



Independent Monitoring of
National Deworming Day in Jharkhand
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's preparedness for NDD and 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* in 24 districts 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 Jharkhand'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, who further conducted a two-day training of 120 monitors (including buffer monitors). The training 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 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* workers (AWWs) 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 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 are trained on program processes and protocols to ensure effective NDD implementation including integrated distribution of drugs and IEC materials. Findings show that 62% of schools and 71% of *anganwadi* workers attended training for the August 2017 NDD round. Although school teachers and *anganwadi* workers are expected to attend training for each round (regardless of training attendance in previous rounds), a decline in training attendance from NDD February 2017 is visible in both school teacher and *anganwadi* worker attendance. Moreover, although the government engaged private schools, training attendance remained low (61%) (Annex-Table PM7). Among those who did not attend training, 65% of each teachers/headmasters (government and private schools) and 84% of *anganwadi* workers reported the lack of information about NDD training as the main reason for not attending training (Annex-Table PM1). Further, 47% of trained teachers provided training to other teachers in their schools (Annex-Table PM1). Only 46% of school teachers and 45% of *anganwadi* workers reported that they received an SMS about NDD (Annex-Table PM1). The lack of an updated contact database may have impacted the overall delivery of SMS to the teachers and *anganwadis* workers.

Integrated Distribution of NDD Kit Including Drugs

Despite the mandate from the NDD guidelines and a well-defined distribution plan, integrated distribution of NDD kits was low for both schools (30%) and *anganwadis* (33%). Around 89% of government schools received albendazole tablets and 91% of them reported to have tablets in sufficient quantity. However, among private schools around 69% of private schools received tablets for deworming and 91% of these schools reported having received sufficient quantities. Fifty-six percent of the private schools covered during process monitoring received posters/banners and 63% of private schools receive handouts/reporting forms for deworming (Annex-Table PM7).

Source of Information about the Recent Round of NDD

Training was the most reported mode of information in schools (60%) and *anganwadis* (68%) on NDD. Forty-one percent of schools and 45% of *anganwadis* reported that other teachers/AWWs informed them about the NDD round (Annex-Table PM1). Thirty-two percent of schools and 25% of *anganwadis* also reported receiving information about NDD through the newspaper. The radio was the least effective source of information about NDD for this round.

NDD Implementation

The proportion of schools and *anganwadis* that conducted NDD remained high during both rounds. The coverage validation data shows that around 87% of schools and 94% of *anganwadis* dewormed children during the August 2017 round of NDD or mop-up day. Out of 138 schools and 129 *anganwadis* that reported implementing NDD, monitors were able to

observe deworming activities in 98% of schools and 96% 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 headmasters/teachers and AWWs interviewed. Vomiting was listed as a side effect by 72% of headmasters/teachers and 80% of *anganwadis*, followed by mild abdominal pain (70% in schools), and nausea for *anganwadis* (63%). Further, 77% of teachers and 72% of *anganwadi* workers knew to make a child lie down in an open, shaded place in the case of any adverse events and around 42% of school teachers and 50% of *anganwadis* workers knew to give ORS/water. Forty-nine percent of schools and 44% of *anganwadis* also knew to manage an adverse event by keeping children under observation for at least two hours at schools/*anganwadis*. Further, around 70% 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 only 2% of schools and 31% of *anganwadis* that conducted deworming followed correct recording protocols. Around 60% of schools and 34% of *anganwadis* followed partial protocols (marking down different symbols or making a list of dewormed children), however, 38% of schools and 35% of *anganwadis* did not follow any protocol to record the number of dewormed children (Annex-Table CV4). Sixteen percent of headmasters and 15% of *anganwadi* workers were not aware that they should retain a copy of reporting forms (Annex-Table PM2). Further, it was observed during coverage validation that reporting forms were available in only 51% of schools and 45% of *anganwadis* (Annex-Table CV1).

ASHAs are 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 72% of schools and 70% of *anganwadis* respectively (Annex-Table CV1). These figures do not corroborate with information shared by ASHAs, as 31% of 438 ASHAs present at *anganwadis* at the time of field visit reported to have prepared the list of unregistered and out-of-school children and 86% of the 31% of ASHAs who prepared the list reported to have shared lists with the *anganwadi* workers. Moreover, 70% of ASHAs reported to conduct meetings with parents to inform them about NDD, and 76% reported to administer albendazole to children during NDD. However, only 14% of ASHAs who were available in *anganwadis* at the time of visit reported to have received incentives for the NDD February round (Annex-Table CV3).

Coverage Validation

Verification factors¹ are common indicators to measure the accuracy of reported treatment values for Neglected Tropical Disease control programs.² 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 0.49, indicating that on average, for every 100 children dewormed, 49 were verified through available documents. Similarly, the overall state-level verification factors for children dewormed at *anganwadis* was 1.04, indicating slight under-reporting of the number of dewormed children in *anganwadis*. Category-wise verification factors for registered (1-5 years), unregistered (1-5 years), and out-of-school (6-19 years) children of 0.93, 1.29, and 1.16 respectively (Annex-Table CV4). Findings clearly indicate a lack of proper record management at schools and consequently over-reporting of the number of dewormed children at the school level. Although, overall the *anganwadi* verification factor shows better reporting of all target groups, proper recording keeping and reporting remains 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 school on NDD or mop-up day received (100%) and consumed (99%) the albendazole tablet on either on NDD or mop-up day (Annex-Table CV5), from child interview data.

Against the state government reported 93% coverage in schools and 94% 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 87% of schools conducted deworming on either NDD or mop-up day, a maximum of 86% of children were in attendance, 100% of children received an albendazole tablet, and 95% of children reported to consume the tablet under supervision. Taking these factors into account, 71% ($0.87 \times 0.86 \times 1.0 \times 0.95$) of enrolled children could have been dewormed in the schools. This indicates that NDD coverage in the schools was below the WHO threshold of 75% coverage (Annex-Table CV4). Since interviews of children are not conducted in *anganwadis*, a verification factor of 1-5 years registered children from coverage validation data is applied to government reported coverage. It was estimated that around 87% (0.94×0.93) 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.

¹A 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.

²WHO (2013), Data Quality Assessment tool for Neglected Tropical Diseases: Guidelines for Implementation December 2013.

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 schools and *anganwadis*, as well as being the key source of NDD information. 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. 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 intensive community mobilization activities. The state is recommended to make stringent review and follow up with districts to ensure 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 require 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 the benefits of deworming. 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 to engage 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 ASHAs with information on incentives.
5. Low rates 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. Further, the data showed that there has been a substantial decline from February 2017 round to the August 2017 round in adherence to correct reporting protocol as per the NDD guidelines. 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.