

## Delhi School and Anganwadi-Based Mass Deworming Program

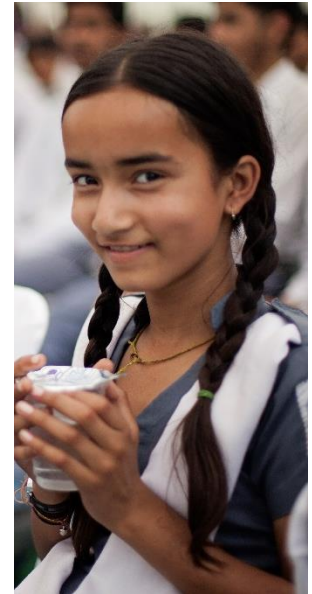


Photo Credit: Evidence Action

Round Three - Report

July 2015

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## ACRONYMS

ASHA- Accredited Social Health Activists  
Cantt. Board- Cantonment Board  
CATS- Centralized Accident and Trauma Services  
CDPO- Child Development Program Officer  
CNSY- Chacha Nehru SehatYojana  
DFW – Directorate of Family Welfare  
DHS- Directorate of Health Services  
DOE- Directorate of Education  
DWCD- Department of Women and Child Development  
GOI- Government of India  
ICDS – Integrated Child Development Scheme  
IEC- Information Education Communication  
IFA- Iron and Folic Acid  
M&E – Monitoring and Evaluation  
MCD- Municipal Corporation of Delhi  
MDD- Mass Deworming Day  
MoHFW- Ministry of Health and Family Welfare  
MSDF- Michael & Susan Dell Foundation  
NCT- National Capital Territory  
NDD- National Deworming Day  
NDMC- New Delhi Municipal Council  
NHM- National Health Mission  
SHS- School Health Scheme  
STH- Soil Transmitted Helminths  
WHO – World Health Organization  
WIFS- Weekly Iron and Folic Acid Supplementation

## Executive Summary

This year was a landmark achievement for the school and *anganwadi*-based deworming program in the country with the announcement of National Deworming Day (NDD), targeting 140 million children in the first phase. Aligning with this national effort, Delhi’s third round of school and *anganwadi*-based deworming program was observed on April 16, 2015 followed by a mop up day on April 20, 2015. In this round, 2.9 million children were dewormed through a network of 3,043 government and government-aided schools and 11,000 *anganwadis* in the state under the umbrella of the *Chacha Nehru Sehat Yojana* of Delhi State School Health Program.<sup>1</sup> This achievement is an outcome of coordinated efforts and successful convergence among the multiple government departments, such as the School Health Scheme, Directorate of Family Welfare, Directorate of Education, and Department of Women and Child Development of the Government of National Capital Territory Delhi, offices of the Municipal Corporation of Delhi (East, North and South), and the Cantonment Board of Delhi. The technical assistance partner, Evidence Action’s Deworm the World Initiative, was supported through The Michael & Susan Dell Foundation. The program’s success translates into a continued sustainable deworming program to reduce the prevalence and intensity of worm load in children at schools and *anganwadis*, and out-of- school children in the state of Delhi.

### Key Achievements from the School and Anganwadi- based Mass Deworming Program in Delhi

Indicators	Findings	% Achievement
Number of schools reporting deworming coverage	3,043	100
Number of <i>Anganwadis</i> reporting deworming	11000	100
Number of enrolled children (Class 1 to 12; not including class 11 *) dewormed at schools	18,28,562	81.6 (Total target beneficiaries at school: 22,40,573)
Number of enrolled and non-enrolled children (1-19 years) dewormed at <i>Anganwadis</i>	10,72,193	80.7 (Total target beneficiaries between 1-19 years at <i>Anganwadis</i> : 13,28,964)
Number of children dewormed on Deworming Day and Mop Up Day	29,00,755	81.3 (Total no. of children 1-19 years in state: 35,69,537 )

**Source:** Report submitted by School Health Scheme (SHS) Delhi to Government of India dated 03 June, 2015 (Annexure A)

\* Due to examinations of 11 grade in April, the SHS decided to cover these children later in the year

In this third round of deworming in the state, program planning and implementation was guided by learnings from previous rounds, and supplemented with advocacy efforts by Evidence Action at the national and state-level for greater institutionalization within the

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<sup>1</sup>Chacha Nehru Sehat Yojana (CNSY): The Directorate of Health Services representing the Government of National Capital Territory of Delhi started a school health scheme in 1979 to provide comprehensive health care services to school-going children.



government system. The state referred to the national operational guidelines formulated for National Deworming Day, to ensure successful implementation, and submitted program coverage within the stipulated time. Given the multiplicity of stakeholders, the School Health Scheme as the nodal agency led various steering committee meetings to ensure consensus from all stakeholders for key decisions such as, the date for deworming day, finalization of training cascade, and others. The government undertook some new initiatives in this round aimed at improving program coverage and outreach, such as inclusion of all non-enrolled children, 1-2 year olds, and strengthening integrated drug logistics at trainings. The state leveraged the existing resources through strengthened participation of government officials in trainings, program monitoring, and coverage reporting. Evidence Action provided the state technical assistance through robust tracking and monitoring system, which provided guidance to undertake corrective measure for gaps identified.

## 1. Program Background

In India, approximately 241 million children between the ages of 1 and 14 are at risk of parasitic intestinal worms (known as soil-transmitted helminths or STH). The infected children represent approximately 68% of Indian children in this age group and 28% of all children at-risk for STH infections globally, according to the WHO. These parasitic infections result from poor sanitation and hygiene conditions, and are easily transmitted among children through contact with infected soil. Various studies have documented the widespread and debilitating consequence of chronic worm infections, which cause anaemia and malnutrition among children, affecting their physical and cognitive development. Worm infections contribute to absenteeism and poor performance at school, and in adulthood, diminished work capacity and productivity<sup>2</sup>.

### 1.1 A Cost-Effective Win for Education: Deworming through Schools

Evidence from across the globe shows that deworming leads to significant improvement in outcomes related to children's health, education, and long-term well-being. In 2008 and again in 2012, the Copenhagen Consensus Centre identified school-based deworming as one of the most efficient and cost-effective solutions to the current global challenges. School-based deworming is considered a development "best buy"<sup>3</sup> due to its impact on educational and economic outcomes. The benefits of using such platforms for deworming are immediate. Regular treatment can reduce school absenteeism by 25%, with the greatest participation gains among the youngest pupils<sup>4</sup>. Young siblings of those treated and other children who live nearby, but were too young to be dewormed, also showed significant gains in cognitive development from school-based deworming.<sup>5</sup> The existing and extensive infrastructure of schools provides the most efficient way to reach the highest number of children, and teachers, with support from the local health system, can administer treatment with minimal training. Preschool settings are often used to provide children with basic health, education, and

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<sup>2</sup>Helminth control in school-age children- A guide for managers of control programmes: WHO, 2011

<sup>3</sup> <http://www.povertyactionlab.org/publication/deworming-best-buy-development>

<sup>4</sup> Miguel, Edward and Michael Kremer. "Worms: Identifying Impacts On Education And Health In The Presence Of Treatment Externalities," *Econometrica*, 2004, v72 (1,Jan), 159-217.

<sup>5</sup> Ozier, Owen. "Externalities to Estimate the Long-Term Effects of Early Childhood Deworming." Working Paper, Jun. 2011. [http://economics.ozier.com/owen/papers/ozier\\_early\\_deworming\\_20110606a.pdf](http://economics.ozier.com/owen/papers/ozier_early_deworming_20110606a.pdf)

nutrition services, making this a natural, sustainable, and inexpensive platform for deworming programs.<sup>6</sup>

## 1.2 Deworming Children in India

Deworming children is part of the Government of India's school and preschool health programs, such as the Weekly Iron-Folic Acid Supplementation (WIFS) program, which provides a weekly dose of Iron Folic Acid (IFA) with biannual deworming for adolescents (10-19 years).<sup>7</sup> National Iron Plus Initiative (NIPI) is a national anaemia control program, which offers IFA supplementation and deworming for a wider age group of 1-45 years, including preschool-age children who also receive Vitamin A. Until recently, only a few states ran effective school and *anganwadi*-based deworming programs with good coverage. Many programs had sporadic deworming efforts and low coverage, while in other states no deworming programs existed. Considering this complex environment and the clear need to accelerate treatment for India's children, the Government of India renewed its focus on deworming by streamlining efforts through the school and *anganwadi*-based National Deworming Day launched in 2015.

## 1.3 State Program History:

Recognizing the positive impact of deworming on the health and education of children, the Government of Delhi, along with the technical assistance partner, Evidence Action's Deworm the World Initiative, launched the first school and *anganwadi*-based deworming program on February 21, 2012. 2.65 million children across government and government-aided schools and *anganwadis* were dewormed in this round.

With the subsequent launch of the WIFS program in July 2013 in the state, which integrated deworming as a program component, all students from 6 to 12 class were covered at schools, and out-of-school adolescent girls between the age of 10 to 19 at *anganwadis* in the second round held in October 2013. A total of 2.38 million children were dewormed in this round.

Round 3 of the deworming program was initially scheduled for October 2014. However, it was postponed due to delayed procurement of syrups for preschool-age children. Later, the state was included in the first phase of the National Deworming Day announced by the Government of India to be implemented in February 2015. Due to state assembly elections followed by school examinations, the Government of Delhi arrived at an agreement with all stakeholders to conduct the third round in April 2015.

## 2. About National Deworming Day

The deworming program in India reached a key milestone with the Government of India's launch of the National Deworming Day on February 10, 2015. The first phase of the National Deworming Day targeted all children aged 1-19 years in 12 states and union territories (Assam, Bihar, Chhattisgarh, Dadra and Nagar Haveli, Delhi, Haryana, Karnataka, Maharashtra, Madhya

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<sup>6</sup> <http://journals.plos.org/plosntds/article?id=10.1371/journal.pntd.0000223#pntd-0000223-g003>

<sup>7</sup> <http://www.nrhmhp.gov.in/sites/default/files/files/Iron%20plus%20initiative%20for%206%20months%20-5%20years.pdf>

Pradesh, Rajasthan, Tamil Nadu, and Tripura) through the network of government and government-aided schools and *anganwadis*.

Evidence Action supported the Child Health Division in the Ministry of Health and Family Welfare to plan and finalize operational guidelines for the National Deworming Day. These guidelines laid out key objectives, shared guidance, clarified roles and responsibilities of stakeholders, and provided budgetary allocations for states to finance program implementation. All training, community awareness materials, monitoring and reporting forms, and other reference materials available through the National Deworming Day resource kit were uploaded on the National Health Mission website<sup>8</sup> for participating states and union territories.

Evidence Action also supported organizing a national-level orientation meeting on January 19, 2015 in Delhi for all states and union territories participating in the first phase, including the four states where Evidence Action was engaged as technical assistance partner (Madhya Pradesh, Bihar, Rajasthan, and Delhi).

On February 9, 2015, the Union Minister of Health inaugurated the National Deworming Day in Jaipur, Rajasthan. The State Minister of Health for Rajasthan and other senior officials from the national and state government participated in the launch event alongside representatives from development partners and the media. The event received extensive media coverage. Evidence Action supported organizing of the launch event, media engagement and related events for the National Deworming Day.

The Government of Delhi participated at the national orientation program on January 19, 2015, wherein they requested for postponement of their deworming round until April 2015. The Ministry of Health and Family Welfare granted this request and Delhi proceeded to plan their deworming day on April 16, 2015.

## 3. Introduction – State Anganwadi and School-Based Deworming Round 3

### 3.1 Target Beneficiaries

As reported by the state, the target was identified as 22, 40,573 children enrolled in government and government-aided schools, 13, 28,964 preschool-age children registered at *anganwadis* as well as non-enrolled school-age children were targeted through *anganwadis* (Annexure A).

### 3.2 Key Stakeholders:

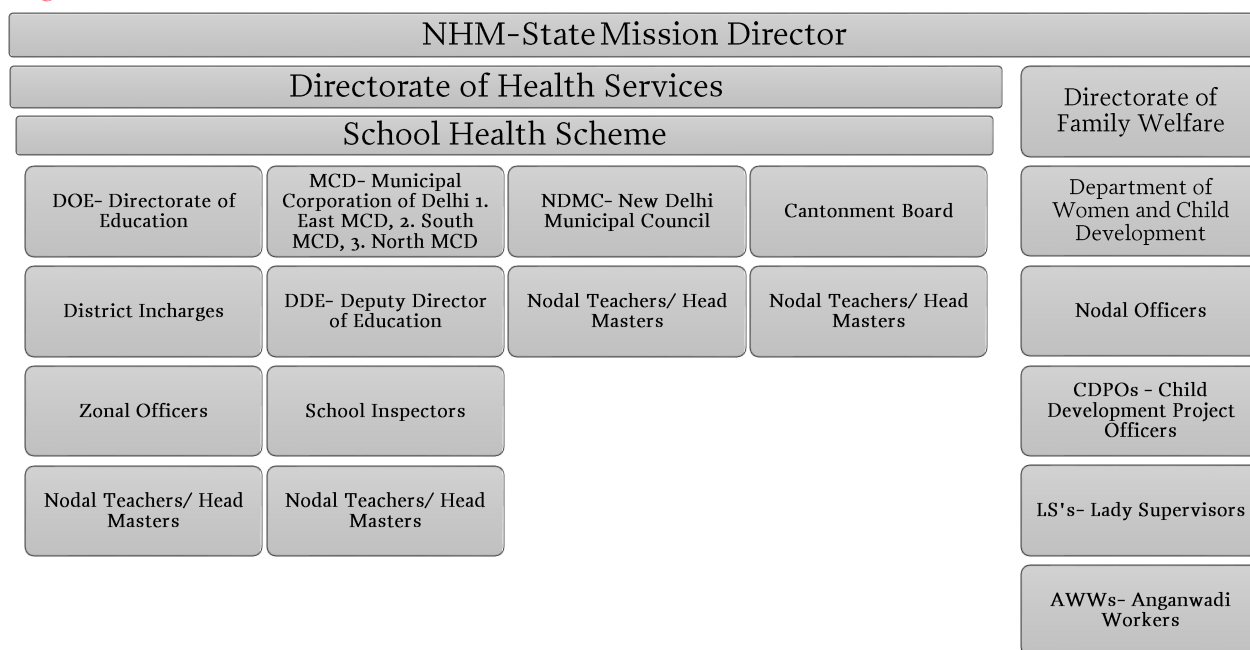
The School Health Scheme (SHS), under the Directorate of Health Services (DHS) led the overall program planning and implementation in coordination with other stakeholders for reaching schools viz. Directorate of Education (DOE), three units of Municipal Corporation of

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<sup>8</sup> <http://nrhm.gov.in/national-deworming-day.html>

Delhi (MCD), New Delhi Municipal Council (NDMC), and Cantonment Board. The Directorate of Family Welfare led, and ensured the overall implementation of the program at the *anganwadis* in coordination and support from Department of Women and Child Development (DWCD). Evidence Action worked closely with all stakeholders to offer required technical assistance for high quality roll-out of the deworming program, with a focus on aligning with the national operational guidelines for National Deworming Day.

Figure 1: Key Government Stakeholders for the Deworming Program in Delhi for Schools and Anganwadis for Round 3



## 4. Program Implementation

The state conducted the mass deworming round on April 16, 2015 followed by a mop up day on April 20, 2015 to reach children who missed deworming day due to absenteeism or sickness.

### 4.1 Policy and Advocacy

With the postponement of the deworming round from October 2014, the School Health Scheme organized a series of inter-departmental meetings to build consensus between stakeholders on the new date. Delhi, being one of the participating states in the National Deworming Day, decided on April 16, 2015 for deworming. With the State Assembly elections, and annual school examination at the end of February, preparations for the deworming round started in full swing in March. A steering committee, led by the School Health Scheme, was constituted to plan for the upcoming deworming round on March 3, 2015 wherein the state confirmed the operational plan targeting children in the 1-2 age group. It was decided that all non-enrolled children will be reached, expanding the prior focus of only adolescent girls who were out of school. Furthermore, all the stakeholders decided to exclude children in Standard 11 from the round in April, because of their unavailability during examinations and agreed to cover them in the last week of July (Annexure B).

The Directorate of Family Welfare led the planning for preschool deworming through a key stakeholder meeting on March 13, 2015 where training, logistics and supply, publicity and awareness activities, reporting and recording, and supervision on program aspects were finalised (Annexure C).

Evidence Action's advocacy with the state to leverage existing platforms and resources for the deworming program in order to maximize program impact continued with successful efforts. The Directorate of Family Welfare supported sending bulk SMSs for training reinforcement to program functionaries from their official portals.

## 4.2 Program Management

Evidence Action's technical assistance was provided through a two-member state-based team, including field-based short-term district coordinators and tele-callers with additional support and guidance from the national team, also based in Delhi. Evidence Action's state team provided training and ongoing guidance to the short term hires on various program components to build a common understanding of the program strategy.

**District Coordinators** – Evidence Action hired 12 district coordinators (one for each district), out of which 1 was designated as the lead district coordinator. They facilitated program implementation and supported on-ground program coordination for a three-month period around the deworming round, including supporting their respective districts to track drug availability and implementing the training cascade as per agreed timelines. They also worked with district and block officials to ensure efficient coordination for on-ground program implementation. Additionally, they participated in trainings at districts and blocks and escalated any observed gaps to the state team for appropriate follow-up at the state level.

**Tele-callers** - 4 tele-callers were hired to assess program preparedness, through calls made to officials at blocks and below in order to provide information on drug and IEC availability. The tele-callers also did post-deworming follow up on the status of submission of coverage reports. The dynamic flow of information gathered from block and below was shared promptly with the state government for timely corrective actions.

## 4.3 Drug Procurement, Storage, and Transportation

The state government received approximately 3.5 million donated drugs from the WHO global drug donation program for school-age children in October 2014. The government also had stocks of approximately 0.47 million tablets<sup>9</sup> at the School Health Scheme drugstore from the previous deworming round. Thus, approximately 4.07 million albendazole tablets was available for Round 3. The Government of Delhi administered albendazole syrups to all children at the *anganwadis* and school children from Nursery to class 2. By February 2015, 0.88 million albendazole 400mg syrup vials were procured by the School Health Scheme through Central

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<sup>9</sup> Source: State coverage report of round 3 to GOI; Annexure 1

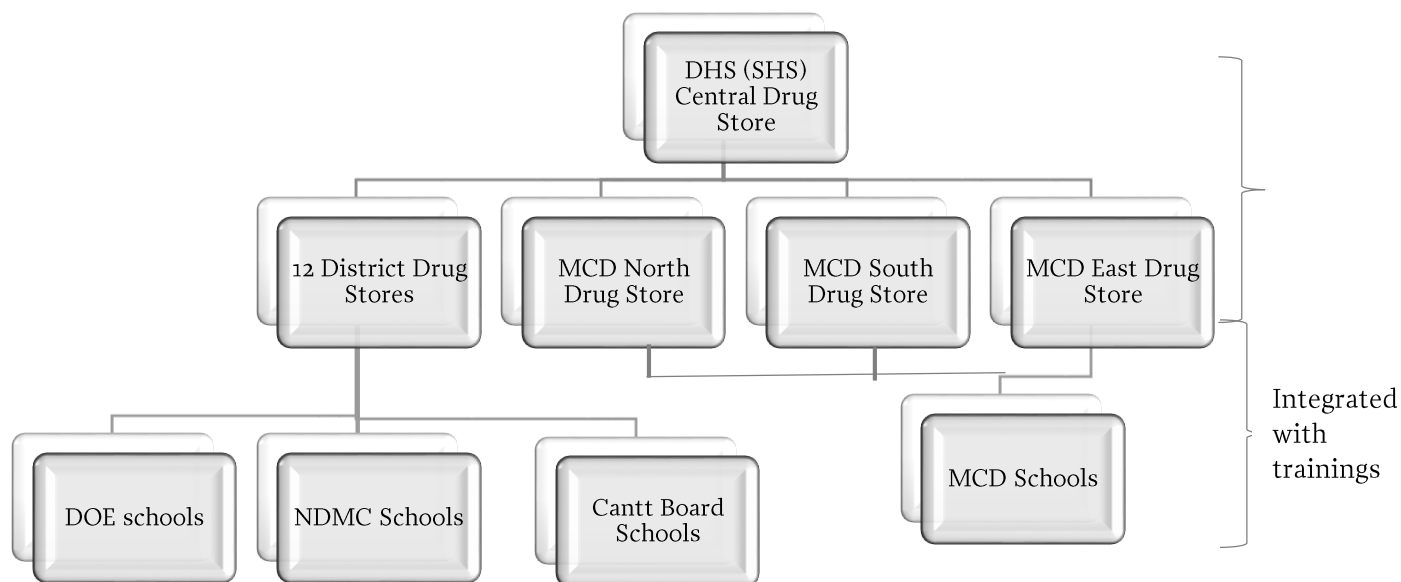
Procurement Agency (CPA)<sup>10</sup>. Drug testing was carried out by CPA at the Directorate of Health Services' central drug storage room to ensure the quality of drugs prior to distribution.

The School Health Scheme led all coordination with WHO from drug customs clearance and transportation from the port to the state, unlike from previous rounds where Evidence Action led the efforts.

In this round the state agreed to distribute sealed jars of albendazole tablets to the schools, which was one of the key recommendations put forward by Evidence Action from the previous deworming round. This eliminated drug repackaging, as it is a potentially unsafe practice given hygiene and safety requirements.

For drug logistic management, the state referred to past experiences and the national operational guidelines for distribution of deworming kits at the training. The drug distribution was thus integrated with the training cascade (as detailed in the training section below), where National Deworming Day kits were provided to schools at the block-level trainings. The kits included drugs, IEC materials, and reporting formats. The delivery cascade is depicted in figure 2. At anganwadis, drugs, emergency response kits, reporting formats, and handbills were distributed through the vehicle at the Directorate of Family Welfare medical store, as shown below.

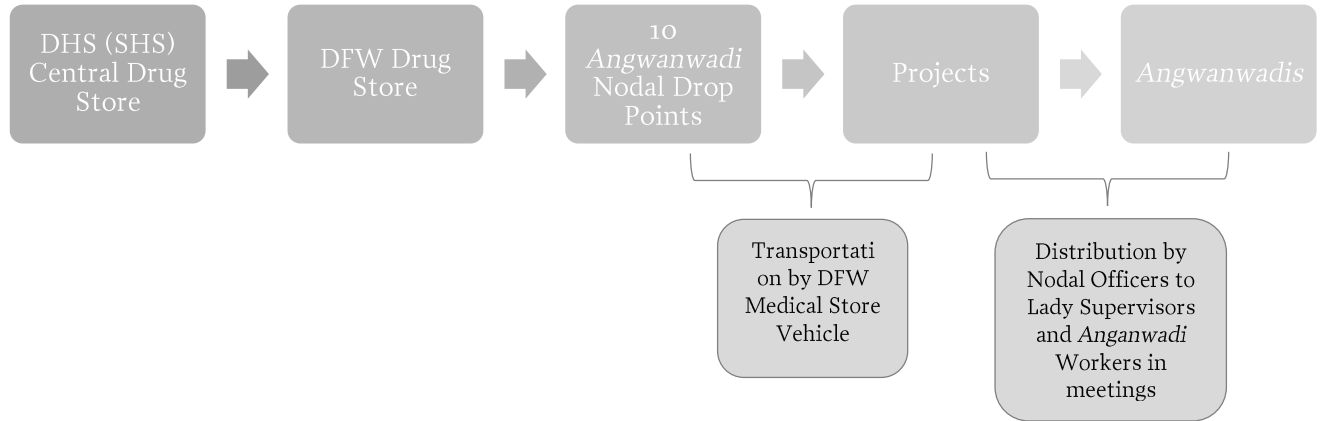
Figure 2.1: Drug Delivery Cascade for Schools



<sup>10</sup>Central Procurement Agency (CPA) was established in 1994. It procures medicines & surgical consumables for all Delhi Govt. Institutions.



Figure 2.2: Drug Delivery Cascade for Anganwadis



#### 4.4 Adverse Event Management Preparedness

In order to provide guidance on roles and responsibilities of functionaries to manage and report adverse events that may occur, the School Health Scheme organized a stakeholders meeting in March 2015 to disseminate key information on the adverse event management. At the meeting, the stakeholders agreed on the emergency response system to handle adverse events, including issuing of instructions to the Centralized Accident and Trauma Services (CATS) ambulance service to ensure their responsiveness during the deworming round. In line with the National Deworming Day operational guidelines and advice from the Government of India, the School Health Scheme developed a detailed adverse event management protocol, which was circulated to all stakeholders. Emergency Response System-Standard Operative Guidelines and Functional Guidelines were shared during training sessions and meetings for effective adverse event management on the ground (Annexure D).

##### 4.4.1 Reporting of Adverse Events

Reporting forms to document mild adverse events were made available at schools. Instructions were also given to school on handling and reporting on such events. There were 303 mild adverse events reported from the field. These cases were addressed in a timely manner in coordination with the concerned local health officials as per the program's adverse event management protocol and Emergency Response System - Standard Operative Guidelines.

#### 4.5 Public Awareness and Community Sensitization

Activities designed to enhance community awareness on deworming were rolled out to improve overall program coverage. The awareness activities included newspaper advertisements a day prior to the deworming day; a 60-second radio jingle aired on 3 FM channels from April 7 to 15 by School Health Scheme, and banners displayed at schools.



Evidence Action was part of the committee formed by the state government for contextualization of the radio jingle.

Evidence Action extended support to the state in contextualizing IEC materials from the National Deworming Day guidelines. The Directorate of Family Welfare also independently developed and printed handbills for distribution at *anganwadis* to mobilize people on deworming day. The School Health Scheme provided banners to the schools, the distribution of which was integrated in trainings for teachers.

The Delhi state government also used an [e-portal](#) to disseminate key information, including dates for deworming and mop up days, benefits of deworming, and details of the launch event.

#### 4.5.1 Inaugural Event to Launch Deworming Day

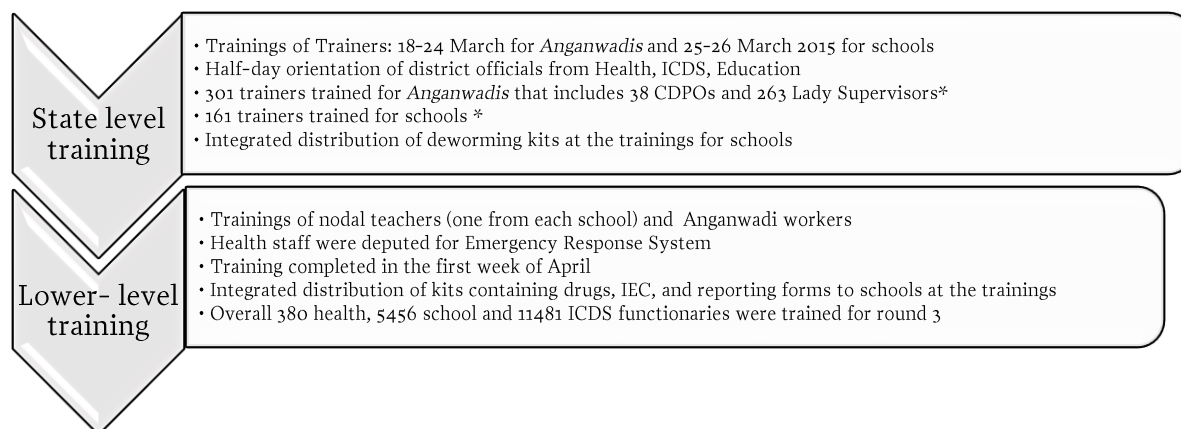
The Health Minister for Delhi launched the Mass Deworming Program Round 3 on April 15, 2015 in the presence of senior state officials and other stakeholder department at Sarvodaya Vidyalaya, New Multan Nagar, Delhi. Evidence Action partnered with a media and public relations agency for greater coverage of the program in 15 leading newspapers and magazine and 13 news portals (Annexure E).

“We are happy that our school has taken this initiative to deworm all the children. We know that by having this medicine, we will get rid of stomach worms, which will help us stay healthy, improve concentration in studies and do well in life.”- Komal and Rekha, Students of class XII, Sarvodaya School, New Multan Nagar, New Delhi

#### 4.6 Training Cascade

Incorporating learnings from Round 2, the state government planned for trainings to take place closer to deworming day for Round 3, so as to facilitate information retention among participants. Evidence Action supported the implementation of the training cascade, which was led by the School Health Scheme and Directorate of Family Welfare at schools and *anganwadis* respectively (depicted below):

Figure 3: Training Cascade for Schools and *Anganwadis*



\*Source: Tracking sheets of training through daily tracking by DC's and tele-callers led by Deworm the World

As per the cascade, training for various district and block functionaries covered the basics of deworming and detailed operational aspects of the program.

**Training Resources:** Evidence Action supported the School Health Scheme for contextualization of training materials from the National Deworming Day resource kit according to the state requirements, including training presentations, handouts for frontline workers, and Frequently Asked Questions (FAQs) (Annexure F). The School Health Scheme and Directorate of Family Welfare led the printing of training handouts for school teachers and *anganwadis* and its dissemination was integrated with drug distribution.

**Training Support:** Evidence Action's district coordinators participated in district-level trainings under the National Deworming Day. Additionally, the team attended a sample of block-level trainings to provide support and ascertain quality, while providing support in facilitation of trainings as required (Annexure G).

**SMS Reinforcement:** To reinforce key training messages, the state departments sent SMSs through their existing platforms to various functionaries. Approximately 5,500 SMSs were sent by the state Department of Women and Child Development to functionaries including ASHAs and Lady Supervisors. Additionally Evidence Action sent 1,38,353 SMSs to reiterate key messages on the deworming program to school headmasters, who were not on the existing government SMS platform. A SMS plan, which was shared and approved by the state (Annexure H) detailed out content and target audience. The SMS plan is available as part of the National Deworming Day resource kit and was adapted to the state context for Round 3.

#### Highlights from Deworming Day and Mop-up Day

- ✓ State level inauguration held on April 15, 2015 with political commitment and convergence among various stakeholders and large media coverage.
- ✓ Evidence Action hired services of an agency to conduct independent monitoring. The trained monitors visited a total of 400 schools and 400 *anganwadis* across the state on both deworming and mop up days, and for one week following the deworming round for coverage validation.
- ✓ The mild adverse events reported were managed well on the ground. No severe adverse events were reported.
- ✓ The state government reported deworming of 29,00,755 out of approximately 35,69,537 children in the target age group.

## 5. Monitoring and Evaluation

Understanding program reach and quality is a key component of a successful deworming intervention. In order to fulfil this need, Evidence Action worked intensively with the state

Departments of Health, Women and Child Development, and Education to ensure quality planning and implementation of the program. The preparedness of the schools, *anganwadis*, and health systems to undertake deworming, adherence to the prescribed deworming processes, and ensuring accurate reporting of coverage are key components of the program monitoring support provided by Evidence Action. The process of monitoring and evaluation in each deworming program round are performed in three ways: (1) process monitoring, (2) coverage reporting and (3) coverage validation.

## 5.1 Process Monitoring, Coverage Reporting, and Coverage Validation

Process monitoring assesses the preparedness of schools, *anganwadis*, and health systems to implement mass deworming and the extent to which they have followed correct processes to ensure a high quality program. Evidence Action assesses the program preparedness during the pre-deworming phase and selected independent monitors observe the processes on deworming and mop up days. We conduct process monitoring in two ways: a) telephone monitoring and cross verification, and b) physical verification by visiting schools and training venues.

The method of stratified random sampling using proportional allocation approach<sup>11</sup> was followed for selection of schools and *anganwadis* for deworming day, mop-up day, and coverage validation monitoring to provide state-wide estimates of indicators. We hired an independent research agency, Sigma Research and Consulting Private Limited that has experience in implementing field-based surveys, to conduct process monitoring and coverage validation in schools and *anganwadis* in Delhi. A two-day training was held with 80 independent monitors and supervisors to equip them with the knowledge to undertake the deworming program and undertake monitoring effectively. These monitors were to visit total of 400 randomly selected schools and 400 randomly selected *anganwadis*; 80 schools and 80 *anganwadis* on deworming day and mop up day each (April 16 & April 20); and 240 schools and 240 *anganwadis* during coverage validation (April 23-27, 2015). The actual number of schools and *anganwadis* visited on each day is given in annexure (Table SA-1). The monitors visited the selected schools and *anganwadis* on deworming day, on mop up day to check for adequacy of drug supplies and awareness materials, whether teachers/*anganwadi* workers had received training, and knowledge of adverse event management protocols and reporting processes. Monitors gathered data through observation during deworming and interviews with headmasters, teachers, and *anganwadi* workers as well as of randomly selected students from schools. Additional randomly sampled schools and *anganwadis* were surveyed from April 23-27 to check whether deworming occurred, reporting protocols were followed, and to validate the coverage reporting.

- **Field Monitoring Visits for Process Monitoring:** A team of 12 district coordinators monitored districts for deworming preparedness to physically verify availability of drugs

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<sup>11</sup>A random sample of population in which the population is first divided into distinct subgroups or strata, and random samples are then taken separately from each stratum proportional to the size of subgroup.

and IEC and training status. Their feedback was shared daily with state and district officials for taking corrective measures to fill gaps.

- **Telephone Monitoring and Cross Verification for Process Monitoring:** Our tele-callers tracked the status of training, drugs, and IEC material availability at the district, and school/*anganwadi* through phone calls. Approximately 8,504 successful<sup>12</sup> calls were made to the education, health, and WCD departments during this period.

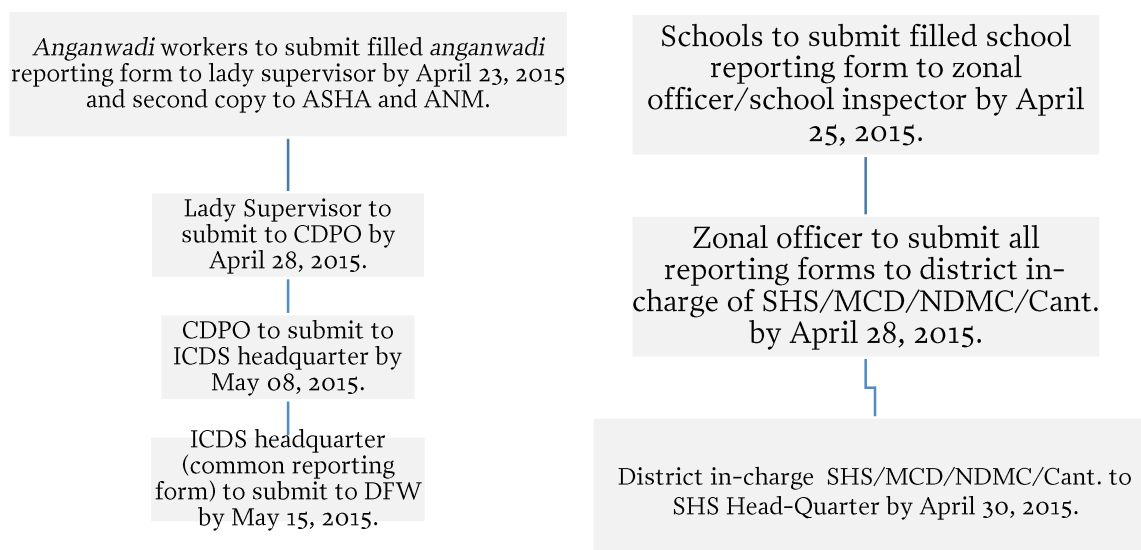
Coverage reporting assesses the estimated numbers of program beneficiaries, and is a crucial component for understanding the success of the implementation. In this round, each school and *anganwadi* was supposed to fill a one-page reporting form (annexure III). In order to improve the accuracy of coverage reporting by the schools and *anganwadis*, every participating school and *anganwadi* was instructed to follow a recording protocol for deworming. Every teacher and *anganwadi* worker was required to put a single tick mark (✓) next to a child's name in the school<sup>13</sup>/*anganwadi* register if they were administered albendazole on deworming day and double-tick mark (✓✓) if dewormed on mop up day. School headmasters and *anganwadi* workers were responsible to compile the number of dewormed children, fill the reporting format and submit it to the next level. Reporting structure of coverage data from schools and *anganwadis* and timelines are given in the below flow chart:

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<sup>12</sup>Successful calls were those calls where the information was collected by tele-caller as per the requirement of the program.

<sup>13</sup>Class teachers were asked to prepare a list of enrolled children in a separate register.

Figure 4: Reporting Structure of Coverage Data and Timelines in Schools and *Anganwadis*



Coverage validation is an ex-post check of the accuracy of the reporting data and coverage estimates. Data to verify coverage of enrolled children was gathered through interviews with headmasters and three students (in three different randomly selected classes in each school), and by checking all class registers and reporting forms<sup>14</sup>. Whereas, *anganwadi* coverage validation data was gathered through interviews with *anganwadi* workers and checking *anganwadi* registers and reporting forms. These activities provides a framework to validate the coverage reported by the schools and *anganwadis*, and calculate the level of inaccuracy in the reporting data by comparing the ticks with the numbers reported in school/*anganwadi* reporting forms.

## 6. Key Findings

While the detailed results of independent monitoring are shared in Annexure I, the key results of this monitoring were as follows:

### Deworming in Schools and *Anganwadis*

- The deworming process was directly observed in 80% of schools and 74% of *anganwadis* that the monitors visited on deworming or mop up days (Table S1 & Table A1). However, interviews with headmasters and *anganwadi* workers indicated that 99% of schools and 97% of *anganwadis* had done deworming either on deworming day or mop up day (Table S12 & Table A12).
- Amongst the total interviewed children, 96% indicated that they had received a deworming tablet during the school-based program.
- Average attendance during deworming days was 62% (Table S8).

<sup>14</sup>Please note that the coverage validation is only able to check the coverage of enrolled children in schools.

**Drug Availability:** 91% headmasters reported that they had sufficient drugs for deworming (Table S12). ‘Sufficient drugs’ is defined here as the availability of drugs in accordance with the number of children enrolled in the school. ORS, given as part of adverse event management was available in 95% of schools (Table S4). 17% *anganwadis* reported that they did not have sufficient drugs for deworming, whereas, 53% reported that they had unused drugs after the round (Table A12).

### Reporting Forms and IEC Material

- Reporting forms (Annexure III) were available in approximately 86% of schools and 79% of *anganwadis*, while 62% schools and 83% *anganwadis* received training handouts.
- Additionally, 94% of schools received banners, and 74% *anganwadis* received community handbills (Table S12 & Table A12).
- Banners were clearly posted in 90% of schools.
- 94% of interviewed children were aware that the drug given to them was for deworming. Out of those, 19% had heard about deworming from their parents/siblings, while 33% knew about deworming through the banner at their school. 95% of these children had heard about deworming from their teacher at the school. Other sources of information were radio (6%), newspaper (8%), and friends/relatives (4%) (Table S2).

**Training Status:** 91% of headmasters/teachers and 83% of *anganwadi* workers attended deworming related training. Of these 99% *anganwadi* workers received information about deworming program from the Lady Supervisor at the departmental meeting. The primary reasons given for non-attendance at training was that they did not know the dates of the training (44% and 49% of schools and *anganwadis* respectively). Findings on reinforcement SMSs suggest that 85% of headmasters and 76% of *anganwadi* workers had received any SMS related to the deworming program (Table S12 & Table A12).

**Usefulness of Training and IEC Material:** When asked to rate the training and IEC materials on a five point rating scale (strongly disagree, disagree, agree, strongly agree, don't know/not applicable), 85% of headmasters/teachers strongly agreed that deworming training was useful. Further, 45% teachers/headmasters strongly agreed that SMSs were helpful in reinforcement of training messages, and 94% reported them to be helpful in recalling the dates. 78% of the headmasters reported that drug dosage and administration was the most helpful thing recalled from the handouts followed by adverse event management (73%). Additionally, 62% strongly agreed that the banner was helpful for deworming program. *Anganwadi* data suggests that 76% of *anganwadi* workers strongly agreed with the usefulness of training. Further, those who received an SMS on the deworming program, 47% agreed they were helpful in reinforcement of key training messages, with 93% reporting that the SMS was helpful in recalling the dates (Table S12 & Table A12).



**Effectiveness of Training:** Performance of trained schools was higher as compared to untrained schools on most of the indicators. For example, compared to 82% of trained schools, 75% of the untrained schools were aware about the submission of reporting form after the deworming day. Only 35% of untrained schools as compared to 68% of trained schools were aware about the last date of reporting form submission. Additionally, 88% of trained *anganwadi* workers had followed the correct recording protocol as compared to 68% of the untrained *anganwadi* workers. Moreover, 44% of trained *anganwadis* were aware about the date of submission of *anganwadi* reporting form, as compared to only 30% untrained *anganwadis* (Table S11 & Table A11).

**Management of Adverse Events:** Interviews with headmasters and *anganwadi* workers suggest limited awareness about the possible occurrence of adverse events. 71% headmasters and 58% of *anganwadi* workers who were interviewed did not think that there could be any adverse events due to drug administration. As observed by monitors, 93% of teachers identified and separated out sick children before administering deworming tablets, reducing the risk of adverse events due to any existing illness (Table S5 & Table A5).

**Program Coverage:** The coverage data from the schools in Delhi indicated that 1,828,562 enrolled children were dewormed in the state during deworming day and mop up day against the total target of 2,240,573 enrolled children from class 1 to 12. Children in class 11 were not covered in this round due to the examination in the month of April. Thus, the program coverage percentage came to 81.6% according to government reported figures. The coverage data from *anganwadis* indicated that 1,072,193 registered children were dewormed in *anganwadis* against the total number of 1,328,964 registered children in *anganwadis*. Thus, the program coverage percentage in *anganwadis* came to 80.7% according to the government reported figures. The extent to which this might be an accurate reflection of the number of children dewormed in Delhi is explored in the next section.

**Recording Protocol and Coverage Validation:** As per monitors' observation, 85% of schools were following the correct reporting protocols on deworming and mop up day (Table S1). Monitors visited 253 schools for coverage validation. To validate coverage of enrolled children, the aggregated number of ticks in school registers is compared to the deworming coverage reported in the school reporting forms submitted to the state to arrive at a state level verification factor<sup>15</sup>. The factor, in this case of 0.98175, indicates that for every 98 enrolled children who were recorded as dewormed in the school, the school reported that 100 enrolled children had been dewormed. This indicates an overall state-level inflation rate<sup>16</sup> of 1.9%. In other words, the number of children which the state reported was 1.9% higher than the number found recorded in school registers (Table S8). Likewise schools, state verification factor and

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<sup>15</sup>A verification factor of 1, means the schools reported exactly what they had recorded as being dewormed. A verification factor less than 1, indicates over-reporting.; a verification factor greater than 1, indicates under-reporting.

<sup>16</sup>This inflation means that the numbers being reported in the reporting forms from schools appeared to be approximately 1.9% higher than the numbers being recorded in attendance registers.



inflation factor were also calculated for *anganwadi* data. The state-level verification factor for *anganwadis* was 1.03359, indicating good coverage reporting in the state. We also calculated the state inflation rate in reporting data from *anganwadis* using the same method as for schools. This indicates that the numbers reported in the reporting forms from *anganwadis* appeared to be approximately 3.3% lower than the numbers being recorded in registers (Table A8).

## 7. Recommendations

The Government of Delhi exemplified leadership and effective program planning for the implementation of the Deworming Day, taking into consideration earlier program experiences and learnings. It is of critical importance that all program components are aligned to prevent gaps and delays in program execution. This includes IEC, training, drug logistics, adverse event preparedness, and correct reporting. Following are the key recommendations for future program improvements that emerged out of monitoring activities.

**Increase Training Attendance:** The findings highlight that school which received training performed better than schools which did not. Though training attendance seems to be good in schools and *anganwadis*, but it is not universal. Awareness regarding training schedules and dates was limited among those who did not attend the training. This indicates that additional efforts are needed to provide timely information to the school headmasters/teachers and *anganwadi* workers about training schedules, through various channels like issuance of reminder government letters, and training dates reinforcement SMSs by stakeholder departments.

**Strengthening of Training Reinforcements through SMSs and Reminder Calls:** The findings highlights the need to make more efforts to ensure accurate and complete databases of school and *anganwadi* contact details which can be used for sending out SMSs through bulk messaging platforms or reminder calls. Since the reach and utility of these modes of communication has been demonstrated in this round, it will be critical that all stakeholder departments ensure the availability of updated contact data base of frontline workers so that necessary information can be shared widely in a timely manner. Sending SMSs through existing government platforms, is also recommended under the NDD guidelines as an effective way to reinforce important program information.

**Improve Drug Distribution Plan for School and *Anganwadis*:** Some schools and *anganwadis* did not receive sufficient quantity of drugs required for deworming, while some of them had surplus. Insufficiency of drugs in schools and *anganwadis* limited the coverage of the program. It is recommended that in future rounds improved drug distribution plan to be made for schools and *anganwadis*. Integrated distribution of drugs during trainings can help in overcoming this problem.

**Improve IEC Material Distribution and Availability:** Limited availability of IEC materials in schools and *anganwadis* suggest scope for further improvement in the distribution cascade

through universal training attendance and integrated distribution system. In addition, tracking of the IEC distribution cascade in a timely manner, will improve the availability of IEC materials. Moreover, lower proportion of children heard about deworming from their parents, indicating the need of more focus on community sensitization activities through radio, newspaper, and TV.

**School Attendance on Deworming Day and Mop-up Day:** Higher attendance on deworming day and mop-up day would have increased coverage. Therefore, greater efforts need to be made to sensitize parents and children about benefits of deworming.

## 8. Key Successes

The program's overall momentum was challenged by the postponement of the deworming day from October 2014 to April 2015 in two separate instances. This round was finally implemented a year and half after the second deworming round (October 2013). The multiple stakeholders, demonstrated ownership towards preparing for the program even before the date was finalized, which is noteworthy. This round of deworming also witnessed the state adapting some of the best practices recommended under the National Deworming Day operational guidelines , namely integrated drug distribution at trainings; knowledge reinforcements through SMSs; and inclusion of all out-of-school children and 1-2 year-olds in the targeted group. Perhaps the most notable program achievement during this round was the strengthened program monitoring from the stakeholders.

## 9. Way Forward

The third round of deworming in Delhi demonstrated significant progress towards program institutionalization, which laid the groundwork for stronger government ownership and sustainability that will be seen in future rounds. The state rolled out the deworming round, in alignment to the NDD guidelines. From the integration of deworming in the WIFS program after round 2 to referring to the National Deworming Day guidelines in round 3, the state has continued its commitment towards program sustainability. The state has ensured best practices are being incorporated and the key recommendations are fed into the program, as the planning for the subsequent rounds take place.

As the program has achieved significant coverage for enrolled children in schools, moving forward the state is committed to focus on impacting scale through greater coverage of out-of-school children, and devising strategies to reach children in private schools. Sustaining the pace of program will require continued commitment from the government to ensuring committed resources for deworming under the State Program Implementation Plans.

Finally, in light of the deworming program's great potential to improve health, education and productivity for millions of children in Delhi, the government's continued commitment and support for program sustainability is critical.

*Evidence Action's technical assistance in Delhi was made possible with support from the Michael & Susan Dell Foundation*

## Annexures

Attached as separate files:

Annexure A: State Reporting Format

Annexure B: Minutes of the Steering Committee Meeting – SHS

Annexure C: Minutes of Convergence Meeting – DFW

Annexure D: Emergency Response System - Standard Operative Guidelines for Mass  
Deworming 2015

Annexure E: Media Coverage

Annexure F: Training Resources

Annexure H: Training Support

Annexure I: SMS Plan

Annexure J1: Analysis of Independent Monitoring Data

Annexure J2: Definitions


Annexure J3: Reporting Forms

## State Reporting Format



GOVERNMENT OF NCT OF DELHI  
SCHOOL HEALTH SCHEME  
DIRECTORATE OF HEALTH SERVICES  
DGD BUILDING KARKARDOOMA, DELHI-92  
Ph: 22377419, Fax 22377478 schoolhealthscheme@gmail.com

**STATE REPORTING FORMAT FOR MASS DEWORMING PROGRAMME**

<b>State : DELHI</b>			
<b>Number of the Schools in the State :</b>	3043	<b>Number of schools reported in State</b>	3043
<b>Number of Anganwadi projects in State:</b>	95	<b>Number of Anganwadi projects reported in the State</b>	95
Number of trained MO/PHN/ANM for Mass Deworming programme		380	
Number of Zonal officers/ Principals/Teachers trained for Mass Deworming programme		5456	
Number of Lady Supervisors/CDPOs/ Anganwadi Worker/ ASHAs trained for Mass deworming programme		11481	
<b>Albendazole Coverage</b>			
Total No. of children (1-19 years) in State [T= (A+B)]		<b>(T) 35,69,537</b>	
Total No. of children enrolled in the schools		(A) 22,40,573	
Total No. of children registered in Anganwadis		(B) 13,28,964	
NO. of school enrolled children who were administered Albendazole on MDD and MUD		(1) 18,28,562	
NO. of AWC registered children who were administered Albendazole on MDD and MUD		(2) 10,72,193	
<b>GRAND TOTAL of number of children who were administered Albendazole (C= 1+2)</b>		<b>(C) 29,00,755</b>	
<b>Percent coverage</b>		<b>(C)X100/(T)=81.26 %</b>	
Number of adverse events reported from all schools and Anganwadi centers (in prescribed format)		303	
<b>Logistic Details</b>			
Total No. of Syp Albendazole received		8,85,400	
Total No. of Syp Albendazole distributed ( DOE District/MCD /NDMC /Cantonment Board/DFW )		8,85,400	
Balance stock of Syp Albendazole		Nil	
Total No. of Tab Albendazole received(opening balance(472800)+received (3598000)		40,70,800	
Total No. of Tab Albendazole distributed (DOE District/MCD /NDMC /Cantonment Board/DFW)		31,07,700	
Balance Stock of Tab Albendazole		9,63,100	
Feedback from the Sub-center / Block / District / State (if any)			
 (Name and signature of the Signatory) <b>Dr. ADARSH KUMAR</b> Addl. Director in Charge Central Health Services Directorate of Health Services Govt. of NCT of Delhi			
You may call up the State Officer (Name : Dr. Adarsh Kumar / Phone :8745011351) for any assistance required			

Minutes of the Steering Committee Meeting – SHS



GOVERNMENT OF NCT OF DELHI  
SCHOOL HEALTH SCHEME  
DIRECTORATE OF HEALTH SERVICES  
DGD BUILDING KARKARDOOMA, DELHI-92  
Ph: 22374419, Fax 22377478 [schoolhealthscheme@gmail.com](mailto:schoolhealthscheme@gmail.com)

No.F.15 (32)/DWP/CNSY/DHS/SHS/2012/pt. file 2014-15 - 751  
To

Dated: 12/03/15

Dr. Gautam Kr. Singh  
SPO- Adolescent health  
Directorate of family Welfare  
7<sup>th</sup> Floor, Vikas Bhawan –II, Metkalf House  
Civil line Zone, New Delhi -110002

Director,  
Deptt. of Woman & Child Development,  
1, Canning Road, Kasturba Gandhi Marg,  
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Dr. Ajay Lekhi,  
DHO, School Health Scheme  
Shahdara North, MC Primary School  
North Delhi Municipal Corporation  
Mansarovar Park, Delhi-32

Dr. Sita Bhagi  
Deputy DHA, School Health Scheme  
South Delhi Municipal Corporation  
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Dr. R. Chandravalli  
DHO (SHS)  
North Delhi Municipal Corporation  
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Mr. K. P. Tripathi  
Zonal Officer (CATS)  
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Near Vijay Ghat, Delhi-110006

Mr. Tapeshwar Jugran,  
DEO (Schools),  
Directorate of Education,  
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Mr. Ambuj Kumar  
Asst. Director (Education)  
East Delhi Municipal Corporation  
Ground Floor, Plot No. 419  
Udyog Sadan, Patparganj Industrial Area,  
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Mrs. Geeta Kumari  
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Minto Road, New Delhi-110002

Mr. Jagdish Prasad  
Asst. Director (Education)  
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19<sup>th</sup> Floor, Dr. S.P.M Civic Centre  
Minto Road, New Delhi-110002

Dr. N.K. Kataria, (Deputy Education officer),  
New Delhi Municipal Corporation,  
Palika Kendra, Opp. to Jantar Mantar,  
Parliament Street, New Delhi-110001

**Sub: Minutes of the Meeting of the Steering Committee on Mass De-worming Programme held on 03<sup>rd</sup> March 2015.**

Sir/Madam,

A Steering Committee meeting for 3<sup>rd</sup> Round of Mass De-worming programme was convened under the Chairmanship of Director Health Services on 03.03.2015 at 11 am in the Conference room, 1<sup>st</sup> Floor, Directorate of Health Services, F-17, Karkardooma, Delhi-110032.

A copy of Minutes of Meeting is forwarded for your information.

Dr. Adarsh Kumar  
Additional Director  
School Health Scheme

Copy to:

- 1) Director, Directorate of Education, Old Secretariat, Delhi-54.
- 2) Director, Directorate of Family Welfare, Govt. of Delhi.
- 3) Director, Department of Women & Child Development.
- 4) Project Director, CATS HQ, Bela Road, Yamuna Pushta, Near Vijay Ghat, Delhi-110006.
- 5) Director Education, East Delhi Municipal Corporation, Ground Floor, Plot No. 419, Udyog Sadan, Patparganj, Industrial Area, Delhi-110092.
- 6) Director Education, North Delhi Municipal Corporation, Education H.Q., 15<sup>th</sup> Floor, Dr. S.P.M Civic Centre, Minto Road, New Delhi-110002
- 7) Director Education, South Delhi Municipal Corporation, Education H.Q., 23<sup>rd</sup> Floor, Dr. S.P.M Civic Centre, Minto Road, New Delhi-110002
- 8) DHO, School Health Scheme, East Delhi Municipal Corporation, Ground Floor, Plot No. 419, Udyog Sadan, Patparganj, Industrial Area, Delhi-110092.
- 9) DHA, School Health Scheme, North Delhi Municipal Corporation, Education H.Q., 19<sup>th</sup> Floor, Dr. S.P.M Civic Centre, Minto Road, New Delhi-110002
- 10) DHA, School Health Scheme, South Delhi Municipal Corporation, Education H.Q., 18<sup>th</sup> Floor, Dr.S.P.M Civic Centre, Minto Road, New Delhi-110002.
- 11) Director (Medical Services), New Delhi Municipal Corporation, Palika Kendra, Opp. to Jantar Mantar, Parliament Street, New Delhi-110001
- 12) Director (Education), New Delhi Municipal Corporation, Palika Kendra, Opp. to Jantar Mantar, Parliament Street, New Delhi-110001
- 13) Chief Executive Officer, Cantonment Board, Office of Cantonment Board, Sadar Bazar, Delhi Cantt. Delhi-110010.
- 14) Chief Medical Officer, Cantonment Board, Cantonment General Hospital, Sadar Bazar, Delhi Cantt. Delhi-110010
- 15) Dr. Priya Jha, Country Director, De-worm the World Initiative.
- 16) PA to DHS
- 17) Office copy
- 18) Guard File



Dr. Adarsh Kumar  
Additional Director  
School Health Scheme





GOVERNMENT OF NCT OF DELHI  
SCHOOL HEALTH SCHEME  
DIRECTORATE OF HEALTH SERVICES  
DGO BUILDING, KANUNGOCHA, DELHI-110  
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F.No. 15 (321)/DWP/ENSY/SHS/2012/PL. File 2014-15

Dated:

### MINUTES OF MEETING

A Steering Committee Meeting of all Stake holders for Delhi school and Anganwadi based Mass Deworming programme (2014-15) was held under the chairmanship of Director, Directorate of Health Services, Govt. of Delhi on 03/03/2015 to discuss the expected roles and responsibilities of each Stake Holders and to Finalize the operational details of each Stake Holders in respect of training, logistics and supplies, publicity, documentation and monitoring mechanism. The meeting was attended by the following members:

1. Dr. Adarsh Kumar, Additional Director, SHS, DHS
2. Dr. Nandita Chhibber, CMO (SAG) / C (Admin/ Monitoring), SHS, DHS
3. Dr. Radha Dubey, MD/C Programme & Stores, SHS, DHS
4. Dr. Gautam Kumar Singh, SPO, Directorate of Family Welfare
5. Mr. K. P. Tripathi, Zonal Officer (CATS), C.A.T.S.
6. Mr. Tapeshwar Jugran, DEO (Schools), Directorate of Education
7. Dr. Ajay Lekhi, DHO, EDMC
8. Dr. Shabresh Dharampal, GDMO-II, SHS, EDMC
9. Ms. B. Bharli, Assistant Director Education, North MCD
10. Dr. R. Chandravali, DHO (SHS), North MCD
11. Dr. Sita Bhagi, Deputy DHA (SHS), SDMC
12. Dr. Subhita Bagga, CMO (SAG), NDMC
13. Dr. N. K. Kataria, Deputy Education Officer (Admin), NDMC
14. Ms. Indu Selhi, CDPO, Department of Women & Child Development
15. Mr. Sharad Barkhataki, Associate Director, DtWI
16. Ms. Esha Kaira, Programme Manager, Deworm the World initiative
17. Ms. Shweta Singh, Programme co-coordinator, DtWI
18. Ms. Swati Sharma, Programme co-coordinator, DtWI
19. Mr. Bharat Bhushan, Programme Coordinator, SHS
20. Ms. Swati Singh, Public Health Nurse, SHS (HQ)

Dr. Adarsh Kumar Addl. Director (SHS) welcomed all the participants and initiated the meeting mentioning that as decided in the last Stakeholders meeting, Mass De-worming in Delhi is scheduled on 16<sup>th</sup> April 2015 followed by Mop up day on 20<sup>th</sup> April 2015. A Power Point Presentation on the implementation Modalities for Mass De-worming Programme was made by the Additional Director (SHS)

#### Issue 1

##### **Logistics distribution**

The transportation of the suspension Albendazole and Tablet will be completed by 05/03/2015 to all the 12 District Stores of School Health Scheme and, Directorate of Family Welfare Store, seven MCDs Stores and NDMC Store. Additional Director, School Health Scheme stated to all Stake holders that the person assigned to receive the stock should maintain the stock register regarding the suspension, tablets and IEC received by them. Tablet Albendazole has been received from WHO as donation & Suspension Albendazole has been procured through Central Procurement Agency, GNCT of Delhi.

Therefore for suspension Albendazole a copy of challan with a certificate for the quantity received in a good condition and the stock entry has been made in the relevant Stock Register on page number has to be sent in the office of School Health Scheme (HQ) for releasing the payment to the supplier. The Additional Director, SHS also mentioned regarding Suspension Albendazole receiving that each recipient has to submit the random samples of 24 bottles of each batch in the School Health Scheme office immediately not later than 7 days of receipt for Laboratory Sample testing.

Further these Drugs will be packed in a carry bag for each school with proper label for the Schools under jurisdiction of the concerned Store and will be handed over to Nodal Teachers of the school in the Lower Cascade trainings on Mass De-worming along with IEC material.

The participants demanded for carry bags & labels, for this De-worm the World Initiative which provided the carry bags & labels last time expressed inability to supply these items this time. It was decided that School Health Scheme, Directorate of Health Services will procure carry bags & labels for the distribution to the Schools. Directorate of Family Welfare will procure these items for Anganwadis supply.

Regarding packaging the School Health Scheme under Directorate of Health Services will be providing packing material i.e. a bag and a label to all the Stake holders according to the number of Schools.

## Issue 2

### Trainings

The Master Trainings for Mass De-worming Programme would be conducted around 25<sup>th</sup> March 2015. As a part of capacity Building the Master Training has been planned for 38 Medical Officers (SHS), 64 PHNs (SHS), 24 participants from three MCDs (Education and Health) and 1 participant from Delhi Cantonment Board, 29 Zonal Officers from Directorate of Education and 4 Officers/ Officials from New Delhi Municipal Council (Education and Health). This half day training will be conducted in the Conference Hall of Directorate of Health Services, F-17, Karkardooma, Delhi-32 in 4 batches. The final schedule will be communicated accordingly.

The resource persons for the Master Trainers Training will be provided by De-worm the World Initiative. The representative from Directorate of Family Welfare informs the chair that Master Trainings for Anganwadis will commence from 16<sup>th</sup> March 2015 and will be concluded in 5 Days followed by Lower Cascade trainings.

The Additional Director, SHS mentioned that the School Health Scheme Master Trainers (M.O/ PHNs) will be conducting Zonal Orientations in 29 Zones for 1 Nodal Teacher from each DOE Schools and also for ANMs deputed by CDMOs for Emergency Response System clusters. During these Zonal Level Trainings all the required logistics i.e. Tablet/ Suspension Albendazole, ERS Medicines and IEC material will be handed over to Nodal Teachers. These trainings will be completed in the 1<sup>st</sup> week of April 2015.

The Additional Director, SHS also asserted that the other Stakeholders like MCDs, NDMC, and Cantonment Board may also follow the same process of conducting Lower Cascade Orientations.

### Issue 3

#### IEC Activities

The following IEC activities will be taken up by School Health Scheme under DHS:-

- Radio spot-(For 5 days before the Mass Deworming day in 3 FM channels)
- Newspaper Advertisement-(on 15<sup>th</sup> April 2015 i.e. 1 day before the Mass Deworming day)

The following print IEC will be provided to all the Stake Holders except DFW according to their requirement school wise.

- Banners-(2 for each school)
- Posters-(4 for each school)
- Handouts for Teachers-(40 for each school)

The banners, posters, handouts & reporting formats for Anganwadis will be arranged by Directorate of Family Welfare

The Additional Director, SHS informed that a proposal about the launch function on 15<sup>th</sup> April 2015 by the Hon'ble Chief Minister of Delhi along with Media Sensitization for the Programme has been moved for approval of Hon'ble Chief Minister of Delhi.

### Issue 4

#### Emergency Response System

The ERS was explained to all the stakeholders and were advised to develop their ERS on the same format as School Health Scheme, GNCT of Delhi.

Hospitals, Dispensaries and CAT ambulance services will be on high alert on both Mass Deworming Day and Mop-Up Day. One M.O./ P.H.N/ A.N.M will be deployed for a cluster of four or five schools and they will visit each of their schools one or two days prior to Mass Deworming Day and exchange their contact no. with the Principals/ Nodal Teachers.

It was discussed that the drug Albendazole is safe. However there could be two types of adverse events – Mild or Serious. Mild Adverse Events like nausea, mild abdominal pain, vomiting and fatigue can be managed in the school itself. In very rare cases of Serious Adverse Event which could be life threatening, affected child should be separated from other children and stop De-worming activities in that school. The school Principals / Nodal Teachers should immediately call the ERS team (whose contact no. is already shared with the school) and transfer the child to the nearest linked Hospital by CATS ambulance (102/1099). The child can also be transferred through any other vehicle in case there is delay in arrival of the ambulance. The Mild Adverse event is to be reported by each school in the prescribed proforma and the Serious Adverse event is to be reported by concerned Hospital only.

The parents of the child should be informed and also inform the SHS (HQ)

The Additional Director, School Health Scheme, DHS briefed all the participants regarding media handling. He informed as per the Govt. of India guidelines, in case of any adverse events the designated Officer from Health and Family Welfare is responsible as the spokesperson to the media.



Dr. Ajay Lekhi, Elected President of DMA, offered all possible help of DMA for sensitizing regarding Mass De-worming Programme 2015, for this it was decided that a request letter may be issued to DMA.

Additional Director (SHS) also mentioned about the Control Room at DHS which would be functional on the De-worming Day i.e. 16<sup>th</sup> April 2015 (Thursday) and also on the Mop Up day i.e. 20<sup>th</sup> April 2015 (Monday). The contact no. of control room will be intimated later.

#### Issue 5

##### **Coverage of 11<sup>th</sup> Class**

Additional Director, SHS informed the members since the 11<sup>th</sup> class will not be available in the month of April henceforth the Mass De-worming for class 11<sup>th</sup> will be conducted in the last week of July for Delhi State as suggested by representative from Directorate of Education. A separate report for coverage to this class will be sent to SHS (HQ) through the same channel.

#### Issue 6

##### **Reporting and Recording**

Class teachers and Anganwadi Workers will record the administration of drug in class Attendance/ Enrollment register. The School Reporting Format will be filed by Nodal teacher and Anganwadi Reporting Format will be filed by Anganwadi Worker.

School Reporting Format will be filed by Nodal Teachers of schools of Directorate of Education and it will be submitted to Zonal officer by 25<sup>th</sup> April 2015. Zonal officer will submit School Reporting Format to District Incharge SHS by 28<sup>th</sup> April 2015 and the District Incharges of SHS will submit the Common Reporting Format to Monitoring Branch, SHS (HQ) by 30<sup>th</sup> April 2015.

Directorate of Family Welfare /MCD's (East, North & South) New Delhi Municipal Council/ Cantonment Board may develop their own reporting mechanism and the compiled report is to be submitted to SHS (HQ) by 30<sup>th</sup> April 2015.

##### **Independent Monitoring**

On Mass De-worming Day and Mop- up Day the Govt. of India, Zonal officers of Education Department, Additional CDMOs, MCO's (East, North & South) and De-Worm The World Initiative will conduct monitoring of the programme.

The meeting ended with vote of thanks to the chair.



**Dr. Adarsh Kumar**  
Additional Director, SHS

## Minutes of Convergence Meeting – DFW

DIRECTORATE OF FAMILY WELFARE (GOVT. OF NCT OF DELHI)  
B & C WING, 7<sup>TH</sup> LEVEL, VIKAS BHAWAN-II  
NEAR MATCALF PARTICIPANTS, CIVIL LINES, NEW DELHI- 110054

F: No. 8 (27)/ARSH-WIFS/DFW/2013-14  
To

2749-2767

Dated: 8/4/15

- |   |   |    |   |
|---|---|----|---|
| 1 | Dr. R.K. Gupta,<br>Director, DFW, Govt. of NCT of Delhi | 8  | Ms. Asha Saxena,<br>CDPO, Deptt. of WCD                               |
| 2 | Dr. O.P. Agarwal CMO (SAG), Principal<br>H&FWTC, DFW    | 9  | Ms. Anita Kaushal, Supervisor,<br>Deptt. of WCD                       |
| 3 | Dr. R.K. Batra,<br>State EPIO, DFW                      | 10 | Mr. Sandeep Bhardwaj, Deptt. of<br>WCD                                |
| 4 | Dr. Prashant Singh<br>CMO I/c Medical Store, DFW        | 11 | Ms. Esha Kalra,<br>Program Manager, DtWI                              |
| 5 | Dr. Gautam Kr. Singh, SPO Adolescent Health,<br>DFW     | 12 | Ms. Shweta Singh, Program<br>Coordinator, DtWI                        |
| 6 | Mr. Dharmendra K. Sahu, State BCC Consultant,<br>DSHM   | 13 | Dr. Chitra Rathi,<br>State Technical Team lead,<br>RMNCH+A, IPE/USAID |
| 7 | Ms. Jayshree Das,<br>State MIS Expert, DSHM             | 14 | Dr. Neelesh Kapoor,<br>State Technical Officer, IPE/USAID             |

Sub: Convergence of various Stake holders under Mass De-worming program 2015 at the level of Anganwadi Centres - Minutes of Meeting.

Madam/Sir,

A meeting of stakeholders involved in planning & implementation of 3<sup>rd</sup> phase of Annual mass De-worming Programme at the Level of Anganwadi Centres under Deptt. of Women & Child Development, GNCT of Delhi to finalized the operational details of various aspects of campaign in terms of Training, Logistics & supply, Publicity, Reporting & Record keeping as well as Monitoring & Supportive Supervision was convened under the Chairmanship of Director, Family Welfare on 13.03.2015 at 12:00 Noon at Directorate of Family Welfare, Vikas Bhawan-II, Civil Lines, Delhi- 110054.

A copy of minutes of meeting is enclosed herewith for your information.


Thanking you,

Encl.- A/A


F: No. 8 (27)/ARSH-WIFS/DFW/2013-14

Copy to:

1. PS to Secy. (H&FW), 9<sup>th</sup> Level Delhi Secretariat, I.P. Estate, Delhi-110002
2. PA to Mission Director, DSHM, 6<sup>th</sup> Floor, Vikas Bhawan-II Delhi- 110054
3. PA to Director, Health Services, F-17 Karkardooma, Delhi- 110092
4. PA to Director, Family Welfare, Vikas Bhawan-II, Civil Lines, Delhi-54
5. Addl. Director, School Health Scheme, Delhi Govt. Dispensary, Karkardooma, Delhi-92
6. Office Copy.

  
(Dr. Gautam Kr. Singh)  
SPO-Adolescent Health

Dated:

  
(Dr. Gautam Kr. Singh)  
SPO-Adolescent Health



**Minutes of the Meeting**  
**Convergence Meeting, Directorate of Family Welfare**  
**13<sup>th</sup> March 2015**

**Participants:**

1. Dr. R. K Gupta, Director Family Welfare, DFW
2. Dr. O.P. Agarwal, Principal, H&FW Training Centre, DFW
3. Dr. R.K. Batra, State EPIO, DFW
4. Dr. Prashant Singh, CMO I/c Medical Store, DFW
5. Dr. Gautam Kumar Singh, SPO (Adolescent Health), DFW
6. Mr. Dharmendra K. Sahu, State BCC Consultant, DSHM
7. Ms. Jayshree Dass, State MIS Expert, DSHM
8. Mrs. Asha Saxena, CDPO, Department of WCD
9. Mrs. Alka, CDPO, Department of WCD
10. Mr. Sandeep Bhardwaj, Deptt. of WCD
11. Dr. Chitra Rathi, State Tech. Team Leader, RMNCH+A, IPE Global
12. Mr. Neelesh Kapoor, State Tech. Lead, RMNCH+A, IPE Global
13. Ms. Esha Kalra, PM, Deworm the World Initiative
14. Ms. Shweta Singh, SPC, Deworm the World Initiative

**Introduction:**

A convergence meeting was convened by Directorate of Family Welfare on 13<sup>th</sup> March, 2015 under the chairmanship of Director Family welfare with key stakeholders for the upcoming Deworming Round 3.

Dr. Gautam expressed his gratitude to Director Family Welfare to have taken his precious time out to chair the meeting. He welcomed all participants and started the meeting by sharing an overview of the upcoming Deworming round in the state followed by a detailed presentation of various program components including the timelines as per cascade. Important points discussed during the meeting are mentioned as below.

**Logistics:**

- **Drug availability at DFW stores:** Tablets have been received through SHS supply as per WHO drug donation process and for suspension, Central Procurement Agency, DHS had placed the order. The vendor is communicated to directly deliver the suspension at Central Medical Store, DFW vendor has already supplied nearly 3.25 lac vials against the supply order of 5.0 lac vials. DFW has asked the vendor to wait for few days before rest of the consignment of drug is supplied at 2-Battery Lane. The vendor will resume the supply as per the direction issued by DFW in this context.
- **Tentative Timelines for receiving drugs, IEC material and reporting formats:**



- ✓ Transportation from central Medical Store, DFW to 10 ICDS Nodal Drop Points will be completed by 05th April 2015. Transportation from these Nodal points to Individual ICDS Projects will be completed by 07th April 2015. Further all the *Anganwadis* centres will receive the drugs by 10th April 2015.
- ✓ The process will be facilitated by CMO I/c Medical store cum CO Vehicle, DFW.

#### **Trainings:**

Dr. Gautam apprised the chair about the refresher trainings during the last phase and why it is important to impart the trainings during this round as well. He further sought the input of representatives from Department of Woman & Child Development and NGO Partner – De Worm the World Initiative to collectively decide the dates for state level trainings for CDPOs and Lady Supervisors (LS). It was unanimously decided to conduct the training on 18<sup>th</sup>, 19<sup>th</sup>, 20<sup>th</sup>, 23<sup>rd</sup> and 24<sup>th</sup> of March. The trainings will be done in two batches over five days and total 349 WCD officials (52 CDPOs and 279 LS) will be trained. Training plan/agenda will be divided into two sessions; first session on technical details on Deworming will be facilitated by the De Worm the World Initiative and second session on review of WIFS program including performance during previous phases, how to improve upon the last phase, importance of mobilizing out of school children & adolescents as well as children and adolescents enrolled in private schools, if they wish to be a part of the program voluntarily. Second session shall also include discussion on how to fill correctly all the reporting formats as well as the time lines for report submission.

Further representatives from Department of Woman & Child Development agreed to complete lower cascade trainings by 7<sup>th</sup> April 2015.

#### **Role of ASHA workers:**

Role of ASHA was discussed in detail for mobilizing and covering non-enrolled children (out of school adolescent boys and girls aged 10-19 years and non-enrolled 3-10 years children) from the community. The participants also discussed on the provision of financial incentives for the ASHAs subject to the coverage of specific percentage of non-enrolled children. There was difference of opinion in the participants present over the lack of clarity in denominator to decide the incentive. Also, the incentives to be given to ASHA worker and not the AWW was discussed in detail. DFW, decided to take it forward in their internal discussions and get back to stakeholders.

Group raised concerns about the areas where neither AWC nor schools are will cover the population; how the out of school children will be dewormed in such areas. The group discussed various ways to cater to this population like mobilization of the children to nearest health centre/ AWW or doing a door-to-door community based approach; It was discussed that there are challenges attached with this approach as school/ *Anganwadi* based deworming program is a cost-effective programme as compared to door-to-door, Mrs. Asha Saxena, CDPO asked if de worming could be undertaken in 11 districts in a manner so as to cover one district in each month. Dr. Gautam clarified that the advantage of the campaigns in pulse mode is whole system is better prepared to tackle any case of adverse events etc. Such massive arrangements cannot be made twice every month for a particular



Public Health Program. Further, due to lack of mutual understanding the decision was not taken. DFW to discuss internally and make best feasible decision in this regard.

Also, it was decided to orient the MOICs on 17<sup>th</sup> March (at a training session on Mission Indradhanush program). The ASHAs will be trained on their role in the monthly refresher trainings for the month of March/April 2015. **Resource Material for Refresher Training to be provided by Adolescent Health Section, DFW.**

#### **IEC activities:**

IEC activities will include the following-

- ✚ **Audio spot:** Broadcast through 3 FM Channels to be started 4-5 days prior to Deworming Day.
- ✚ **Newspaper Advertisement:** Advertisement to be carried out in select dailies in Hindi, English, Urdu & Punjabi on 15<sup>th</sup> April 2015 i.e. one day prior to the Mass Deworming day so as to ensure that general public has before hand information of the campaign. Both the above Mass Media Activities to be carried out jointly by DHS & DFW for which financial expenditure shall be borne by DHS.
- ✚ **Banners:** 01 flex banner to be provided to each Anganwadi Centre (AWC).
- ✚ **Posters:** 01 poster to be provided to each Anganwadi Centre (AWC).
- ✚ **Handouts:** 100 handouts to be provided for each AWC for community awareness and mobilization. These to be distributed in the community by Anganwadi workers (AWWs) before Deworming Day.
- ✚ **SMS Connect:** Information regarding important dates i.e. Deworming Day & Mop-up day as well as information regarding the supply of drugs and other logistics and timely submission of reporting formats will be sent to ICDS functionaries at different levels and to ASHA workers through DFW portal and Deworm the World Initiative.
- ✚ **Launch Function by Hon'ble Chief Minister of Delhi on 15<sup>th</sup> April 2015**

In addition to aforementioned program, mid-media activities likes folk programs (street plays), Munadi and Interpersonal communication sessions shall be held at facility/district level.

#### **Adverse Event Management and Emergency Response System (ERS):**

Dr. Gautam, SPO (Adolescent Health) DFW explained about two types of adverse events viz. Mild & Severe Adverse Events. Director Family Welfare enquired about the system in place to tackle adverse event in case there are any. Dr. Gautam apprised the house that in case of any mild adverse events like vomiting, stomach ache etc. as practiced during last 2 phases the child should be managed at AWC level by providing ORS and safe drinking water and letting the child lie down in open shaded place. He further added that in face of any severe adverse event the child must be taken immediately to the nearest health centre/Dispensary, Govt. hospital. The reporting for any such event will be done through the concerned Public Health Facility only.

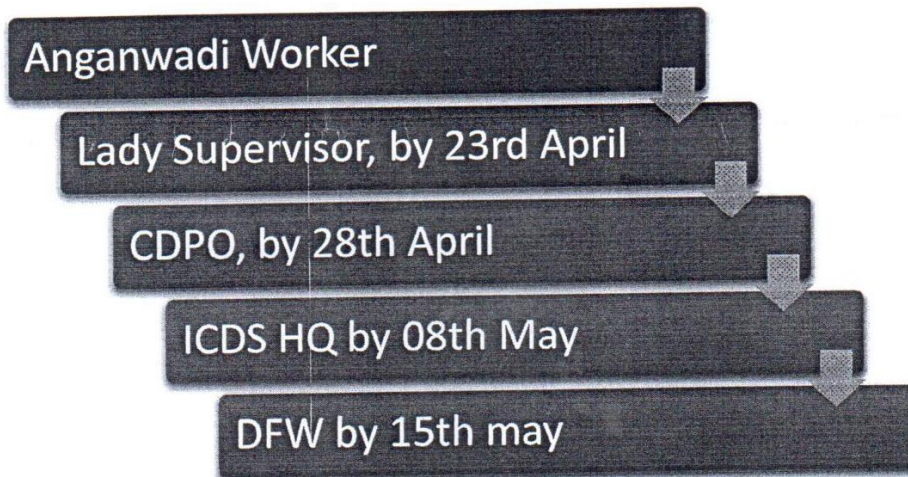
It was discussed that the hospitals, dispensaries and CATS ambulance will be on high alert during Deworming Day and Mop Up day. SPO (Adolescent Health) also apprised the house that all the Health Facilities across the agencies shall remain open from 8 am till 8 pm on both Deworming as well as Mop-up day.

An ERS kit including ORS, Tab./Susp. PCM, Tab./Susp. Domperidone 10 mg and Tab./Susp. Dicyclomine 10 mg will be available with the ASHA worker. It was re-emphasized that the nearest Health center/ dispensary shall be contacted in case of any adverse event.

It was suggested by Dr. O.P. Agarwal, Principal, H&FW Training Centre, DFW to have a relook at the present structure of Emergency Response System and instruct all ICDS functionaries instead to take the child directly to the nearest Public health facility in case of any adverse event severe or mild to avoid any delays. Dr. Gautam welcomed the suggestion and submitted that this policy decision shall be made after wider consultation and discussion during the forthcoming meeting of WIFS steering committee.

#### **Reporting Cascade and Timelines:**

Dr. Gautam, shared the timelines for the reporting cascade. The timelines are as follows-



Representatives from USAID raised concerns about the above reporting structure as it will not provide district wise coverage to the state. After much discussion and deliberations, it was agreed unanimously to follow a dual reporting structure that also provide district wise coverage, which is as under:





Two parallel reporting cascade to be followed- two copies of reporting form ("Anganwadi Reporting Prarop") to be prepared by AWW. The same to be submit to LS and ASHA one copy each. It must be ensured that entries made in both copies are same in each and every aspect..

#### Deworming Day Monitoring:

Dr. Gautam explained that monitoring on both Deworming Day and Mop-up- day will be done by

- **Government of India:** representatives from GoI will be visiting few AWCs to monitor the program.
- **Officers/officials from Department of WCD:** Officials from WCD state department will also visit few AWCs to monitor the program.
- **RCH Nodal officers:** RCH Nodal Officers will visit the AWCs and monitor the campaign.
- **Officers/Officials from DFW (HQ):** Similarly state officers/officials from DFW will be visiting and monitoring the program.
- **Deworm the World Initiative:** A team of Independent Monitors (external agency) will be hired by Deworm the World Initiative to carry out an Independent Monitoring of the deworming round. Along with Independent Monitors members of state and national program team will also visit few AWCs and monitor the program.
- **USAID:** For two High Priorities Districts i.e. North West and North East, monitoring of some AWCs will also be done by a team of USAID members.

#### Co-administration of Vitamin-A:

Dr. Gautam brought the idea of co-administration of Vitamin A and Albendazole to the table for discussion. With due consideration to the scientific evidence on the benefits of co-administration and recommendations of WHO for the same, it was discussed that the whole system (training, reporting etc.) need to be prepared if a co-administration is decided.


Director, Family Welfare suggested that since the idea has been tabled when time to get the whole system oriented, sensitized and trained is limited, it would be advisable to defer co-administration of vitamin-A along with albendazole. He also expressed concern that in case a particular adverse event occurs even due to vitamin A, the same may get wrongly attributed to Albendazole which may have some detrimental impact on program itself. Similar concerns were also raised by Principal H&FW Training Centre.

Representatives from Department of Woman & Child Development also expressed their inability to convince AWWs to administer vitamin-A as they are not trained to administer such drugs and lack confidence to do the same. It was also added that Vitamin A administration were undertaken in some districts affected by measles outbreak recently.

It was also brought to the notice of the house that during April Phase of "Mission Indradhanush" children especially 0-2 years of age anyways shall be covered with all due vaccines for their age along with other vaccines.

It was unanimously decided that co-administration through may be a forward looking idea may be deferred for this phase and wider consultations on this may be done for its implementation during the next phase.

The meeting ended with vote of thanks to chair and to the participants.

  
( Dr. Gautam Kr. Singh)  
SPO (Adolescent)



**Emergency Response System**  
**Standard Operative Guidelines for Mass  
De-worming 2015**

The school and Anganwadi based Mass De-worming Day is being observed on 16<sup>th</sup> April 2015 (Thursday) followed by Mop Up day 20<sup>th</sup> April 2015 (Monday) in Delhi.

For Mass De-worming in Delhi State Tab. Albendazole 400 mg which is chewable and palatable flavor will be administered to the students from Class 3<sup>rd</sup> to Class 12<sup>th</sup> (In-Schools) and above 7 years to 19 years for Out of School Children through Anganwadis.

Suspension Albendazole for class nursery to Class 2<sup>nd</sup> (In- School) and 1 to 7 years for Out of School Children through Anganwadis.

All hospitals of Delhi Govt./ MCD/ Central Govt./ NDMC, Dispensaries and CAT ambulance services will be on high alert on both Mass De-worming Day and Mop-Up Day. One M.O./ P.H.N/ A.N.M will be deployed for a cluster of four or five schools and they will visit each of their schools one or two days prior to Mass Deworming Day and exchange their contact no. with the Principals/ Nodal Teachers.

Though the drug Albendazole is a safe drug for Mass Administration with rare reporting of adverse events. The De-worming treatment has a very few side effects in Children. There may be some mild side effects like dizziness, nausea, headache, and vomiting, all likely due to the worms being passed through the child's body. They will all disappear after sometimes. These mild side effects can be managed in the schools itself.

In very rare cases there may be Serious Adverse Event which may be life threatening. These serious adverse event may be due to allergic reaction to drug, or acute intestinal obstruction due to worm load, choking if tablet is not chewed or more likely coincidental not related to De-worming. In such cases, the affected child should be separated from other children and stop De-worming activities in that school. The school Principals / Nodal Teachers should immediately call the ERS team (whose contact no. is already shared with the school) and transfer the child to the nearest linked Hospital by CATS ambulance (102). The child can also be transferred through any other vehicle in case there is delay in arrival of the ambulance.

#### Actions taken to strengthen ERS

##### Before programme

- Training- the State level Training for Master Trainers who will further conduct the Lower Cascade Orientation Trainings.
- Awareness generation through IEC (Print/ Electronic)
- Emergency Response System in Place.
- ERS on Public Domain.

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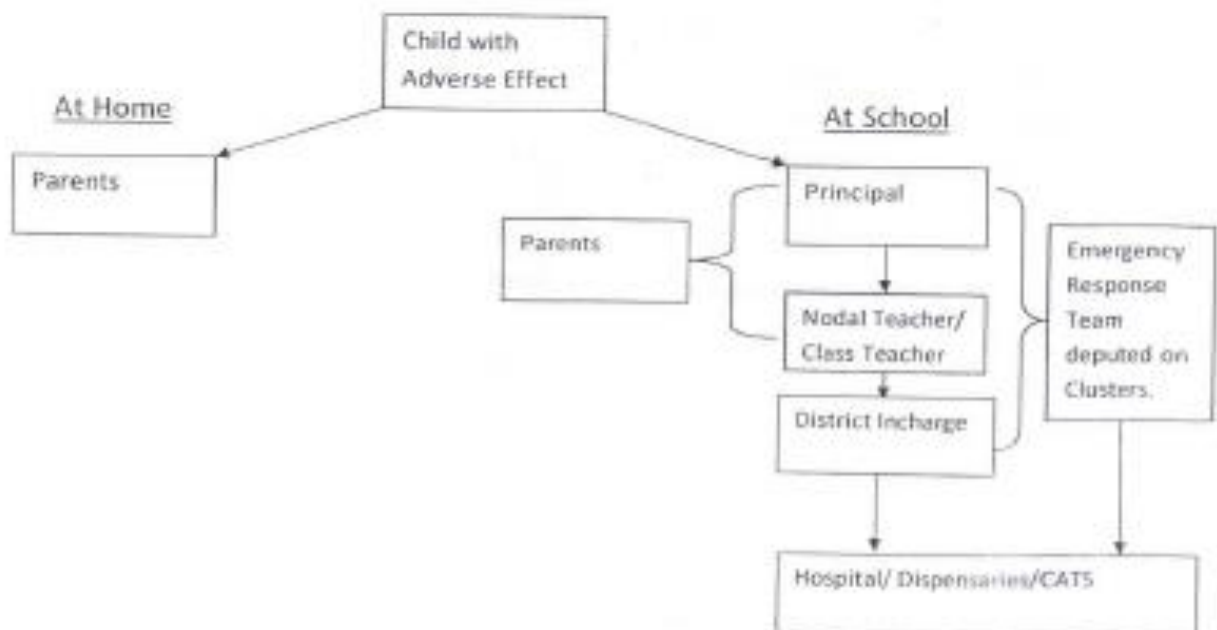


Emergency response team members-

1. Nodal teachers of school
2. Principals of school
3. District In-charges (SHS)
4. M.O. Incharge of Dispensaries
5. Medical Superintendents of District/ Tertiary Hospitals.
6. M.O. & PHNs from SHS and ANMs from CDMOs.

Deputation on 4 – 6 clusters of schools of M.O/PHN of SHS and ANMs of CDMOs for providing on the spot medical services. The teams are to be called for providing services in case of any adverse reaction. The deputed M.O/PHN/ANM will share the contact numbers to every school. Every school has been linked with a nearby First Referral Unit- i.e. Dispensaries/ District hospitals of Delhi Govt. in the vicinity of the schools. All children who experience serious adverse event to be transported to nearby linked district /tertiary hospital through CATS ambulance on call available on 102 or 1099.

**The management of adverse events by the Emergency Response Teams:**





### AT SCHOOL LEVEL

#### Activities before the programme

1. Ensure all Class Teachers are familiar with guidelines related to administration of tablets/syrup and precautions to be taken.
2. Emergency Response Committee to be constituted in the school.
3. Educate the students about programme in the assembly.
4. A parent teacher meeting should be held and parents be made aware.
5. Contact numbers of Emergency Response Team should be displayed at an appropriate place.
6. Contact numbers of all the nearby hospitals (government and private) should be available with the school/ CATS phone numbers.
7. Distribution of handouts.

#### ON THE DAY OF PROGRAMME

1. Adhere to the guidelines related to administration of tablets/syrup.
2. Please make sure that **children who are apparently looking not too well are not to be given Albendazole tablet/ suspension.**
3. Activate Emergency Response System.
4. Rooming in of the child reported with mild adverse event.
5. Give ORS/Drinking Water and observe for next two hours, the child will recover.
6. In case there is a need to shift the child to nearby dispensary or hospital, make arrangements for transportation of the children, by CATS, personal conveyance, private ambulances, auto/taxi etc whatever easily available.
7. Coordinate with the Emergency Response Team M.O. / PHNs/ ANMs & District Incharges for smooth and prompt response.
8. Proper documentation of adverse events should be done.
9. Inform parents of the children.

#### SHS District In-charge

#### Activities before the programme

1. Ensure prior preparations of the teams for ERS.
2. Share phone numbers of teams & themselves with Schools.
3. Ensure every team is equipped with basic drugs which may be required that day.

### ON THE DAY OF PROGRAMME

1. Ensure Health Teams are in place on the day of administration of tablet/syrup.
2. In case of information of adverse event, inform the deputed Emergency Team Members for the management of adverse event nearby SHS team to the School for co-ordination.
3. Supervision and monitoring of the Mass De-worming Programme may be done physically by the district in-charges by visiting the schools.

### Standard Operative Guidelines for dispensaries

Ensure that Dispensary In-charges have information regarding the programme (Mass De-worming) and remain alert on De-worming Day (16<sup>th</sup> April 2015) and Mop- Up Day (20<sup>th</sup> April 2015).

Ensure availability of basic drugs in the dispensaries/health centres and with the mobile health teams for De-worming Programme.

- ORS Packets
- Tab Dicyclomine 10mg
- Tab Domstal 10mg
- Tab/ Syrup Paracetamol

All Delhi Govt. Dispensaries to remain open till 8 PM on 16<sup>th</sup> April 2015 and 20<sup>th</sup> April 2015.

- Prompt priority-based response to cases of adverse effects.
- Ensure accurate reporting of the incident.

### ROLE OF PARENTS

1. In case of an adverse effect at home, the parents should take the child to the nearest available health unit.

### CATS

#### Activities before the programme

1. Dissemination of information to the CATS staff regarding the Mass De-worming Programme and ERS i.e. for transportation of children with adverse effects to the nearest health facility.

### ON THE DAY OF PROGRAMME

CATS ambulances will be stationed at major points for prompt transportation of children with adverse effects.

### HOSPITALS

#### Activities before the programme

1. Dissemination of information to the staff regarding the programme and ERS.
2. The Chief Casualty Medical Officer may be designated as Nodal Officer for the programme in the hospital who will put on alert the Emergency Department & will make all necessary arrangements.

### ON THE DAY OF PROGRAMME

1. Prompt priority-based response to cases of adverse effects.
2. Ensure accurate reporting of the incident in the prescribed serious adverse reporting proforma.

#### Advisory Central Control Room

1. The staff posted at central control room to strictly follow the duty roster.
2. Punctuality to be maintained strictly.
3. The staff in control room will inform the adverse events to Additional Director, SHS on his mobile no. 8745011351.
4. Documentation to be done properly and handing over of the register to Monitoring Branch, School Health Scheme Head Quarter.
5. Register from central control room to be reserved and kept in a safe custody/ confidentiality to be maintained.
6. All Documentation regarding adverse effects to be done in the prescribed format.

#### Prerequisites to strengthen Emergency Response System:

- All Delhi Govt. Dispensaries to remain open till 8 PM on 16<sup>th</sup> April 2015 and 20<sup>th</sup> April 2015.
- All MCD Dispensaries, M & CW, polyclinics, T.B clinics to remain open.
- Stationing of Mobile Dispensaries with their staff in each School Health Scheme District.

- **CATs Ambulance-** CATs Ambulance to be stationed at strategic points for transporting the children reporting adverse events.
- **Hospitals secondary and tertiary level-** All hospitals of Delhi Govt./ MCD/ Central Govt./ NDMC to be kept in high alert, with Chief Casualty Medical Officer as Nodal Officer with Mobile No., available for 24 hrs. In case there is no nearby center, the student to be taken to nearby nursing home /Pvt hospital for stabilizing and providing free of cost treatment.
- **Linkage of Anganwadis:** All Anganwadis to be linked with nearest health facility by Directorate of Family Welfare, GNCT Delhi.





Times of India

## Govt's deworming drive to cover 3.7-mn kids

New Delhi, 15 April: Targeting more than 35 lakhs school children, the Delhi government today launched the mass deworming drive. During this programme a Albendazole 400 mg tableted will be administered to the school kids between 7-19 years of age. Those who don't go to school can get the medicine from the Anganwadi. The people of Delhi would soon prefer to go for government schools and hospitals as they will be made "far better than private ones", health minister, Satyendra Jain, said while launching the drive. "It has become a fashion now to attend private schools. Soon, people of Delhi would prefer government schools and hospitals as we would make them far better than private ones", he said at the launch of the state-level programme of the 'National Deworming Day'. The programme is receiving technical assistance from Evidence Ac-

tion's Deworm the World Initiative. Delhi government aims to deworm 3.7 million children as part of the drive. At the event here at the Government Sarvodaya Co-ed Vidyalaya, Jain underlined that government schools can equip students to reach any height even as he said that he had studied at one himself. "I have spoken to my officials and we plan to implement the programme in private schools also next month," Jain said. Priya Jha, Country Director of India Programmes for Evidence Action's Deworm the World Initiative, said, "This de-worming round is critical for the health and well-being of Delhi's children. Regular deworming together with improved water, sanitation and health education, can significantly reduce the prevalence and detrimental health impacts of parasitic worms in children."

The Statesman

### HEALTH MIN LAUNCHES DE-WORMING PROGRAMME

Delhi Health Minister Satyendar Jain launched the Mass Deworming Programme Round Third for children of school and pre-school age on Wednesday at Sarvodaya Vidyalaya, New Multan Nagar. It is expected to cover 35 lakh children of Government and Government-aided schools, MCDs, NDMC, Cantonment Board Schools and anganwadis. For mass de-worming in Delhi, Tab. Albendazole 400 mg which is chewable and palatable flavor would be administered to the students from Class 3rd to class 12th (In-Schools) and above 7 years to 19 years for out-of-school children through anganwadis and suspension Albendazole for class Nursery to class 2nd (in-school) and 1 to 7 years for out-of-school children through anganwadis.



The Pioneer

## Govt kicks off de-worming drive; to cover 3.7 mn kids

OUR CORRESPONDENT programme of the 'National Deworming Day'. The programme is receiving technical assistance from Evidence Action's Deworm the World Initiative. Delhi government aims to deworm 3.7 million children as part of the drive. At the event here at the Government Sarvodaya Co-ed Vidyalaya, Jain underlined that government schools can equip students to reach any height even as he said that he had studied at one himself. He also emphasised to the students the importance of the de-worming programme, which will cover 11,500 anganwadis and 3,032 schools across 12 districts of Delhi on Thursday. A mop-up day has been scheduled for April 20. "I have spoken to my officials and we plan to implement the programme in private schools also next month," Jain said. Priya Jha, Country Director of India Programmes for Evidence Action's Deworm the World Initiative, said, "This de-worming round is critical for the health and well-being of Delhi's children. Regular de-worming together with improved water, sanitation and health education, can significantly reduce the prevalence and detrimental health impacts of parasitic worms in children." Apart from Delhi, 11 other states/UTs -- Assam, Bihar, Chhattisgarh, Dadra & Nagar Haveli, Haryana, Karnataka, Maharashtra, Madhya Pradesh, Rajasthan, Tamil Nadu and Tripura -- are taking part in the first phase of the National Deworming Day, which aims to cover 140 million children for treatment for parasitic worms.

Hindustan

## 35 lakh kids get de-worming tab

**HT Correspondent**  
htreporters@hindustantimes.com

**NEW DELHI:** Around 35 lakh children were given de-worming medicine under the Delhi government's third round of mass de-worming programme for school and pre-school children on Wednesday. Over 3,300 schools participated in the programme. Community workers gave tablet Albendazole 400 mg, which is chewable and palatable, to the students from Class III to class XII and out-of-school chil-

dren between the age group of 7 years and 19 years through Anganwadis. Suspension Albendazole were administered to children from nursery to class II and out-of-school children from 1 to 7 years. "School-based de-worming is a simple, safe and cost-effective solution. At a very low cost for each child per year, we can improve the health and education of millions of children. Achieving massive results at a low cost is possible by leveraging the existing educational infrastructure and training teachers to deliver de-worming medication," said Delhi health minister Satyendra Jain. "School-based de-worming is also one of the cost-effective ways to increase attendance at schools. De-worming a child leads to an average increase of 12 per cent in the hours worked each week as a young adult. "And among wage earners who were de-wormed as children, average earnings are 23 per cent higher than for their counterparts who were not given the anti-worm medicine," the minister said.

Millennium Post



Amar Ujala







## अक्सर पूछे जाने वाले सवाल जवाब (FAQs)

प्र - 1: डिवर्मिंग डे ?

उ - 1: एक दिन पर किया जाने वाला कृमि नाशन कार्यक्रम / फिक्स्ड डिवर्मिंग डे।

लक्ष्य : सभी सरकारी स्कूलों और आगनवाड़ी केन्द्रों में 1 से 19 साल के बच्चों की बेहतर सेहत, पोषण, स्कूल में बच्चों की उपस्थिति में बढ़ोतरी और बेहतर जीवन हो।

प्र - 2: डिवर्मिंग डे कब है ?

उ - 2: डिवर्मिंग डे सालाना तौर पर 16 अप्रैल 2015 को घटित किया जा रहा है।

प्र - 3: कृमि क्या होते हैं ?

उ - 3: कृमि परजीवी होते हैं, जो भोजन और जीवित रहने के लिए मनुष्य की आंतों में रहते हैं। कृमि मानव शरीर के जरूरी पोषक तत्वों को खाते हैं, जिससे खून की कमी, कुपोषण तथा वृद्धि में रुकावट होती है।

प्र - 4: ये कैसे फैलते हैं ?

उ - 4: कृमि संक्रमण गन्दगी के कारण होता है। संक्रमण मिट्टी के संपर्क द्वारा कृमि संक्रमण संचारित होता है।

- अंकुश कृमि (हुक वर्म)
- विप कृमि (विप वर्म)
- गोल कृमि (राउंड वर्म)

प्र - 5: कृमि संचरण चक्र ?

उ - 5: एक संक्रमित व्यक्ति की शौच में कृमि के अंडे होते हैं। यह अंडे मिट्टी में विकसित हो जाते हैं।





अन्य व्यक्ति संक्रमित भोजन से, गंदे हाथों से या फिर त्वचा के लार्वा (विकसित अंडे) के संपर्क में आने से संक्रमित हो जाते हैं। एक संक्रमित व्यक्ति में, लार्वा बड़े कृमि में विकसित हो जाते हैं और इस व्यक्ति के आँत में रहते हैं।

**प्र-6: कृमि संक्रमण को फैलने से कैसे रोकें ?**

**उ-6:** सफाई वयवस्था को बेहतर बनाकर कृमि के संक्रमण को फैलने से रोकने के कई तरीके हैं, जिनमें शामिल है :

- हाथ धोने, खास तौर पर खाना खाने से पहले और शौच जाने के बाद
- स्वच्छ शौचालय का प्रयोग करे
- जूते-चप्पल पहने
- साफ व शुद्ध पानी पीएँ
- पूरी तरह से पका हुआ भोजन खाएँ
- साफ व शुद्ध पानी में सब्जियां व फल धोएँ
- नाखून साफ और छोटे रखे

**प्र-7: कृमि संक्रमण से होने वाले हानिकारक प्रभाव क्या है ? बच्चों को कृमि मुक्त करना क्यों जरूरी है ?**

**उ-7:** कृमि संक्रमण बच्चों के स्वास्थ्यए पोषण और शिक्षा में बाधा डालते हैं कृमि से खून की कमी तथा कुपोषण हो सकता है। जिसके मानसिक और शारीरिक विकास पर नकारात्मक प्रभाव पड़ता है। कुपोषित और खून की कमी वाले बच्चों का अक्सरवजन कम हो होता है और विकास में रुकावट आती है। तीव्र संक्रमण के कारण बच्चे अधिक थके हुए रहते हैं जिनके कारण वे स्कूल में ध्यान नहीं लगा पाते या बिल्कुल भी स्कूल नहीं जा पाते। जिन बच्चों में कृमि संक्रमण का इलाज प्राप्त कर सकते हैं,।

**प्र-8: कृमि संक्रमण का बच्चों के लिए क्या इलाज है?**

**उ-8:** उम्र के हिसाब से दवा की खुराक दें।



- नर्सरी कक्षा से दूसरी कक्षा तक के बच्चों को सर्स्पेंसन अल्बेंडाज़ोल दवाई की पूरी शीशी अच्छे से हिलाकर दें।
- तीसरी कक्षा से बारहवीं कक्षा तक के बच्चों को पूरी टेबलेट 400mg अल्बेंडाज़ोल दें व बच्चों को बोले के गोली चबा कर खाए।

प्र - 9: क्या बच्चे के लिए बिना भोजन खाए कृमि नियंत्रण गोली लेना सुरक्षित है?

उ - 9: खाली पेट कृमि नियंत्रण गोली ली जा सकती है।

प्र - 10: क्या डिवर्मिंग गोली किसी बीमार बच्चे को दी जानी चाहिए?

उ - 10: यदि कोई बच्चा बीमार है, तो उसे कृमि नियंत्रण गोली न दें।

प्र - 11: यदि किसी बच्चे को डी-वॉर्मिंग के बाद कोई साइड इफेक्ट होती है तो अध्यापक को क्या करना चाहिए?

उ - 11: दवाई के विपरीत प्रभाव के गंभीर लक्षण दिखाई देने पर नियंत्रण कक्ष के दूरभाष संख्या पर संपर्क करें - **22307145**.

- पीड़ित बच्चों को समीप के चिकित्सालय ले जाने के लिए 102/1099 एम्बुलेंस संख्या पर संपर्क करें।

प्र - 12: क्या कृमि संक्रमण के इलाज़ के कोई साइड इफेक्ट हैं?

उ - 12: कुछ मामूली साइड इफेक्ट हो सकते हैं जैसे चक्कर आना, जी मिचलाना, सिरदर्द, और उलटी होना। ये साइड इफेक्ट कुछ समय बाद ठीक हो जाते हैं।

प्र - 13: यदि बच्चे को गोली देने के बाद गोली अटक जाती है तो क्या करना चाहिए?

उ - 13: बच्चे के गले में गोली अटकने पर बच्चे को छाती के बल अपनी गोद में लिटाएं।

- अपनी हथेली से बच्चे की पीठ थपथपाए जिससे गोली निकल आए।



प्र - 14: अध्यापकों के साथ -साथ, स्वस्थ कर्मचारी इलाज़ क्यों दे रहे हैं?

उ - 14: बच्चे अपने अध्यापकों के साथ सहज होते हैं, और समुदाय व माता पिता को उन पर काफी विश्वास होता है। अध्यापक आसानी से बुनियादी प्रशिक्षण के साथ बच्चों को कृमि नियंत्रण दवाइयाँ दे सकते हैं।

प्र - 15: सभी बच्चों को इलाज़ करने की आवश्यकता क्यों है, जबकी कुछ बच्चे बीमार भी नहीं प्रतीत होते?

उ - 15: हो सकता है कृमि के प्रभाव तुरंत दिखाई न दें, लेकिन वे बच्चों के स्वास्थ्य, शिक्षा और संपूर्ण विकास को लंबे समय तक नुकसान पहुंचा सकते हैं।

## कृमि से मुक्ति, बच्चों को भाक्ति कृमि मुक्ति कार्यक्रम, 16 अप्रैल 2015

आंगनवाड़ी केन्द्रों में पंजीकृत 1 से 19 वर्ष के सभी बच्चों व गैर पंजीकृत बच्चे जो स्कूल में नामांकित नहीं हैं, को 'अल्बेंडाजोल' की दवा निःशुल्क दी जा रही है।

### बच्चों की सेहत पर कृमि के हानिकारक प्रभाव

- खून की कमी (अनीमिया)
- भूख न लगना
- पेट में दर्द, मितली (जी मचलना), उल्टी व दस्त
- कुपाषण
- थकान व बेचैनी
- मल में खून आना
- पेट में सूजन



### बच्चों को डीवर्मिंग के फायदे

- खून की कमी से बचाव
- भूख बढ़ना
- चुस्ती-फुर्ती
- बीमारियों से लड़ने की क्षमता बढ़ना
- बेहतर शारीरिक व मानसिक विकास
- स्कूल, आंगनवाड़ी व कार्यस्थल में उपस्थिति बढ़ना

### कृमि संक्रमण से बचाव के तरीके

- शौच के बाद तथा खाने से पहले हर बार साबुन से हाथ धोएं।
- फलों एवं सब्जियों को प्रयोग से पहले साफ पानी से अच्छी तरह धोएं।
- पीने के लिए साफ एवं स्वच्छ जल का ही प्रयोग करें।
- नाखून छोटे व साफ रखें
- खुली जगह में शौच न करें/शौचालय का प्रयोग करें/शौचालय व उसके आस-पास सफाई रखें।
- खाली पैर न घूमें/जूते-चप्पल का प्रयोग करें।

आंगनवाड़ी कार्यकर्ता/माता-पिता/अभिभावक सुनिश्चित करें कि जिन बच्चों को 16 अप्रैल यानी डीवर्मिंग डे पर पर दवा नहीं दी जा सकी है उन्हें 20 अप्रैल यानी मॉप-अप डे के दिन ये दवा अवश्य खिलाएं/दिलवाएं।



अल्बेंडाजॉल की एक खुराक कृमि से मुक्ति दिलाने में मदद करती है



### कृमि नियंत्रण की दवाई खाने से मामूली साइड इफेक्ट्स

दवाई लेने के बाद कुछ बच्चे हल्का पेट दर्द, मितली, उल्टी, दस्त और थकान महसूस कर सकते हैं। ये सामान्य से साइड इफेक्ट होते हैं।

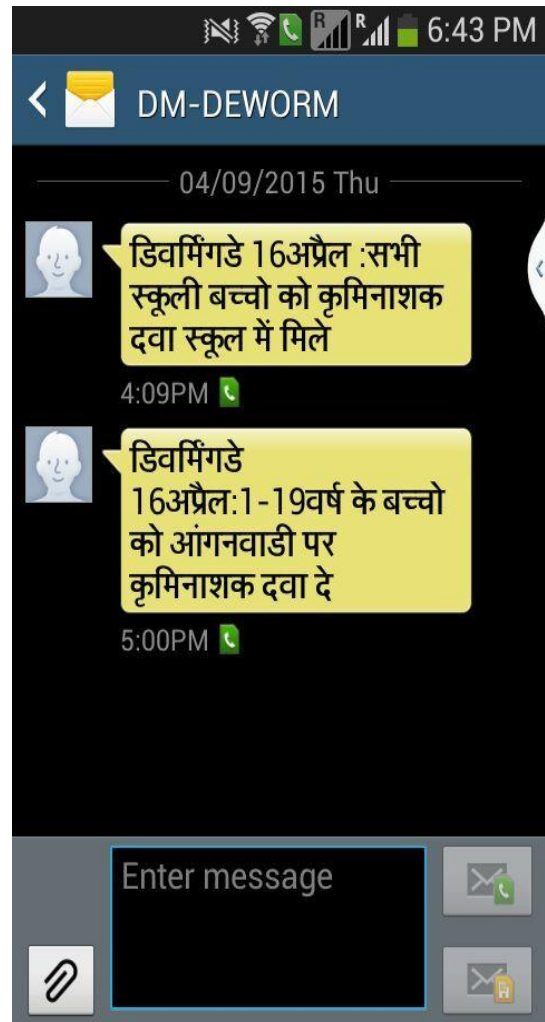
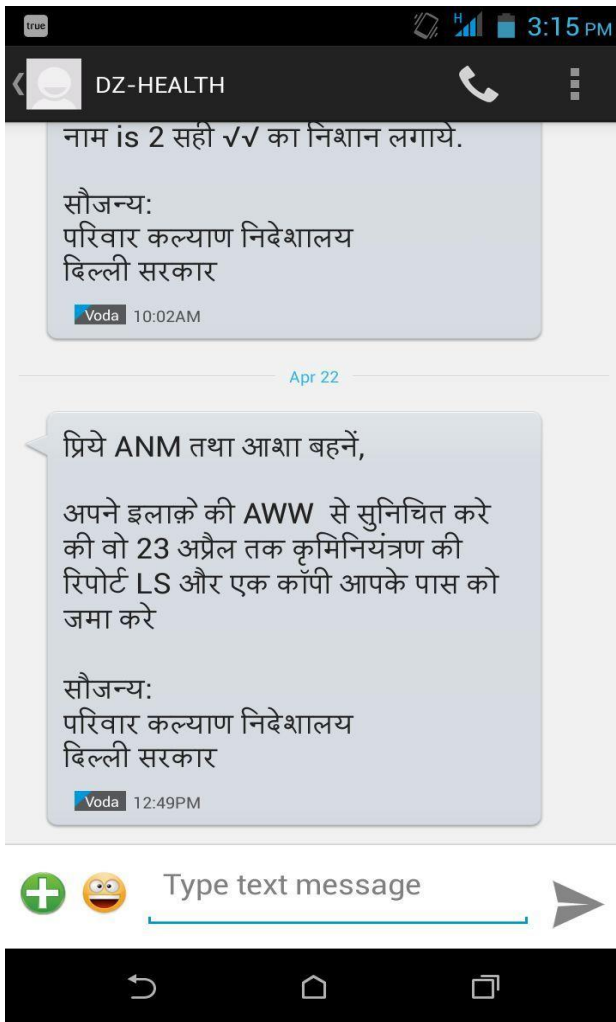






Trainings at state and block level





## Annexure J1:

## Analysis of Independent Monitoring Data

<b>Table SA-1: Sample Sizes During Independent Monitoring</b>	<b>No. of schools visited</b>	<b>No. of Headmasters/ Teachers Interviewed</b>	<b>No. of school children interviewed</b>	<b>No. of <i>Anganwadis</i> visited</b>
Deworming day	58	58	58 (1 child per school)	61
Mop-up day	89	89	89 (1 child per school)	90
Coverage validation	253	253	759 (3 children per school)	249
<b>Total</b>	<b>400</b>	<b>400</b>	<b>906</b>	<b>400</b>

<b>Table S1: Training Related Indicators</b>	<b>Deworming Day (N=58)</b>	<b>Mop-Up Day (N=89)</b>	<b>Aggregate (DD+MUD)</b>
<b>Indicators</b>	<b>Percentage</b>	<b>Percentage</b>	<b>Percentage</b>
<b>Response from the headmasters/principals interviewed:</b>			
<b>Attended training for deworming program</b>	<b>84.5</b>	<b>92.1</b>	<b>89.1</b>
<b>For schools that didn't attend training, reasons were:</b>			
Problem with the location of training	11.1	14.3	12.5
Problem with the timing of training	11.1	42.9	25.0
Weren't aware of the date of training	55.6	28.6	43.8
Problem due to monetary constraints	11.1	14.3	12.5
Attended training in last year	11.1	14.3	12.5
<b>Response from the teachers interviewed:</b>			
<b>Training status of teachers who were conducting deworming:</b>			
Teachers who were trained at official level training	43.1	50.6	47.6
Teachers trained by headmaster or other teachers	41.4	44.9	43.5
Teachers who did not receive training	15.5	4.5	8.8
<b>Based on monitor's observation:</b>			
<b>Deworming activities were taken place in the class</b>	<b>87.9</b>	<b>75.3</b>	<b>80.3</b>
<b>Type of health education about deworming had given</b>			
Harmful effects of worms	70.6	61.2	65.3
How worms get transmitted	72.5	70.1	71.2
Benefits of deworming	80.4	76.1	78.0
Methods of STH prevention	51.0	53.7	52.5
No health education given	5.9	7.5	6.8
<b>Percentage of teachers who identified sick children before administering the tablet</b>	<b>84.3</b>	<b>100.0</b>	<b>93.2</b>
<b>If there were sick children, the response of the teacher:</b>			
Separate the children	41.9	32.8	36.4
Give the medicine	7.0	0.0	2.7
Did not give the medicine	46.5	56.7	52.7
Send back to home	2.3	0.0	0.9
Others	2.3	10.4	7.3
<b>Schools where the drug was being given by teachers/headmasters</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Teachers who told the children to chew the tablets before swallowing it</b>	<b>91.5</b>	<b>100.0</b>	<b>96.4</b>
<b>Teachers who followed the correct recording protocol of ticking (single tick on Deworming Day and double tick on Mop-Up Day)</b>	<b>84.3</b>	<b>85.1</b>	<b>84.7</b>
<b>Schools where children were given less than prescribed dose of albendazole</b>	<b>5.9</b>	<b>0.0</b>	<b>2.5</b>
<b>Schools where children were given more than prescribed dose of albendazole</b>	<b>2.0</b>	<b>0.0</b>	<b>0.8</b>

For Schools

<b>Table S2: Awareness Related Indicators</b>	<b>Deworming day(N=58)</b>	<b>Mop-up day(N=89)</b>	<b>Aggregate (DD+MUD)</b>
<b>Indicators</b>	<b>Percentage</b>	<b>Percentage</b>	<b>Percentage</b>
<b>Response from the headmasters/principals interviewed:</b>			
<b>Different sources of information about the recent round of deworming</b>			
Departmental communication	36.2	40.4	38.8
Radio	17.2	14.6	15.6
Newspaper	25.9	25.8	25.9
Banner	48.3	51.7	50.3
SMS	65.5	66.3	66.0
Training	56.9	62.9	60.5
Others	10.3	14.6	12.9
<b>Awareness about different ways of STH infection</b>			
Having foods without washing hands	94.8	95.5	95.2
Not washing hands after using toilets	87.9	87.6	87.8
Not using sanitary latrine	53.4	55.1	54.4
Moving in bare feet	67.2	62.9	64.6
Consume vegetables and fruits without washing	29.3	62.9	49.7
Having long and dirty nails	55.2	57.3	56.5
Others	8.6	4.5	6.1
<b>Discussed about deworming in the last parent-teacher meeting</b>	70.7	75.3	73.5
<b>Banner visibility</b>			
Schools in which the banner was clearly visible to all	94.2	88.2	90.4
Schools in which the banner was partially visible/hidden in a room	1.9	11.8	8.1
Schools in which the banner was not posted/visible	3.8	0.0	1.4
<b>Received SMS about deworming program</b>	75.9	82.0	79.6
<b>Schools where handouts about deworming program was available</b>	58.6	62.9	61.2
<b>Response from the teachers interviewed:</b>			
<b>Awareness about different ways of STH infection</b>			
Having foods without washing hands	91.4	95.5	93.9
Not washing hands after using toilets	79.3	71.9	74.8
Not using sanitary latrine	53.4	51.7	52.4
Moving in bare feet	65.5	70.8	68.7
Consume vegetables and fruits without washing	63.8	61.8	62.6
Having long and dirty nails	63.8	57.3	59.9
Others	3.4	0.0	1.4
<b>Teachers aware that if child is unwell could not give her/him the deworming tablet</b>	96.6	100.0	98.6

Teachers aware that one deworming tablet/syrup were to be given	96.6	100.0	98.6
Response from the children interviewed:			
Children who knew what the medicine was for deworming	85.7	100.0	94.2
Children who had heard of deworming before deworming day /before mop-up day	67.3	83.1	77.3
Children who had heard of deworming on deworming day/mop-up day	28.6	16.9	21.2
The following are the mediums through which children became aware of deworming-			
Teacher/school	95.9	94.0	94.7
Radio	4.1	7.2	6.1
Newspaper	8.2	8.4	8.3
Banner	30.6	33.7	32.6
Parents/siblings	20.4	18.1	18.9
Friends/relatives	6.1	2.4	3.8

Table S3: Reporting Indicators	Deworming day(N=58)	Mop-up day(N=89)	Aggregate (DD+MUD)
Indicators	Percentage	Percentage	Percentage
Schools where school reporting form was available	81.0	86.5	84.4
Respondents who were aware of the last date of submission of school reporting form	63.8	65.2	64.6
Respondents who were aware of whom to submit the school reporting form to			
Zonal officer	63.8	68.5	66.7
School inspector	22.4	30.3	27.2
Any other person	3.4	1.1	2.0
Respondents who were aware of one copy of school reporting form to be submitted	75.9	83.1	80.3
Respondents who were aware that a copy of school reporting form have to retain in the school	69.0	76.4	73.5



Table S4: Drug availability and storage Indicators	Deworming Day (N=58)	Mop-up Day (N=89)	Aggregate (DD+MUD)
Indicators	Percentage	Percentage	Percentage
Response from the headmasters/principals interviewed:			
Respondents who got information about drug delivery at official training for deworming	67.2	87.6	79.6
Schools received deworming tablets / syrups	96.6	100.0	98.6
According to the drug packets, the expiration date was			
Before deworming day /before mop-up day	0.0	0.0	0.0
After deworming day /after mop-up day	100.0	100.0	100.0
Schools received deworming drug at the official level training	69.6	71.9	71.0
Schools received deworming drug, delivered by the zonal officer/school inspector	28.6	23.6	25.5
Schools where children got deworming tablet on deworming day/ mop-up day	96.6	100.0	98.6
The followings were available on the schools			
ORS	87.8	100.0	95.0
Tab. PCM	59.2	63.4	61.7
Tab. DOMSTAL 10 mg	28.6	21.1	24.2
Tab. DICYCLOMINE 10 mg	16.3	14.1	15.0
Based on monitor's observation			
Schools where the monitor observed spoiled tablets was			
Thrown away	43.1	4.5	21.2
Given to children	2.0	0.0	0.8
Left on the floor	0.0	0.0	0.0
Kept in some other place	7.8	1.5	4.2
Response from the children interviewed:			
Percentage of children got deworming tablet/syrup	96.6	93.3	94.6
Percentage of children who received medicine from the teacher/headmaster	98.2	100.0	99.3
Percentage of children consume deworming medicine	100.0	100.0	100.0
Percentage of children received deworming tablet	89.3	94.0	92.1
Percentage of children received deworming syrup	8.9	6.0	7.2
Percentage of children chewed tablet before swallowing	86.3	85.9	86.0

Table S5: Adverse Events related Indicators	Deworming day(N=58)	Mop-up day(N=89)	Aggregate (DD+MU D)
Indicators	Percentage	Percentage	Percentage
Response from the headmasters/principals interviewed:			
Percentage of headmaster who did not think there could be adverse effects due to deworming	67.2	73.0	70.7
Headmasters who believed the following to be the adverse effects of deworming			
Mild abdominal pain	89.5	95.8	93.0
Nausea/vomiting	63.2	79.2	72.1
Diarrhea	36.8	29.2	32.6
Fatigue	52.6	25.0	37.2
When asked about their response in case a student suffers from adverse effects, the headmasters answered:			
Make the child lie down in shade	56.9	58.4	57.8
Give ORS	55.2	57.3	56.5
Take the child to the hospital immediately	67.2	60.7	63.3
When asked about their response in case a student continues to suffer from adverse effects, the teachers answered :			
Call PHC or emergency number	51.7	62.9	58.5
Take the child to the hospital immediately	75.9	82.0	79.6
Schools prepared ERS (emergency response system) contact list	77.6	71.9	74.1
Schools where ERS (emergency response system) contact list were posted	75.6	79.7	78.0
Based on monitor's observation			
Percentage of teachers who did not identify sick children before administering the tablet	15.7	0.0	6.8
Schools where the monitor observed types of adverse event			
Stomach ache	9.8	10.4	10.2
Nausea	7.8	1.5	4.2
Vomiting	7.8	3.0	5.1
Diarrhea	2.0	0.0	0.8
Response from the teachers interviewed			
Percentage of teachers aware about unwell children could not get the deworming tablet	96.6	100.0	98.6
Percentage of teachers who thought it was acceptable for sick children to be dewormed	1.7	0.0	0.7
Percentage of teachers who did not think there could be adverse effects due to deworming	44.8	60.7	54.4

<b>Teachers who believed the following to be the adverse effects of deworming</b>			
Mild abdominal pain	81.3	88.6	85.1
Nausea/vomiting	81.3	80.0	80.6
Diarrhea	31.3	14.3	22.4
Fatigue	34.4	20.0	26.9
<b>When asked about their response in case a student suffers from adverse effects, the teachers answered:</b>			
Make the child lie down in shade	58.6	57.3	57.8
Take the child to the hospital immediately	65.5	79.8	74.1
<b>When asked about their response in case a student continues to suffer from adverse effects, the teachers answered :</b>			
Call PHC or emergency number	57.4	53.9	55.2
Take the child to the hospital immediately	72.2	74.2	73.4

<b>Table S6: Effectiveness of Training and IEC materials</b>	<b>Deworming day(N=58)</b>	<b>Mop-up day(N=89)</b>	<b>Aggregate (DD+MUD)</b>
<b>Indicators</b>	<b>Percentage</b>	<b>Percentage</b>	<b>Percentage</b>
<b>Response from the headmasters/principals interviewed:</b>			
Attended training for deworming program	84.5	92.1	89.1
<b>Perceived usefulness of training for deworming</b>			
Strongly disagree	5.2	6.7	6.1
Disagree	1.7	0.0	0.7
Agree	36.2	33.7	34.7
Strongly agree	43.1	51.7	48.3
<b>Received SMS about deworming program</b>	75.9	82.0	79.6
<b>Number of SMS received</b>			
Less than four	36.4	21.9	27.4
Four to eight	38.6	35.6	36.8
More than eight	22.7	42.5	35.0
<b>Preferred time to receive SMS</b>			
Morning	59.1	67.1	64.1
Afternoon	47.7	24.7	33.3
Evening	36.4	38.4	37.6
Not to prefer SMS	2.3	4.1	3.4
<b>Most useful things recall from the SMS</b>			
Dates of deworming	90.9	82.2	85.5
Availability of handouts/drugs	63.6	53.4	57.3
Availability of reporting format	43.2	53.4	49.6
Benefits of deworming	56.8	52.1	53.8
Drug dosage and administration	45.5	53.4	50.4
Adverse event management	25.0	34.2	30.8

<b>Perceived helpfulness of SMS providing information about deworming</b>			
Strongly disagree	2.3	6.8	5.1
Disagree	2.3	1.4	1.7
Agree	52.3	52.1	52.1
Strongly agree	43.2	39.7	41.0
<b>Received banner for deworming program</b>	<b>89.7</b>	<b>95.5</b>	<b>93.2</b>
<b>Seen the banner that have received</b>	<b>96.2</b>	<b>96.5</b>	<b>96.4</b>
<b>Most useful things remembered from the banner</b>			
Drug dosage and administration	72.0	81.7	78.0
Adverse event	52.0	50.0	50.8
Health information on STH and transmission	66.0	78.0	73.5
Prevention of worm infection	56.0	45.1	49.2
<b>Perceived usefulness of banner that have remembered</b>			
Strongly disagree	2.0	6.1	4.5
Disagree	6.0	1.2	3.0
Agree	52.0	42.7	46.2
Strongly agree	40.0	50.0	46.2
<b>Schools where handouts about deworming program was available</b>	<b>58.6</b>	<b>62.9</b>	<b>61.2</b>
<b>Handouts was helpful for</b>			
Drug dosage and administration	79.4	73.2	75.6
Adverse event	76.5	76.8	76.7
Health information on STH and transmission	61.8	48.2	53.3
Prevention of worm infection	67.6	55.4	60.0

<b>Table S7: Coverage Validation Indicators (N=253)</b>	
<b>Indicators</b>	<b>Percentage</b>
<b>Response from the headmasters/principals interviewed:</b>	
<b>Different sources of information about the recent round of deworming</b>	
Departmental communication	34.0
Radio	8.7
Newspaper	20.6
Banner	51.8
SMS	71.9
Training	74.7
<b>Awareness about different ways of STH infection</b>	
Having foods without washing hands	95.7
Not washing hands after using toilets	83.8
Not using sanitary latrine	63.6
Moving in bare feet	77.1

Consume vegetables and fruits without washing	66.8
Having long and dirty nails	51.0
Discussed about deworming in the last parent- teacher meeting	79.1
Attended training for deworming program	92.1
For schools that didn't attend training, reasons were:	
Problem with the location of training	0.0
Problem with the timing of training	0.0
Weren't aware of the date of training	44.4
Problem due to monitory constraints	0.0
Attended training in the last year	5.6
Received SMS about deworming program	87.4
Received banner about deworming program	94.1
Received handouts about deworming program	62.1
Percentage of schools had the sufficient drugs for deworming	97.2
Percentage of schools had extra storage of drugs after deworming	82.2
Percentage of schools where school reporting form was available after deworming day and mop-up day	87.4
For schools that didn't have school reporting form, reasons were:	
Did not received	9.4
Submitted to zonal officer	62.5
Submitted to school inspector	6.3
Unable to locate	9.4
Percentage of schools had complete school reporting form	87.4
Percentage of schools did deworming on deworming day or mop-up day	99.2
Percentage of schools reported mild adverse event after taking the medicine	9.5
Percentage of schools reported serious adverse event after taking the medicine	1.2
The followings adverse event was happened after taking the medicine	
Mild abdominal pain	57.1
Nausea/vomiting	60.7
Diarrhea	.0
Fatigue	7.1
When asked about their response in case a student suffers from adverse effects, the headmaster answered:	
Make the child lie down in shade	6.3
Gave ORS	8.3
Call PHC or emergency number	1.2
Take the child to the hospital immediately	3.2
Percentage of schools received the adverse event reporting form	65.2

Percentage of schools where adverse event reporting form was available	84.4
Percentage of schools those who filled the adverse event reporting form	61.3
Schools prepared ERS (emergency response system) contact list	75.1

Table S8: Coverage Validation Indicators	
State level verification factor	0.98175
School following the recording protocol	98.8%
State inflation rate (which measures the extent to which the recording in school reporting forms exceeds records at schools)	1.9%
State level inflation rate among trained schools (which measures how much the coverage reported in reporting forms exceeded school records in registers for schools that received training)	1.9%
State level inflation rate among untrained schools (which measures how much coverage reported in reporting forms exceeded school records in registers for schools that were not trained)	1.3%
School level inflation rate for schools that followed the recording protocol (measures how much coverage reported in reporting forms exceeded school records in registers, for schools that were following recording protocols, i.e., ticking).	3.2%
Non-compliance of recording protocol	1.2%
Inaccuracy among compliant schools (schools following recording protocols where ticks in registers did not match what was reported in school reporting forms)	73.5%
Children who were present on deworming day or mop-up day received deworming tablet, according to the responses from the children interviewed)	95.6%
Average attendance of children on deworming day and mop-up day according to the DD, MUD & CV data	62.2%

Table S9: District level Verification Factor	
District name	Verification factor
Central	1.069
East Delhi	1.122
South Delhi	0.918
South West	1.033
North East	1.067
North West	1.037



North Delhi	1.136
West Delhi	0.978

	Indicators
I_1	Attended training for deworming program
I_2	Received SMS about deworming program
I_3	Received banner about deworming program
I_4	Received handouts about deworming program
I_5	Had the sufficient drugs for deworming
I_6	Had school reporting form available
I_7	Had deworming on deworming day or mop-up day

Table S10: District Wise Variation (DD, MUD & CV) (N=400)									
Sl. No.	Name of Districts	I_1	I_2	I_3	I_4	I_5	I_6	I_7	N
1	Central	95.1	85.4	95.1	48.8	87.8	95.1	97.6	41
2	East Delhi	87.2	87.2	95.7	44.7	89.4	83.0	100.0	47
3	South Delhi	89.6	83.1	94.8	64.9	90.9	87.0	98.7	77
4	South West	97.3	89.2	94.6	75.7	91.9	94.6	100.0	37
5	North East	92.3	86.5	90.4	63.5	82.7	80.8	96.2	52
6	North West	80.3	73.8	93.4	65.6	93.4	88.5	100.0	61
7	North Delhi	94.3	92.5	90.6	58.5	96.2	84.9	100.0	53
8	West Delhi	100.0	81.3	96.9	75.0	90.6	75.0	100.0	32

Table S11: Indicators by Trained and untrained schools	Deworming day(N=58)		Mop-up day (N=89)		Aggregate (DD & MUD)	
	Trained	Untrained	Trained	Untrained	Trained Schools	Untrained Schools
Indicators						
<b>Awareness about different ways of STH infection</b>						
Having foods without washing hands	95.9	88.9	95.1	100.0	95.4	95.6
Not washing hands after using toilets	91.8	66.7	89.0	71.4	90.1	69.5
Not using sanitary latrine	57.1	33.3	57.3	28.6	57.2	30.5
Moving in bare feet	71.4	44.4	62.2	71.4	65.8	60.8
Consume vegetables and fruits without washing	30.6	22.2	61.0	85.7	49.0	60.7
Having long and dirty nails	55.1	55.6	57.3	57.1	56.4	56.5
Teachers aware that if child is unwell could not give her/him the deworming tablet	95.9	100.0	100.0	100.0	98.4	100.0
Teachers who told the children to chew the tablets before swallowing it	93.0	75.0	100.0	100.0	97.0	89.3
Teachers who followed the correct recording protocol of ticking (single tick on deworming day and double tick on mop-up day)	87.0	60.0	87.1	60.0	87.0	60.0
Schools where children were given less than prescribed dose of albendazole	6.5	0.0	0.0	0.0	2.8	0.0
Schools where children were given more than prescribed dose of albendazole	2.2	0.0	0.0	0.0	0.9	0.0
Teachers aware that one deworming tablet were to be given	100.0	77.8	100.0	100.0	100.0	91.2
Percentage of teachers who did not think there could be adverse effects due to deworming	42.9	55.6	59.8	71.4	53.1	65.2
Teachers who believed the following to be the adverse effects of deworming						
Mild abdominal pain	85.7	50.0	87.9	100.0	86.8	76.1
Nausea/vomiting	85.7	50.0	78.8	100.0	82.1	76.1
Diarrhea	32.1	25.0	15.2	0.0	23.3	11.9
Fatigue	32.1	50.0	21.2	0.0	26.4	23.9
When asked about their response in case a student suffers from adverse effects, the teachers answered:						

Make the child lie down in shade	63.3	33.3	57.3	57.1	59.7	47.7
Take the child to the hospital immediately	69.4	44.4	79.3	79.3	75.4	65.5
<b>When asked about their response in case a student continues to suffer from adverse effects, the teachers answered :</b>						
Call PHC or emergency number	57.4	57.1	56.1	28.6	56.6	39.4
Take the child to the hospital immediately	78.7	28.6	73.2	85.7	75.3	64.1
Respondents who were aware of the last date of submission of school reporting form	67.3	44.4	68.3	28.6	67.9	34.8
Respondents who were aware of whom to submit the school reporting form to						
Zonal officer	69.4	33.3	69.5	57.1	69.5	47.7
School inspector	22.4	22.2	29.3	42.9	26.6	34.7
Respondents who were aware of one copy of school reporting form to be submitted	79.6	79.6	84.1	71.4	82.3	74.6
Respondents who were aware that a copy of school reporting form have to retain in the school	73.5	44.4	76.8	71.4	75.5	60.8
Schools prepared ERS (emergency response system) contact list	83.7	44.4	72.0	71.4	76.6	60.8
Schools where ERS (emergency response system) contact list were posted	78.0	50.0	79.7	80.0	79.0	67.6

<b>Table S12: Aggregate level Analysis (DD, MUD &amp; CV) (N=400)</b>	
<b>Indicators</b>	<b>Percentage</b>
<b>Different sources of information about the recent round of deworming</b>	
Departmental communication	35.8
Radio	11.3
Newspaper	22.5
Banner	51.3
SMS	69.8
Training	69.5
<b>Awareness about different ways of STH infection</b>	
Having foods without washing hands	95.5
Not washing hands after using toilets	85.3
Not using sanitary latrine	60.3
Moving in bare feet	72.5
Consume vegetables and fruits without washing	60.5
Having long and dirty nails	53.0
<b>Discussed about deworming in the last parent- teacher meeting</b>	77.0
<b>Attended training for deworming program</b>	91.0
<b>For schools that didn't attend training, reasons were:</b>	
Problem with the location of training	5.9
Problem with the timing of training	11.8
Weren't aware of the date of training	44.1
Problem due to monitory constraints	5.9
Attended training in the last year	8.8
<b>Perceived usefulness of training for deworming</b>	
Strongly disagree	4.8
Disagree	8.0
Agree	45.2
Strongly agree	36.4
<b>Received SMS about deworming program</b>	84.5
<b>Preferred time to receive SMS</b>	
Morning	69.5
Afternoon	39.1
Evening	44.1
Not to prefer SMS	1.8
<b>Most useful things recall from the SMS</b>	
Dates of deworming	93.5
Availability of handouts/drugs	57.1
Availability of reporting format	56.2
Benefits of deworming	56.8
Drug dosage and administration	31.4
Adverse event management	27.5
<b>Perceived helpfulness of SMS providing information about deworming</b>	
Strongly disagree	4.7
Disagree	1.2

Agree	49.1
Strongly agree	45.0
Received banner about deworming program	93.8
<b>Most useful things remembered from the banner</b>	
Drug dosage and administration	84.3
Adverse event	59.9
Health information on STH and transmission	59.3
Prevention of worm infection	58.5
<b>Perceived usefulness of banner that have remembered</b>	
Strongly disagree	4.4
Disagree	2.5
Agree	46.2
Strongly agree	46.7
Received handouts about deworming program	61.8
<b>Handouts was helpful for</b>	
Drug dosage and administration	78.1
Adverse event	72.5
Health information on STH and transmission	59.9
Prevention of worm infection	50.2
<b>Schools had sufficient drugs for deworming</b>	90.5
<b>Schools had extra storage of drugs after deworming</b>	80.5
<b>Schools where children got deworming tablet on deworming day/ mop-up day</b>	99.0
<b>Schools where school reporting form was available</b>	86.3
<b>Schools prepared ERS (emergency response system) contact list</b>	74.8
<b>Percentage of children who were present on deworming day or mop-up day received deworming tablet (response from children)</b>	95.6

<b>Table S13: Enrolment- Attendance Analysis</b>	<b>Percentage</b>
Percentage of children present on deworming day (based on two classes)	72.8
Percentage of children present on mop-up day (based on two classes)	66.0
Average attendance of children on deworming day and mop-up day (based on DD MUD & CV data)	62.2



For Anganwadis

Table A1: Training Related Indicators	Deworming day (N=61)	Mop-up day(N=90)	Aggregate (DD+MU D)
Indicators	Percentage	Percentage	Percentage
Response from the anganwadi worker			
Attended training for deworming program	83.6	87.8	86.1
For anganwadis that didn't attend training, reasons were:			
Problem with the location of training	10.0	9.1	9.5
Problem with the timing of training	20.0	0.0	9.5
Weren't aware of the date of training	30.0	63.6	47.6
Problem due to monitory constraints	10.0	0.0	4.8
Attended training in last year	30.0	27.3	28.6
Received information on deworming by the ls in departmental/sector meeting	100.0	96.7	98.0
Based on monitor's observation			
Deworming activities were taken place in the anganwadi	83.6	66.7	73.5
Type of health education about deworming had given			
Harmful effects of worms	49.2	33.3	39.7
How worms get transmitted	49.2	32.2	39.1
Benefits of deworming	54.1	50.0	51.7
Methods of STH prevention	34.4	31.1	32.5
No health education given	14.8	4.4	8.6
Percentage of anganwadi workers who identified sick children before administering the medicine	70.5	58.9	63.6
If there were sick children, the response of the anganwadi worker:			
Separate the children	27.9	20.0	23.2
Give the medicine	.0	.0	0.0
Did not give the medicine	32.8	34.4	33.8
Send back to home	8.2	1.1	4.0
Others	1.6	3.3	2.6
Anganwadis where the drug was being given by anganwadi worker/helper	83.6	66.7	73.5
Anganwadi workers who followed the correct recording protocol of ticking (single tick on deworming day and double tick on mop-up day)	75.4	54.4	62.9
Anganwadis where children were given more than prescribed dose of albendazole	18.0	5.6	10.6
Anganwadis where children were given less than prescribed dose of albendazole	11.5	2.2	6.0

Table A2: Awareness Related Indicators	Deworming day(N=61)	Mop-up day(N=90)	Aggregate (DD+MUD)
Indicators	Percentage	Percentage	Percentage
Response from the anganwadi worker			
Different sources of information about the recent round of deworming			
Departmental communication	14.8	21.1	18.5
Radio	13.1	12.2	12.6
Newspaper	16.4	14.4	15.2
SMS	47.5	67.8	59.6
Training	62.3	52.2	56.3
Others	6.6	24.4	17.2
Awareness about different ways of STH infection			
having foods without washing hands	90.2	91.1	90.7
Not washing hands after using toilets	78.7	76.7	77.5
not using sanitary latrine	50.8	45.6	47.7
Moving in bare feet	70.5	65.6	67.5
Consume vegetables and fruits without washing	59.0	63.3	61.6
Having long and dirty nails	63.9	48.9	55.0
Others	1.6	12.2	7.9
Received SMS about deworming program	67.2	85.6	78.1
Received handbills for deworming program	77.0	68.9	72.2
Anganwadis where handouts about deworming program was available	80.3	81.1	80.8
Anganwadi worker aware that if child is unwell could not give her/him the deworming tablet	100.0	98.9	99.3
Anganwadi workers aware that half deworming tablet were to be given to the children age 1-2 years	62.3	75.6	70.2
Anganwadi workers aware that one deworming tablet were to be given to the children more than 2 years	62.3	76.7	70.9
Anganwadi workers aware that half bottle deworming syrup were to be given to the children age 1-2 years	100.0	87.8	92.7
Anganwadi workers aware that one bottle deworming syrup were to be given to the children more than 2 years	100.0	95.6	97.4

Table A3: Reporting Indicators	Deworming day(N=61)	Mop-up day(N=90)	Aggregate (DD+MUD)
Indicators	Percentage	Percentage	Percentage
Anganwadis where anganwadi reporting form was available	60.7	85.6	75.5
Anganwadis where ASHA reporting form was available	32.8	81.1	61.6
Respondents who were aware about when to submit the anganwadi reporting form	42.6	38.9	40.4
Respondents who were aware that a copy of anganwadi reporting form have to retain in the anganwadi	67.2	75.6	72.2

Table A4: Drug availability and storage Indicators	Deworming day(N=61)	Mop-up day(N=90)	Aggregate (DD+MUD)
Indicators	Percentage	Percentage	Percentage
Response from the anganwadi worker			
Respondents who got information about drug delivery at project meeting	77.0	76.7	76.8
Anganwadi received only deworming tablets	0.0	10.0	6.0
Anganwadi received only deworming syrups	14.8	2.2	7.3
Anganwadi received deworming tablet and syrup both	85.2	83.3	84.1
According to the drug packets, the expiration date was for tablet			
Before deworming day /before mop-up day	0.0	1.1	0.7
After deworming day /after mop-up day	100.0	88.9	93.4
According to the drug packets, the expiration date was for syrup			
Before deworming day /before mop-up day	0.0	1.1	0.7
After deworming day /after mop-up day	100.0	93.3	96.0
Anganwadis received deworming drug at the project meeting	41.0	48.9	45.7
Anganwadis received deworming drug, delivered by lady supervisor/nodal officer	57.4	44.4	49.7
Anganwadis where children got deworming tablet on deworming day/ mop-up day	100.0	82.2	89.4
Based on monitor's observation			
Anganwadis where the monitor observed spoilt tablets was			
Thrown away	41.0	27.8	33.1
Given to children	0.0	0.0	0.0
Left on the floor	0.0	0.0	0.0
Kept in some other place	4.9	5.6	5.3

Table A5: Adverse Events related Indicators	Deworming day(N=61)	Mop-up day(N=90)	Aggregate (DD+MUD)
Indicators	Percentage	Percentage	Percentage
Response from the anganwadi worker			
Percentage of anganwadi worker who did not think there could be adverse effects due to deworming	72.1	47.8	57.6
Anganwadi workers who believed the following to be the adverse effects of deworming			
Mild abdominal pain	82.4	70.2	73.4
Nausea/vomiting	100.0	72.3	79.7
Diarrhea	29.4	23.4	25.0
Fatigue	52.9	29.8	35.9
When asked about their response in case a child suffers from adverse effects, the anganwadi workers answered:			
Make the child lie down in shade	65.6	56.7	60.3
Give water/ORS	39.3	36.7	37.7
Take the child to the hospital immediately	62.3	70.0	66.9
When asked about their response in case a child continues to suffer from adverse effects, the anganwadi workers answered :			
Call PHC or emergency number	54.1	56.7	55.6
Take the child to the hospital immediately	83.6	70.0	75.5
Percentage of anganwadi workers aware about unwell children could not get the deworming medicine	100.0	98.9	99.3
Percentage of anganwadi workers who thought it was acceptable for sick children to be dewormed	100.0	98.9	99.3
Based on monitor's observation			
Percentage of anganwadi workers who did not identify sick children before administering the medicine	13.1	58.9	40.4
Anganwadis where the monitor observed types of adverse event			
Stomach ache	0.0	2.2	1.3
Nausea	0.0	3.3	2.0
Vomiting	0.0	4.4	2.6
Diarrhea	0.0	1.1	0.7

<b>Table A6: Effectiveness of Training and IEC materials</b>	<b>Deworming day(N=61)</b>	<b>Mop-up day(N=90)</b>	<b>Aggregate (DD+MU D)</b>
<b>Indicators</b>	<b>Percentage</b>	<b>Percentage</b>	<b>Percentage</b>
<b>Response from the anganwadi worker</b>			
<b>Attended training for deworming program</b>	83.6	87.8	86.1
<b>Perceived usefulness of training for deworming</b>			
Strongly disagree	4.9	4.4	4.6
Disagree	1.6	2.2	2.0
Agree	39.3	38.9	39.1
Strongly agree	44.3	45.6	45.0
<b>Received SMS about deworming program</b>	67.2	85.6	78.1
<b>Number of SMS received</b>			
Less than four	39.0	21.1	26.7
Four to eight	43.9	24.4	30.5
More than eight	17.1	36.7	30.5
<b>Preferred time to receive SMS</b>			
Morning	32.8	54.4	45.7
Afternoon	11.5	15.6	13.9
Evening	31.1	35.6	33.8
Not to prefer SMS	3.3	2.2	2.6
Others	3.3	13.3	9.3
<b>Most useful things recall from the SMS</b>			
Dates of deworming	57.4	81.1	71.5
Availability of handouts/drugs	26.2	44.4	37.1
Availability of reporting format	26.2	40.0	34.4
Benefits of deworming	32.8	40.0	37.1
Drug dosage and administration	37.7	44.4	41.7
Adverse event management	14.8	18.9	17.2
<b>Perceived helpfulness of SMS providing information about deworming</b>			
Strongly disagree	0.0	8.9	5.3
Disagree	0.0	1.1	0.7
Agree	39.3	41.1	40.4
Strongly agree	27.9	34.4	31.8
<b>Received community handbills for deworming program</b>	77.0	85.6	82.1
<b>When asked about their response on what aww did with this handbill, the anganwadi workers answered:</b>			
Distributed to the community	45.9	45.6	45.7
Kept in the center	21.3	10.0	14.6
Distributed in the anganwadi	9.8	11.1	10.6
<b>Anganwadis where handouts about deworming program was available</b>	77.0	81.1	79.5
<b>Handouts was helpful for</b>			
Drug dosage and administration	52.5	62.2	58.3
Adverse event management	52.5	52.2	52.3
Health information on STH and transmission	52.5	45.6	48.3
Prevention of worm infection	44.3	12.2	25.2



Table A7: Coverage Validation Indicators (N=249)	
Indicators	Percentage
<b>Response from the anganwadi worker</b>	
<b>Different sources of information about the recent round of deworming</b>	
Departmental communication	46.2
Radio	12.4
Newspaper	20.9
SMS	57.0
Training	76.7
<b>Awareness about different ways of STH infection</b>	
Having foods without washing hands	92.8
Not washing hands after using toilets	75.1
Not using sanitary latrine	59.8
Moving in bare feet	75.1
Consume vegetables and fruits without washing	69.1
Having long and dirty nails	51.4
Received information on deworming by the lady supervisor in departmental/sector meeting	100.0
Attended training for deworming program	81.1
<b>For anganwadis that didn't attend training, reasons were:</b>	
Problem with the location of training	6.4
Problem with the timing of training	4.3
Weren't aware of the date of training	48.9
Problem due to monitory constraints	6.4
Attended training in the last year	12.8
Received SMS about deworming program	74.3
Received handouts about deworming program	83.9
Received community handbill about deworming program	74.7
Percentage of anganwadis had the sufficient drugs for deworming	88.8
Percentage of anganwadis had extra storage of drugs after deworming	42.2
Percentage of anganwadis where anganwadi reporting form was available after deworming day and mop-up day	81.1
<b>For anganwadis that didn't have anganwadi reporting form, reasons were:</b>	
Did not received	19.1
Submitted to lady supervisor	80.9
Unable to locate	.0
Percentage of anganwadis had complete anganwadi reporting form	85.5
Percentage of anganwadis did deworming on deworming day or mop-up day	100.0
Percentage of anganwadis reported mild adverse event after taking the medicine	16.9
Percentage of anganwadis reported serious adverse event after taking the medicine	0.0
<b>The followings adverse event was happened after taking the medicine</b>	
Mild abdominal pain	76.2
Nausea/vomiting	42.9
Diarrhea	11.9
Fatigue	23.8
<b>When asked about their response in case a student suffers from adverse effects, the anganwadi worker answered:</b>	
Make the child lie down in shade	64.3
Gave water/ORS	52.4
Call PHC or emergency number	40.5
Take the child to the hospital immediately	33.3
Percentage of anganwadis received the adverse event reporting form	40.6
Percentage of anganwadis where adverse event reporting form was available	65.3
Percentage of anganwadis those who filled the adverse event reporting form	69.7

<b>Table A8: Coverage Validation Indicators</b>	
<b>State level verification factor</b>	<b>1.03359</b>
<b>Anganwadi following the recording protocol</b>	<b>99.2</b>
<b>State inflation rate</b> (which measures the extent to which the recording in anganwadi reporting forms exceeds records at anganwadis)	<b>-3.3</b>
<b>State level inflation rate among trained anganwadis</b> (which measures how much the coverage reported in reporting forms exceeded anganwadi records in registers for anganwadis that received training)	<b>-3.4</b>
<b>State level inflation rate among untrained anganwadis</b> (which measures how much coverage reported in reporting forms exceeded anganwadi records in registers for anganwadis that were not trained)	<b>-2.6</b>
<b>Anganwadi level inflation rate for anganwadis that followed the recording protocol</b> (measures how much coverage reported in reporting forms exceeded anganwadi records in registers, for anganwadis that were following recording protocols, i.e., ticking).	<b>-2.3</b>
<b>Non-compliance of recording protocol</b>	<b>0.8</b>
<b>Inaccuracy among compliant anganwadis</b> (anganwadis following recording protocols where ticks in registers did not match what was reported in anganwadi reporting forms)	<b>33.7</b>
<b>Average attendance of children on deworming day and mop-up day</b> according to the DD & MUD data	<b>47.2</b>

<b>Table A9: District level Verification Factor</b>	
<b>District Name</b>	<b>Verification factor</b>
Central	1.017
East Delhi	1.051
South Delhi	1.093
South West	1.039
North East	1.118
North West	1.113
North Delhi	1.137
West Delhi	1.106

	Indicators
I_1	Attended Training for deworming program
I_2	Received SMS about deworming program
I_3	Received handbills about deworming program
I_4	Received handouts about deworming program
I_5	Had the sufficient drugs for deworming
I_6	Had anganwadi reporting form available
I_7	Had deworming on deworming day or mop-up day

Sl. No.	Name of Districts	I_1	I_2	I_3	I_4	I_5	I_6	I_7	N
1	Central	90.0	80.0	90.0	75.0	85.0	75.0	95.0	20
2	East Delhi	84.6	69.2	69.2	84.6	82.1	92.3	100.0	39
3	South Delhi	82.5	72.8	78.1	86.0	83.3	76.3	98.2	114
4	South West	92.3	65.4	76.9	92.3	84.6	76.9	100.0	26
5	North East	83.0	75.5	56.6	75.5	88.7	81.1	98.1	53
6	North West	83.1	81.4	69.5	86.4	79.7	69.5	98.3	59
7	North Delhi	72.0	92.0	76.0	64.0	96.0	84.0	100.0	25
8	West Delhi	81.3	76.6	79.7	84.4	76.6	82.8	89.1	64

Table A11: Indicators by Trained and untrained anganwadis	Deworming day(N=61)		Mop-up day(N=90)		Aggregate (DD &MUD)	
	Trained	Untrained	Trained	Untrained	Trained	Untrained
Awareness about different ways of STH infection						
Having foods without washing hands	90.2	90.0	94.9	63.6	93.0	74.3
Not washing hands after using toilets	82.4	60.0	77.2	72.7	79.3	67.6
Not using sanitary latrine	51.0	50.0	48.1	27.3	49.3	36.5
Moving in bare feet	76.5	40.0	65.8	63.6	70.1	54.1
Consume vegetables and fruits without washing	60.8	60.8	67.1	36.4	64.5	46.2
Having long and dirty nails	60.8	40.0	48.1	54.5	53.2	48.7
Anganwadi worker aware that if child is unwell could not give her/him the deworming medicine	100.0	100.0	98.7	100.0	99.2	100.0
Percentage of anganwadi workers who identified sick children before administering the medicine	82.6	100.0	86.8	100.0	84.9	100.0
Anganwadi workers who followed the correct recording protocol of ticking (single tick on deworming day and double tick on mop-up day)	91.3	80.0	84.9	57.1	87.8	67.6
Anganwadis where children were given more than prescribed dose of albendazole	23.9	0.0	9.4	0.0	16.1	0.0
Anganwadis where children were given less than prescribed dose of albendazole	15.2	0.0	3.8	0.0	9.0	0.0
Anganwadi workers aware that half deworming tablet were to be given to the children age 1-2 years	64.7	50.0	75.9	72.7	71.4	63.5
Anganwadi workers aware that one deworming tablet were to be given to the children more than 2 years	64.7	50.0	74.7	90.9	70.7	74.4
Anganwadi workers aware that half bottle deworming syrup were to be given to the children age 1-2 years	100.0	100.0	88.6	81.8	93.2	89.2
Anganwadi workers aware that one bottle deworming syrup were to be given to the children more than 2 years	100.0	100.0	94.9	100.0	97.0	100.0
Percentage of anganwadi worker who did not think there could be adverse effects due to deworming	68.6	90.0	51.9	54.5	58.7	68.9
Anganwadi workers who believed the following to be the adverse effects of deworming						

Mild abdominal pain	81.3	100.0	76.3	80.0	77.7	85.7
Nausea/vomiting	100.0	100.0	76.3	100.0	83.0	100.0
Diarrhea	31.3	0.0	28.9	0.0	29.6	0.0
Fatigue	50.0	100.0	34.2	20.0	38.7	42.7
When asked about their response in case a child suffers from adverse effects, the anganwadi workers answered:						
Make the child lie down in shade	72.5	30.0	59.5	36.4	64.8	33.8
Give water/ORS	43.1	20.0	34.2	54.5	37.8	40.6
Take the child to the hospital immediately	58.8	80.0	69.6	72.7	65.3	75.7
When asked about their response in case a child continues to suffer from adverse effects, the anganwadi workers answered :						
Call PHC or emergency number	56.9	40.0	59.5	36.4	58.4	37.8
Take the child to the hospital immediately	86.3	70.0	68.4	81.8	75.6	77.0
Respondents who were aware about when to submit the anganwadi reporting form	47.1	20.0	41.8	36.4	43.9	29.8
Respondents who were aware that a copy of anganwadi reporting form have to retain in the anganwadi	68.6	60.0	77.2	81.8	73.7	73.0



<b>Table A12: Aggregate level Analysis (N=400)</b>	
<b>Indicators</b>	<b>Percentage</b>
<b>Different sources of information about the recent round of deworming</b>	
Departmental communication	35.8
Radio	12.5
Newspaper	18.8
SMS	58.0
Training	69.0
<b>Awareness about different ways of STH infection</b>	
Having foods without washing hands	92.0
Not washing hands after using toilets	76.0
Not using sanitary latrine	55.3
Moving in bare feet	72.3
Consume vegetables and fruits without washing	66.3
Having long and dirty nails	52.8
<b>Received information on deworming by the lady supervisor in departmental/sector meeting</b>	99.3
<b>Attended training for deworming program</b>	83.0
<b>For anganwadis that didn't attend training, reasons were:</b>	
Problem with the location of training	7.4
Problem with the timing of training	5.9
Weren't aware of the date of training	48.5
Problem due to monitory constraints	5.9
Attended training in the last year	17.6
<b>Perceived usefulness of training for deworming</b>	
Strongly disagree	8.0
Disagree	0.8
Agree	37.3
Strongly agree	42.5
<b>Received SMS about deworming program</b>	75.8
<b>Preferred time to receive SMS</b>	
Morning	59.4
Afternoon	34.3
Evening	47.9
Not to prefer SMS	4.3
<b>Most useful things recall from the SMS</b>	
Dates of deworming	93.1
Availability of handouts/drugs	46.5
Availability of reporting format	50.5
Benefits of deworming	57.1
Drug dosage and administration	52.8
Adverse event management	27.4
<b>Perceived helpfulness of SMS providing information about deworming</b>	
Strongly disagree	8.6
Disagree	2.3
Agree	47.2
Strongly agree	41.9
<b>Received handouts about deworming program</b>	82.8
<b>Handouts was helpful for</b>	
Drug dosage and administration	72.5
Adverse event	60.1

Health information on STH and transmission	64.4
Prevention of worm infection	45.9
Received community handbills for deworming program	73.8
When asked about their response on what aww did with this handbill, the anganwadi workers answered:	
Distributed to the community	78.3
Kept in the center	12.5
Distributed in the anganwadi	8.5
Anganwadis had sufficient drugs for deworming	83.3
Anganwadis had extra storage of drugs after deworming	53.0
Anganwadis where children got deworming tablet on deworming day/ mop-up day	97.0
Anganwadis where anganwadi reporting form was available	79.0

## Annexure J2

### Definitions

We calculated verification factors and reporting inflation rates from our coverage validation exercise. Verification factor is an indicator which is often used to assess the reporting quality. It is also widely used in health programs for the same reason. A state level verification factor (VF) was calculated from the data. **State level verification factors** are calculated by comparing the recorded number of ticks in school registers to the numbers being reported in the school reporting forms. A value of VF greater than 1 suggests that coverage data was deflated relative to actual coverage. A value of VF less than 1 suggests that inflation has occurred. The VF was calculated using the following formula:

$$\text{State level verification factor} = \frac{\text{Number of ticks found in schools across the state}}{\text{Total reported number for those schools}}$$

Thus, in the 253 schools from which coverage validation data was received from, we calculate the aggregated number of ticks for all these schools and divide the sum by the sum of deworming coverage reported in these schools.

We calculated the **state inflation rate** in reporting data by comparing the cumulative numbers reported in the school reporting form, with the total number of ticks actually present in the attendance registers of all schools visited during coverage validation. The state level inflation was calculated using the following formula:

$$\text{State inflation rate} = \frac{(\text{Total no. reported in S forms} - \text{Total no. of ticks in attendance register})}{\text{Actual number of ticks}}$$

## Annexure J3

## Reporting Forms

## SCHOOL REPORTING FORMAT

Mass Deworming Day on 16<sup>th</sup> April, 2015 & Mop up Day 20<sup>th</sup> April 2015

\*Please fill in all the details below and write 'NA' wherever it is not applicable.

State :		District :	
Name of the School		DISE Code of the School	
Number of Teachers trained for Mass Deworming Programme			
<b>Albendazole Coverage</b>			
	Girls	Boys	Total
Total No. of children enrolled in the school (Nursery-12 <sup>th</sup> class)			(A)
No. of enrolled children (upto 2 <sup>nd</sup> class) who were administered Syp Albendazole on Mass Deworming Day			(1)
No. of enrolled children (upto 2 <sup>nd</sup> class) who were administered Syp Albendazole on the Mop Up Day			(2)
No. of enrolled children (3 <sup>rd</sup> to 5 <sup>th</sup> class) who were administered Tab Albendazole on Mass Deworming Day			(3)
No. of enrolled children (3 <sup>rd</sup> to 5 <sup>th</sup> class) who were administered Tab Albendazole on the Mop Up Day			(4)
No. of enrolled children (class 6 <sup>th</sup> to 12 <sup>th</sup> ) who were administered Tab Albendazole on Mass Deworming Day			(5)
No. of enrolled children (class 6 <sup>th</sup> to 12 <sup>th</sup> ) who were administered Tab Albendazole on the Mop Up Day			(6)
GRAND TOTAL of number of children who were administered Albendazole (B= 1+2+3+4+5+6)	(B)		
Number of adverse events reported from the school [submit adverse event reporting format as applicable]			
<b>Logistic Details</b>			
Total No. of Syp Albendazole given to the school			
Total No. of Syp Albendazole administered to the children by the school (total of both Mass Deworming Day and Mop-Up day)			
Stock of Syp Albendazole left in school			
Total No. of Tab Albendazole given to the school			
Total No. of Tab Albendazole administered to the children by the school (total of both Mass Deworming Day and Mop-Up day)			
Stock of Tab Albendazole left in school			
(Name and signature of the signatory) (School Principal/Nodal Teacher)			
You may call up the Monitoring Incharge (Name :-Dr. Nandita Chhibber / Phone:8745011261) for any assistance if required			

Submit to Zonal officer (Edu. Dept.) by 25<sup>th</sup> April, 2015. Zonal Officer will submit all school reporting formats to District Incharge of School Health Scheme by 28<sup>th</sup> April, 2015.

## रिपोर्टिंग प्रारूप डिवर्मिंग डे और मॉप अप डे

### आंगनवाड़ी रिपोर्टिंग प्रारूप

\* कृपया सभी खाली बॉक्स भरें एवं कोई कॉलम खाली न छोड़ें।

राज्य:		जिला का नाम:	
परियोजना का नाम:		आंगनवाड़ी केंद्र:	
क्या आंगनवाड़ी कार्यकर्ता ने डीवर्मिंग पर प्रशिक्षण प्राप्त किया है? (हां/नहीं) ?			
<b>अल्बेडाजोल कवरेज</b>			
	<b>लड़कियाँ</b>	<b>लड़के</b>	<b>कुल</b>
आंगनवाड़ी केंद्र में पंजीकृत बच्चों (1 से 6 साल) की कुल संख्या			(A)
पंजीकृत बच्चों की कुल संख्या (1 से 6 साल) जिन्हें डीवर्मिंग डे पर अल्बेडाजोल की दवा दी गयी			(1)
पंजीकृत बच्चों की कुल संख्या (1 से 6 साल) जिन्हें मॉप अप डे पर अल्बेडाजोल की दवा दी गयी			(2)
अपंजीकृत बच्चों की कुल संख्या (1 से 6 साल) जिन्हें डीवर्मिंग डे पर अल्बेडाजोल की दवा दी गयी			(3)
अपंजीकृत बच्चों की कुल संख्या (1 से 6 साल) जिन्हें मॉप अप डे पर अल्बेडाजोल की दवा दी गयी			(4)
अनामांकित बच्चों की कुल संख्या (6 से 10 साल) जिन्हें डीवर्मिंग डे पर अल्बेडाजोल की दवा दी गयी			(5)
अनामांकित बच्चों की कुल संख्या (6 से 10 साल) जिन्हें मॉप अप डे पर अल्बेडाजोल की दवा दी गयी			(6)
पंजीकृत किशोरियों की कुल संख्या (10 से 19 साल) जिन्हें डीवर्मिंग डे पर अल्बेडाजोल की दवा दी गयी			(7)
पंजीकृत किशोरियों की कुल संख्या (10 से 19 साल) जिन्हें मॉप अप डे पर अल्बेडाजोल की दवा दी गयी			(8)
अनामांकित किशोर/किशोरियों की कुल संख्या (10 से 19 साल) जिन्हें डीवर्मिंग डे पर अल्बेडाजोल की दवा दी गयी			(9)
अनामांकित किशोर/किशोरियों की कुल संख्या (10 से 19 साल) जिन्हें मॉप अप डे पर अल्बेडाजोल की दवा दी गयी			(10)
<b>कुल योग : बच्चों की कुल संख्या जिन्हें अल्बेडाजोल की दवा दी गयी</b> <b>(B = 1+2+3+4+5+6+7+8+9+10)</b>			(B)
आंगनवाड़ी द्वारा सूचित कुल प्रतिकूल घटनाओं की संख्या (प्रतिकूल घटना रिपोर्टिंग प्रारूप प्रस्तुत करें)			
<b>विवरण</b>			
आंगनवाड़ी केंद्र को प्राप्त अल्बेडाजोल गोलियों की कुल संख्या			
आंगनवाड़ी केंद्र को प्राप्त अल्बेडाजोल सिरप शीशी की कुल संख्या			
आंगनवाड़ी केंद्र द्वारा बच्चों को खिलायी गयी अल्बेडाजोल की गोलियों की कुल संख्या <b>(डीवर्मिंग डे + मॉप अप डे)</b>			
आंगनवाड़ी केंद्र द्वारा बच्चों को खिलायी गयी अल्बेडाजोल की सिरप शीशी की कुल संख्या <b>(डीवर्मिंग डे + मॉप अप डे)</b>			
आंगनवाड़ी केंद्र के पास बची अल्बेडाजोल गोलियों की कुल संख्या			
आंगनवाड़ी केंद्र के पास बची अल्बेडाजोल सिरप शीशी की कुल संख्या			
(आंगनवाड़ी कार्यकर्ता का नाम एवं हस्ताक्षर)			
किसी भी समस्या के निवारण हेतु आप राज्य कार्यालय (नाम : डॉ. गौतम सिंह/फोन नं. 011- 23813214/9868394884) से संपर्क कर सकते हैं।			

**इस फॉर्मेट/प्रारूप की एक कापी आंगनवाड़ी कार्यकर्ता 23 अप्रैल, 2015 तक लेडी सुपरवाइजर के पास जमा करें तथा दूसरी कापी आशा कार्यकर्ता अथवा एएनएम को दें।**