



Independent Monitoring of
National Deworming Day in Telangana
August 10, 2017

REPORT
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Process Monitoring and Coverage Validation

During each round of National Deworming Day (NDD), Evidence Action conducts process monitoring on NDD and mop-up day and post-NDD coverage validation through an independent survey agency to assess the planning, implementation, and quality of the program and to identify gaps and suggest recommendations for improvements in future NDD rounds. Process monitoring is conducted to understand government implementers' preparedness for NDD and their adherence to the program's prescribed processes, while coverage validation is an ex-post check of the accuracy of the reporting data and coverage estimates to verify government-reported treatment figures.

Methodology

Using a two-stage probability sampling procedure a total of 250 schools and 250 *anganwadis* were selected for monitoring visits during process monitoring on NDD and mop-up day, and 625 schools and 625 *anganwadis* were selected for coverage validation. Through a competitive review process, Evidence Action hired an independent survey agency to conduct monitoring activities approved by the government. Evidence Action designed and finalized survey tools with approvals from Telangana's Department of Health. One combined tool for process monitoring was used at schools and *anganwadis* on NDD and mop-up day, and one each for schools and *anganwadis* for coverage validation.

Implementation

Prior to a survey, Evidence Action conducted a one-day comprehensive training of master trainers of the agency. Master trainers then conducted a two-day training of 160 monitors (including buffer monitors) that included a brief orientation on NDD, the importance of independent monitoring, and details of the monitoring formats including CAPI practice, survey protocols and practical sessions. Each monitor was allotted one school and one *anganwadi* for process monitoring on NDD and mop-up day and subsequently, five schools and five *anganwadis* for coverage validation. Monitors were provided with a tablet computer, charger, printed copy of monitoring formats as backup, and albendazole tablets for demonstration during data collection. The details of sample schools were shared with monitors one day before the commencement of fieldwork to ensure that they did not contact schools and *anganwadis* in advance. Appropriate quality assurance measures were taken to ensure data collected was accurate, consistent and authenticated including that school and *anganwadi* staff were asked to sign a participation form with an official stamp to verify the visit. Further, monitors verified the photographs of schools and *anganwadis* collected during data collection and the CAPI process included authentication of the location of the interview. Evidence Action reviewed all the data sets and shared feedback to the agency for any inconsistencies observed. All analysis was performed using Stata version 13/14 and Microsoft Excel 2013.

Key Findings

Training

Prior to each NDD round, teachers and *anganwadi* workers receive training on processes and protocols of the program to ensure effective implementation of NDD, including integrated

distribution of drugs and IEC materials. Findings show that 72% of school teachers and 83% of *anganwadi* workers attended training for the August 2017 NDD round. The state government sent key reinforcement messages via SMS to key government officials and frontline functionaries in concerned stakeholder departments; 78% of school teachers and 88% of *anganwadi* workers reported that they received a SMS about NDD (Annex-Table PM1). This was a 16% improvement in schools compared to the previous round, and may have contributed to a 16% increase in the number of school representatives who attended NDD training compared to the previous round. There remains room for further improvement through advocacy efforts to update the SMS contact database.

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 schools¹ in the state via email to support school-level awareness generation efforts, which led to an improvement in the proportion of private school teachers who received training from 39% in the previous round to 73% in the August 2017 round. Among those who did not attend training, 67% of teachers/headmasters and 33% of *anganwadi* workers reported a lack of information about NDD training as the main reason for not attending. Further, 62% of trained teachers provided training to other teachers in their schools.

Integrated Distribution of NDD Kit Including Drugs

Despite the mandate from the NDD guidelines and a well-defined distribution plan, integrated distribution of the NDD kit was low for both schools (56%) and *anganwadis* (66%). Key indicators for schools and *anganwadis*, such as receiving posters/banners and handout/reporting forms increased in schools and remained the same in *anganwadis* compared to the previous round. Among schools, around 87% of private schools and 96% of government schools received sufficient quantities of tablets. Seventy-nine percent of private schools covered during process monitoring received posters/banners and 75% received handouts/reporting forms for NDD (Annex-Table PM7).

Source of Information about the Recent Round of NDD

SMS was the most reported mode of information in schools (60%) and *anganwadis* (70%) on NDD. Approx. half of the schools and *anganwadis* reported hearing about NDD via the banner and television (Annex-Table PM4). Use of social media as a medium also emerged as an effective source of information; 39% of schools and 18% of *anganwadis* received information from government circulated reinforcement messages via Whatsapp. The radio was the least reported source of information about NDD for this round; only 15% of schools and 18% of *anganwadis* reported hearing about NDD through the radio.

NDD Implementation

The proportion of schools and *anganwadis* that conducted NDD remained high during both rounds. The coverage validation data shows that around 93% of schools and 99% of

¹ The database for private school was collected through tele-calling supported by Evidence Action

anganwadis dewormed children during the August 2017 round on NDD or mop-up day (Annex-Table CV1). Out of the 229 schools and 245 *anganwadis* that reported implementing NDD, monitors were able to observe deworming activities in 98% of schools and 97% of *anganwadis* respectively (Annex-Table PM5).

Adverse Events - Knowledge and Management

A high level of awareness regarding potential adverse events due to deworming was observed among all the headmaster/teacher and AWWs interviewed, however, a knowledge gap was observed on the appropriate protocols to follow in the case of such events. Mild abdominal pain was listed as a side effect by 84% of headmasters/teachers followed by vomiting (83%). Further, 71% of teachers and 76% of *anganwadi* workers knew to make a child lie down in an open, shaded place in the case of any symptoms of adverse events. Sixty-two percent of schools and 61% of *anganwadis* knew to manage an adverse event by giving ORS/water to the children and keeping them under observation for at least two hours at schools/*anganwadis*. Further, 84% of schools and *anganwadis* reported the need to call a PHC doctor if symptoms persisted (Annex-Table PM6).

Recording Protocol

Coverage validation data revealed that 68% of schools and 72% of *anganwadis* followed the correct recording protocols. Additionally, around 13% of schools and 10% of *anganwadis* followed partial protocols (marking down different symbols or making a list of dewormed children), however, 18% of schools and *anganwadis* did not follow any protocol to record the number of dewormed children (Annex-Table CV3). As recommended in the NDD guidelines, teachers and *anganwadi* workers were supposed to retain a copy of reporting forms; however, 14% of headmasters and 10% of *anganwadi* workers were not aware of this requirement (Annex-Table PM2). Further, it was observed that reporting forms were available in only 46% of schools and 44% of *anganwadis*.

ASHAs were required to prepare a list of children not attending schools and *anganwadis* and submit it to *anganwadi* workers, as recommended in the NDD guidelines. However, findings suggest that lists of out-of-school (6-19 years) and unregistered (1-5 years) children were not available for 75% and 63% of *anganwadis* respectively (Annex-Table CV1). These figures do not corroborate with information shared by ASHAs, as 64% of the 287 ASHAs present at *anganwadis* at the time of the survey reported having prepared the list of unregistered and out-of-school children and 82% of the ASHAs compiling the lists reported to share them with the *anganwadi* workers. Moreover, 75% of ASHAs reported to conduct meetings with parents to inform them about NDD, and 92% reported to administer albendazole to children during NDD.

Coverage Validation

Verification factors² are common indicators to measure the accuracy of reported treatment values for Neglected Tropical Disease control programs.³ These factors also give an idea about

²A verification factor of 1 means the schools reported the exact same figures that they recorded on deworming day. A verification factor less than 1 indicates over-reporting, while a verification factor greater than 1 indicates under-reporting.

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

record keeping and data management at the service delivery point. The verification factor was estimated based on the availability of a copy of reporting forms at schools and *anganwadis*. The state-level verification factor for enrolled school children was 0.64, indicating that on average, for every 100 dewormed children reported by the school, 64 were verified through available documents. The overall state-level verification factor for children dewormed at *anganwadis* was 1.2, indicating under-reporting of children dewormed by *anganwadis*. This figure encompasses category-wise verification factors for registered (1-5 years), unregistered (1-5 years) and out-of-school (6-19 years) children 1.1, 1.47, and 1.37 respectively (Annex-Table CV2). Findings clearly indicate a lack of proper record management at schools and consequently over reporting of dewormed children at the school level. Although the overall *anganwadi* verification factor shows better reporting of all target groups, proper record keeping and reporting is a challenge for unregistered and out-of-school children. Despite challenges in reporting and documentation of NDD coverage data, it is evident from children's interview that majority of the children present at schools on NDD or mop-up day received (98%) and consumed (92%) the albendazole tablet on either NDD or mop-up day, based on child interviews.

Against the state government reported 97% coverage in schools and 95% for 1-5 years registered children in *anganwadis*, attempts were made to understand the maximum number of children that could have been dewormed in the schools and *anganwadis* through coverage validation data. The NDD treatment coverage in schools was estimated considering the maximum attendance of children on NDD dates. Coverage validation data showed that 93% of schools conducted deworming on either NDD or mop-up day, a maximum of 98% of children were in attendance, 98% of children received an albendazole tablet, and 92% of children reported to consume the 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. (Annex-Table CV2). Since interviews of children are not conducted in *anganwadis*, coverage validation data is applied to government reported coverage. It was estimated that around 104⁴% (1.10×0.95) of registered children in *anganwadis* could have been dewormed. The calculation of verification factors is based on only those schools and *anganwadis* where a copy of the reporting form was available for verification. Therefore, adjusted coverage in schools and *anganwadis* based on verification factors needs to be interpreted with caution.

Recommendations

The following are the key recommendations for program improvements that emerged from the process monitoring and coverage validation exercise.

1. Findings from process monitoring suggests that the participation of schools at training is less than 75%, which hampers the integrated distribution of drugs, IEC and training materials through the NDD kit and their subsequent availability at schools. To reduce this gap, timely communication must be shared by the DM&HO (District Medical & Health Officer) to inform departments about training dates and the venue in advance. This can be

⁴Number of children verified through single tick/double tick was more than the number of children reported being dewormed.

incorporated into program directives and through reinforcement messages from the state. School teachers and headmasters who attend training must be mandated to impart adequate training to other teachers in the school.

2. Trainings should be implemented as per the pre-determined schedules and completed at least ten days prior to NDD in order to leave sufficient time for intensive community mobilization activities. It is important that the state reviews and follows up with districts on the implementation schedule for trainings.
3. While more than half of the headmasters received NDD related SMSs, an updated contact database of functionaries across all stakeholder departments will further ensure the maximum reach of reinforcement messages among school teachers and *anganwadi* workers. This will facilitate the comprehensive, effective, and timely dissemination of information to functionaries. For future rounds, all stakeholder departments must update the contact database for the 31 districts.
4. There is scope for improvement in the engagement of ASHAs in community mobilization efforts and the creation of lists of unregistered and out-of-school children. It is recommended that a state-level directive from ASHAs to the MO-PHC advocating for timely engagement and efforts for community mobilization, including information on incentives, be shared. ASHAs' orientation on the NDD program and its benefits should be initiated in advance so that they include appropriate messaging during home visits, mother meetings, and other health education efforts.
5. Trends from previous rounds to the August 2017 round show an increase in adherence to recording protocol, however this continues to be low overall. This could be improved upon in upcoming rounds, by ensuring 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.
6. Integrated distribution in schools was stagnant and low in *anganwadis* from the last two NDD rounds in Telangana. Most schools and *anganwadis* did not receive IEC materials during training. Focused efforts are required to align the distribution cascade and hand over of NDD kits to the teachers/headmasters and *anganwadi* workers at the time of training.
7. Coverage validation findings suggest a low level of adherence to recording protocols. Greater emphasis on recording protocols during training is likely to improve the quality of coverage data. Training and reinforcement messages shared through SMS need to include the importance of following correct reporting protocols and maintaining correct and complete documentation. Practical sessions on recording protocols for teachers and *anganwadi* workers should be organized during primary health center (PHC) level trainings.
8. Coverage validation findings revealed low availability of a copy of reporting forms at schools and *anganwadis*, which affects the verification of reported coverage data. Along with providing two copies of reporting forms during training sessions, trainers should

ensure that teachers/headmasters and *anganwadi* workers understand how reporting forms need to be maintained at their level.