



Independent Monitoring of National Deworming  
Day in Bihar

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 coverage validation post-NDD 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 300 schools and 300 *anganwadis* were selected for monitoring visits during process monitoring on NDD and mop-up day and 750 schools and 750 *anganwadis* were selected for coverage validation in 24 districts. This round, 11 out of the 35 districts scheduled for NDD rescheduled NDD for the month of September due to unavailability of drugs. Therefore, process monitoring and coverage validation surveys were only conducted in 24 out of 35 NDD implementing districts. A total of 131 schools and 133 *anganwadis* were covered during process monitoring and 693 schools and 693 *anganwadis* were covered during coverage validation. Through a competitive review process, Evidence Action hired an independent survey agency to conduct monitoring activities. Evidence Action designed and finalized survey tools with approvals from Bihar's state government. 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 the survey, Evidence Action conducted a one-day comprehensive training of master trainers of the agency. Further, these master trainers conducted a two-day training of 150 monitors (including buffer monitors), which included a brief orientation on NDD, the importance of independent monitoring, details of the monitoring formats including CAPI practices, 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 them one day before the commencement of fieldwork to ensure that monitors did not contact schools and *anganwadis* in advance. Appropriate quality assurance measures were taken to ensure data collected was accurate, consistent and authenticated. 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 IM data collection and the CAPI process included authentication of the location of the interview. Evidence Action reviewed all the data sets and shared feedback with 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 (AWWs) are trained on program processes and protocols to ensure effective implementation of NDD, including integrated distribution of drugs and IEC materials. Findings show that 81% of schools and 83% of AWWs attended training for the August 2017 NDD round, an increase from NDD in February 2017 for both schools and AWWs. In the August 2017 round of NDD, around 45% of private schools reported attending NDD training, a more than two-fold increase from NDD in February 2017 (Annex-Table PM7). Among those who did not attend training, 64% of each teachers/headmasters and 72% of *anganwadi* workers reported a lack of information about NDD training as the main reason for not attending. Sixty-three percent of trained teachers provided training to all other teachers in their schools. Approximately 27% of schools and 36% of *anganwadis* reported that they did not receive an SMS about deworming (Annex-Table PM1). The lack of an updated contact database may be one of the factors that impacted the overall delivery of the SMSs to the teachers and *anganwadis* workers.

### **Integrated Distribution of NDD Kit Including Drugs**

Despite the mandate in the NDD guidelines and a well-defined distribution plan, integrated distribution of NDD kits was 53% for schools and 47% for *anganwadis*. Compared to the previous round, the number of schools and *anganwadis* that received posters/banners decreased and those that received handouts/reporting forms increased in the August NDD round. Around 98% of government schools received albendazole tablets and 84% of them reported to have tablets in sufficient quantity, however, around 45% of private schools received tablets for deworming and all of these schools reported having received a sufficient quantity of tablets. Thirty-six percent of the private schools covered during process monitoring received both banners/posters and handouts/reporting forms (Annex-Table PM7), indicating a need for further strengthening.

### **Source of Information about the Recent Round of NDD**

Training was the most reported source of information in schools (58%) and *anganwadis* (59%) on NDD. A substantial portion of schools (45%) and *anganwadi* workers (41%) also reported having received information about NDD through SMS. Furthermore, 41% of teachers and 30% of *anganwadis* workers came to know about NDD through the newspaper. Television, radio and banners were the least reported sources of information about NDD by both schools and *anganwadis* (Annex-Table PM1).

## **NDD Implementation**

The proportion of schools and *anganwadis* that conducted NDD remained high during both rounds, however, it increased by four percentage points in the case of *anganwadis*. Coverage validation data shows that around 97% of government schools, 48% of private schools and 97% of *anganwadis* dewormed children during the August 2017 round on either NDD or mop-up day (Annex-Table CV1). Out of 94 schools and 88 *anganwadis* that reported implementing NDD during the visit, monitors were able to observe deworming activities in 96% of schools and 94% of *anganwadis* (Annex-Table PM5).

## **Adverse Events - Knowledge and Management**

Interviews with headmasters, teachers, and AWWs revealed a high degree of awareness regarding potential adverse events due to deworming and a high level of understanding of the appropriate protocols to follow in the case of such events. Mild abdominal pain was listed as a side effect by 95% of teachers/headmasters and 90% of AWWs, followed by vomiting by 86% of schools and 92% of AWWs (Annex-Table PM6). Further, 86% of teachers and 87% of AWWs knew to make a child lie down in an open, shaded place in the case of any side effects (Annex-Table PM6). Fifty-eight percent of schools and 55% of AWWs also 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, 83% of schools and 92% of *anganwadis* reported the need to call a PHC doctor if symptoms persisted (Annex-Table PM6).

## **Recording Protocol**

As per the coverage validation data, 70% of schools and 65% of *anganwadis* followed the correct recording protocols. Around four percent of schools and 10% of *anganwadis* followed partial protocols (marking down different symbols or making a list of dewormed children); however, 26% of schools and 25% of *anganwadis* did not follow any protocol to keep records 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; 93% of headmasters and 92% of AWWs were aware of this requirement (Annex-Table PM2). As recommended in the NDD guidelines, teachers and *anganwadi* workers were supposed to retain a copy of reporting forms; reporting forms were not available in 29% of schools and 33% of *anganwadis* (Annex- Table CV1).

ASHAs were required to prepare a list of the children not attending schools and *anganwadis* and submit it to *anganwadi* workers. However, findings suggest that lists of out-of-school (6-19 years) and unregistered (1-5 years) children were not available at 53% of schools and 48% of *anganwadis* respectively (Annex-Table CV1). These figures do not corroborate with information shared by ASHAs, as 69% of 326 ASHAs present at *anganwadis* at the time of visit, reported to prepare the list of unregistered and out of school children and 97% of the 69% of ASHAs who prepared the list reported to share the list with the *anganwadi* workers. Moreover, 82% of ASHAs reported to conduct meetings with parents to inform them about NDD, and 84% reported to administer albendazole to children during NDD. However, only

19% of ASHAs who were available in *anganwadis* at the time of visit reported receiving incentives for the February NDD round (Annex-Table CV2). Findings highlight a need for proactive engagement of ASHAs in future rounds.

### Coverage Validation

Verification factors are common indicators to measure the accuracy of reported treatment values for Neglected Tropical Disease control programs. These factors also give an idea about 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 0.76, indicating that on average, for every 100 dewormed children reported by the school, 76 were verified through available documents. The overall state-level verification factor for children dewormed at *anganwadis* was 1.11, indicating more accurate reporting of the number children dewormed in *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 of 0.97, 1.20 and 1.19 respectively (Annex-Table CV2). Findings indicate a lack of proper record management at schools and consequent over reporting of dewormed children at the school level. Although the overall *anganwadi* verification factor shows better reporting for 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, the majority of the children present at schools on NDD or mop-up day received (98%) and consumed (96%) the albendazole tablet on either on NDD or mop-up day (Annex-Table CV4), based on findings from child interviews.

Against the state government reported 89% coverage in schools and 87% 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 maximum attendance of children on NDD dates. Coverage validation data showed that 92% of schools conducted deworming on either NDD or mop-up day, a maximum of 81% of children were in attendance, 98% of children received an albendazole tablet, and 92% of children reported to consume the tablet under supervision. Considering these factors, 70% ( $0.92 \times 0.81 \times 0.98 \times 0.96$ ) of enrolled children could have been dewormed in the schools (Annex-Table CV3). Since interviews of children are not conducted in *anganwadis*, the verification factor of 1-5 years registered children from coverage validation data is applied to government reported coverage data. It was estimated that around 84% ( $0.97 \times 0.87$ ) of registered children in *anganwadis* could have been dewormed. The calculation of the 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. Training is a crucial component of NDD, impacting the distribution of drugs, IEC and training material in the NDD kit and their subsequent availability at school and *anganwadis*, as well as being the key source of information about NDD. Teachers and *anganwadi* workers should be encouraged to participate in training. Pre-planning of sessions and timely communication of training dates and venues to schools and *anganwadis* are crucial steps in this direction. School teachers and headmasters who attend training must be mandated to impart adequate training to other teachers in their schools. Further, efforts should be made to ensure that block level trainings are completed at least 10 days prior to NDD to leave sufficient time for intensive community mobilization activities. The state is recommended to make stringent review and follow up of districts for ensuring the same.
2. As a substantial proportion of schools and *anganwadis* did not receive SMS for this round, efforts should be made to have an updated contact database across all stakeholder departments, including frontline workers, to ensure timely sharing of the training reinforcement SMS and information pertaining to NDD.
3. Low rates of integrated distribution requires efforts to strengthen and align the distribution cascade (NDD kits) whereby teachers/headmasters and *anganwadi* workers receive NDD kits at the time of training.
4. There is scope for greater involvement of ASHAs in mobilizing out-of-school children and spreading awareness on deworming benefits. Efforts are required to increase ASHA participation and engage them to prepare lists of 1-5 years unregistered and out-of-school children in their communities and take part in community mobilization. ASHA participation could be further strengthened by highlighting the role of ASHAs in the joint directive, encouraging their participation in training sessions, and sending reminder SMSs to them with information on incentives.
5. Despite the increased scale and improved performance of private schools on crucial NDD indicators, efforts should be focused on encouraging the participation of private schools in training, facilitating drug logistics, sharing IEC materials, and managing adverse events.
6. A low adherence to correct recording protocols highlights the need for greater emphasis on recording protocols during training, which can improve the quality of coverage data in the next round. Training and reinforcement messages shared through SMS needs to have an increased focus on the importance of following correct reporting protocols and maintaining correct and complete documentation. Practical sessions on recording protocols for teachers and *anganwadi* workers can be organized during sector level trainings.
7. The average attendance rate observed in schools visited on NDD was consistent from the February 2017 NDD round (83%) to the August 2017 NDD round (83%). Further emphasis on

improving attendance rates in schools will be helpful for the state to meet universal coverage goals.

8. Coverage validation findings revealed unavailability of a copy of reporting forms at a large number of schools and *anganwadis* visited, which affects the verification of reported coverage data. Along with providing two copies of reporting forms during training, trainers should ensure that teachers/headmasters and *anganwadi* workers understand how reporting forms need to be maintained at their level.