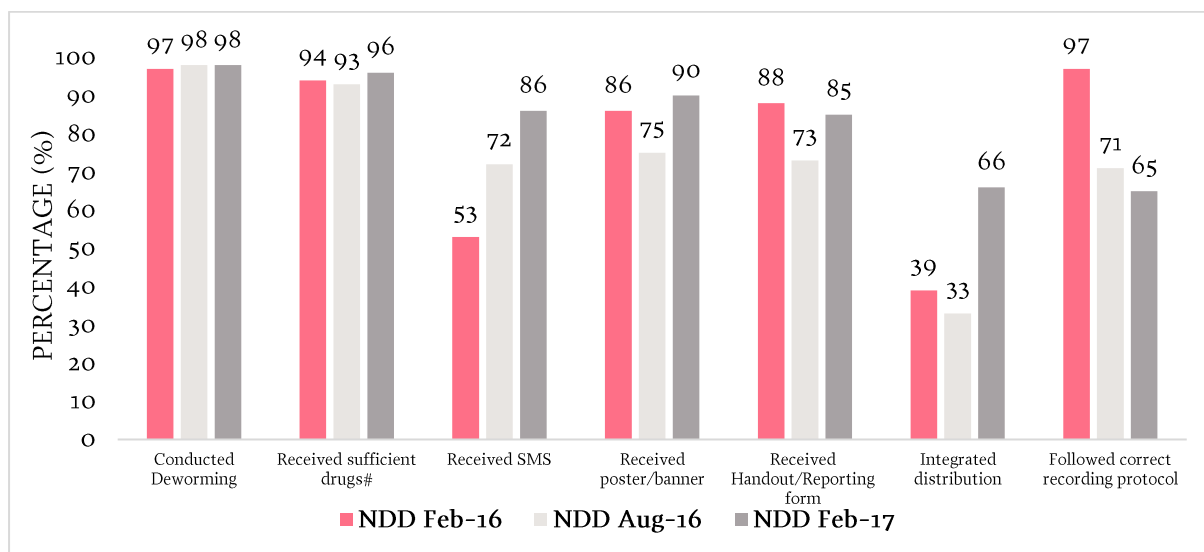


Figure 10 and 11 presents trend in selected indicators during February 2016 to February 2017 for schools and *anganwadis* respectively. Figure 11 depicts that indicators like NDD implementation and drug sufficiency remains as high as more than 90% across various NDD rounds in the state. The results for *anganwadis* are more or less similar to schools. During August, 2016 to February 2017, the percentage of schools that received poster/banner and handout/reporting form increased by 12 percentage points and 8 percentage points respectively. The respective increase for *anganwadis* was 15 and 12 percentage points. This might be attributed due to efforts put forth by NHM for printing additional copy of reporting format to be provided for all schools/*anganwadi* to ensure 100% retention of counterfoils of school/*anganwadi* reporting format. The integrated distribution almost doubled for both schools and *anganwadis* from NDD August 2016 to NDD February 2017. This increased trend could be due to strengthened efforts by NHM in timely printing of IEC and training materials. The integrated distribution was aligned with the cluster-level training to ensure greater availability of resources to schools and *anganwadi* for implementing quality program.

While the percentage of *anganwadis* that received, SMS increased by 14 percentage points, percentage of schools received SMS has declined from 65% to 62% 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 also evident from declining trend of SMS received (Figure 10 and 11), which indicates that update contact databases need to improve. 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 cluster-level trainings that impacted the quality of sessions.

Fig 11: Trend of key indicators in *anganwadis* during February 2016 and February 2017 round



5. Data Quality Assessment:

Process monitoring and coverage validation are conducted at service delivery points, while there is limited understanding of challenges on aspects such as data management, data aggregation, reporting and quality assurance at higher aggregation levels i.e. sub-centre/nodal, block and district. Evidence Action with approvals and participation from state government implemented the WHO Data Quality Assessment Tool to verify reported data, assess data management and reporting system for NDD program in the state in June-July 2016 jointly with Government stakeholders. The DQA recommendations suggest that reporting cascade as decided by the state Government was not followed at below district-level and there was less clarity in reporting of 6-19 years out-of-school and 1-5 years unregistered children among *anganwadi* workers. Further, lack of clarity was observed among *anganwadi* workers on reporting form, participation from private schools was poor in the training program. It is therefore important that due attention is given to the training cascade, the quality of information covered in these training sessions, reinforcements through SMS, directives, letters, video conferencing and review meetings including monitoring of trainings and program by government officials and partner organizations.

6. 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. The state must strengthen inter and intra departmental convergence with stakeholder departments as the success of the efforts will depend on how engaged, timely and active participation of stakeholder departments happen in each round.

1. 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 the targets) reflect 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.
2. Promote strengthening of private school engagement through participation of their representatives in state task force meeting at state, district-level coordination committee meetings, and special meetings called by district and Mandal¹⁷ education officers (MEO). Continued engagement of District Magistrate is suggested and this will help effective implementation on the program in private school and over participation of the schools in trainings, which further help to generate awareness and generate interest in private schools in next round NDD.
3. Efficient planning and timely drug procurement at least three months prior to NDD will ensure timely availability of drugs during PHC-level trainings to facilitate integrated distribution. Letters may be issued from the state to the districts for ensuring transportation and distribution of drugs within the stipulated timeline.
4. Integrated drug distribution can be strengthened by ensuring clear responsibilities are assigned for drug bundling at all levels, through a state-level directive. Also, necessary supervision at all level is required for ensuring adequate drug bundling and distribution in a timely manner.
5. Budgetary provision for drugs and IEC transportation is recommended in the State budget release order and district action plan to ensure timely reach of drugs and IEC to all the schools and *anganwadi*.
6. The contact database of functionaries by all stakeholder departments in the NDD program needs to be regularly updated to ensure information dissemination on the NDD program (and for other programs) is reaching the key audience in a timely manner to allow for action as needed. The updated contact database should be shared three months prior to the upcoming NDD round so that dissemination is managed with a common database.
7. Greater emphasis needs to be made on increasing coverage and accurate reporting of un registered and out-of-school children. There is an opportunity to do this by strengthening the role of ASHA in mobilizing these children and report the coverage accordingly. Ensure letter with clear instructions on ASHA engagement and their roles to be sent to all PHC MOs. State budget release orders to be shared along with instructions to DM&HOs on timely release of ASHA incentives. 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. Appropriate distribution of ASHA leaflets, ASHA reporting forms and community handbills to be ensured by the State.
8. Coverage Validation data suggests that a greater emphasis on recording protocols during the training is likely to improve the quality of coverage data in next round NDD. Specific SMS on correct recording and reporting protocol can be developed and shared widely for

¹⁷ Mandal is an administrative division for districts in Telangana state. Each mandal approximately has 40 habitations and about 8-10 mandals make one revenue division/cluster.

reinforcement.

9. As the program continues to be strengthened and systems of financing, procurement, trainings, community mobilization are streamlined, it is important to focus on prevention strategies more for all future NDD rounds. This can be ensured through face-to-face meetings with departments' like, *Swachh Bharat Abhiyan*. In addition, letter/directives may be issued from the NHM about NDD, benefits of deworming, importance of integration/synergies between NDD with WASH. This can result in wider impact collaboration with other key stakeholders.

7. Annexures

Annexure A	Report submitted by National Health mission (NHM) Telangana to Government of India
Annexure B.1	District and PHC-wise Drug Bundling Plan
Annexure B.2	Instructions to 104 to Handle Adverse Event
Annexure C	Drug Recall Letter
Annexure D.1	State-level Communications Campaign for National Deworming Day February 2017
Annexure D.2	National-level Communications Campaign for National Deworming Day February 2017
Annexure E.1	Training Material Printing plan
Annexure E.2	Training Quality Assessment Pre-Post Test
Annexure F	Note on Monitoring visit on NDD and mop-up day
Annexure G	Program Target set Prior to National Deworming Day
Annexure H	Process Monitoring Tables
Annexure I	Coverage Validation Tables