

Process Monitoring and Coverage Validation

During each round of National Deworming Day (NDD) round, 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 200 schools and 200 *anganwadis* were selected for monitoring visits during process monitoring on NDD and mop-up day, and 500 schools and 500 *anganwadis* were chosen for coverage validation. Through a competitive review process, Evidence Action hired an independent survey agency to conduct the monitoring activities approved by the government. Evidence Action designed and finalized survey tools with approvals from Chhattisgarh'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 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 140 monitors (including buffer monitors) that included a brief orientation on NDD, the importance of independent monitoring, and 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 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 and 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 IM data collection and CAPI process included authentication of the location of the interview. Evidence Action reviewed all the data sets and shared the 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 *anganwadis* workers are trained on processes and protocols of program to ensure effective implementation of NDD, including integrated distribution of drugs and IEC materials. Findings show that 63% of schools and *anganwadis* workers attended training for the current August 2017 NDD round. Although all school teachers and *anganwadis* workers are expected to attend training for each round (regardless of training attendance in previous rounds), a decline in attendance from the NDD February 2017 is visible in both school teachers and *anganwadis* workers in the August round. Despite efforts by the government to engage private schools, their training attendance remained low at 24% (Annex-Table PM7). Among those who did not attend training, 70% of teachers/headmasters (government and private schools) and 70% of *anganwadis* workers reported a lack of information about NDD training as the main reason for not attending training. Further, 62% of trained teachers provided training to other teachers in their schools. Sixty-two percent of schools and 44% of *anganwadis* workers reported that they received an SMS about NDD (Annex-Table PM1), a decline of 5% in schools and 2% in *anganwadis* from the previous round.

Integrated Distribution of NDD Kit Including Drugs

With the mandate in the NDD guidelines and a well-defined distribution plan, integrated distribution of the NDD kit was low for both schools (31%) and *anganwadis* (37%). Delays in printing IEC materials at the state level affected the successful integrated distribution and availability of materials at schools and *anganwadis*. Therefore, the percentage of schools and *anganwadis* that received posters/banners and handouts/reporting forms decreased from the previous round.

Around 93% of *anganwadis* received tablets for deworming, and 92% of *anganwadis* reported to receive sufficient drugs for deworming (Annex-Table PM3). Among schools, around 71% of private schools and 97% of government schools received tablets for deworming and almost all of these schools reported having received sufficient quantities of tablets (Annex-Table PM7). Although drugs were made available at all private schools, only 26% of schools attended training, which is a crucial aspect of receiving necessary information and materials through integrated distribution about NDD (Annex-Table PM7). Twenty-seven percent of the private schools covered during process monitoring received posters/banners and 30% of private schools received handouts/reporting forms for NDD (Annex-Table PM7).

Source of Information about the Recent Round of NDD

Training was the most reported mode of information in schools and *anganwadis* (38%) on NDD. Approximately 30% of the schools and 35% of *anganwadis* reported hearing about NDD from other school teachers/Lady Supervisors (Annex-Table PM1). The use of social media as a medium also emerged as a source of information; 27% of schools and 7% of *anganwadis* received information via WhatsApp about NDD (Annex-Table PM1). The radio was the least

reported source of information about NDD for this round as only 10% of schools and 9% of *anganwadis* reported to hear about NDD through the radio (Annex-Table PM1).

NDD Implementation

The proportion of schools and *anganwadis* that conducted NDD remained high during both NDD rounds. The coverage validation data shows that around 94% of schools and 99% of *anganwadis* dewormed children during the August 2017 round on NDD or mop-up day (Annex-Table CV1). Out of 131 schools and 144 *anganwadis* that reported implementing NDD, monitors were able to observe deworming activities in 92% of schools and 84% 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. Vomiting was listed as a side effect by 85% of headmasters/teachers followed by mild abdominal pain (71%) (Annex-Table PM6). Further, 69% of headmasters/teachers and 64% of *anganwadis* workers knew to make a child lie down in an open, shaded place in the case of any side effects (Annex-Table PM6). Approximately, 45% of schools and 46% of *anganwadis* 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* (Annex-Table PM6). Further, 61% of both schools and *anganwadis* reported the need to call a PHC doctor if symptoms persisted (Annex-Table PM6).

Recording Protocol

Coverage validation data revealed that 57% of schools and 58% of *anganwadis* followed the correct recording protocols (Annex-Table CV3). Around 10% of schools and 15% of *anganwadis* followed partial protocols (marking down different symbols or making a list of dewormed children); however, 33% of schools and 28% of *anganwadis* did not follow any protocol to record the number of dewormed children (Annex-Table CV3). As recommended in the NDD guidelines, teachers and *anganwadis* workers were supposed to retain a copy of reporting forms; however, 10% of headmasters and 16% of *anganwadis* workers were not aware of this requirement (Annex-Table PM2). Further, it was observed that reporting forms were available in only 71% of schools and 64% of *anganwadis* (Annex-Table CV1).

Mitanins (community health workers) were required to prepare a list of the children not attending schools and *anganwadis* and submit it to *anganwadis* workers. However, findings suggest that lists of out-of-school (6-19 years) and unregistered (1-5 years) children were not available at 58% of schools and 78% of *anganwadis* respectively (Annex-Table CV1). These figures do not corroborate with information shared by *Mitanins*, as 41% of 219 *Mitanins* present at *anganwadis* at the time of visit reported to prepare the list of unregistered and out of school children and 89% of the 41% of *Mitanins* who prepared the list reported to share the lists with the *anganwadis* workers (Annex-Table CV2). Moreover, 72% of *Mitanins* reported to conduct meetings with parents to inform them about NDD, and 73% reported to administer

albendazole to children during NDD. However, only 55% of *Mitanins* who were available in *anganwadis* at the time of visit reported to receive incentives for NDD February round (Annex-Table CV2).

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 school enrolled children was 0.58, indicating that on average, for every 100 dewormed children reported by the school, 58 were verified through available documents. The overall state-level verification factor for children dewormed at *anganwadis* was 1.06 indicating correct 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 of 1.0, 1.37, and 1.23 respectively (Annex-Table CV3). 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 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, the majority of the children present at schools on NDD or mop-up day received (98%) and consumed (94%) the albendazole tablet on either NDD or mop-up day, based on child interviews.

Against the state government reported 94% coverage in schools and 93% coverage 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 94% of schools conducted deworming on either NDD or mop-up day (Annex-Table CV1), a maximum of 93% of children were in attendance (Annex-Table CV3), 98% of children received an albendazole tablet, and 94% of children reported to consume the tablet under supervision (Annex-Table CV4). Considering these factors, 81% ($0.94 \times 0.93 \times 0.98 \times 0.94$) of enrolled children could have been dewormed in the schools. 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 93% (1.0×0.93) 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. 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 *anganwadis* 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 leaving sufficient time for planned intensive community mobilization activities. The state is recommended to make stringent review and follow up with districts a priority.
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 *anganwadis* workers receive NDD kits at the time of training.
4. There is scope for greater involvement of *Mitanins* in mobilizing out-of-school children and spreading awareness on deworming benefits. Efforts are required to increase *Mitanins* 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 efforts. Mitani participation could be further strengthened by highlighting the role of *Mitanins* in the joint directive, encouraging their participation in training sessions, and sending reminder SMS to them with information on incentives.
5. A low rate of 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 need 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 *anganwadis* workers can be organized during sector level trainings.
6. Coverage validation findings revealed unavailability of a copy of reporting forms at schools and *anganwadis*, which affects the verification of reported coverage data due to unavailability of denominators. Along with providing two copies of reporting forms during training, trainers should ensure that teachers/headmasters and *anganwadis* workers understand how reporting forms need to be maintained at their level.