



## **TECHNICAL PROGRESS OF THE EXPANDED CORE GROUP POLIO PROJECT August 2009**

The CORE Group Polio Project (CGPP) received funding in calendar year 2009 from the Bill and Melinda Gates Foundation (Gates Foundation) to support project activities in Angola and India, and to strengthen data collection, analysis and use in these countries as well as in Ethiopia and Nepal. CGPP is also examining its impact on routine immunization in order to further contribute to child health and to our knowledge of community based efforts to improve child immunization coverage in high risk areas.

### **ANGOLA**

***Critical Milestone: By 04/30/09, 5% reduction in children missing 2 consecutive immunizations relative to baseline in 80% of catchment areas***

A child registration system (*Activity Milestone 2.1*) has been designed and in May was endorsed by the Angola Ministry of Health. The first set of registers for field use were printed with Gates Foundation funding. Additional registers will be printed when the next tranche of funding is received. The registers will not only support early identification and follow up of children who have missed scheduled immunizations, they also will provide useful data to measure project impact, identify weak areas and make appropriate strategic and programmatic changes.

New trainers' modules and volunteer manuals (with pictorial content for low-literacy volunteers) were developed with Gates Foundation funding this year and are currently being field tested. The modules and manuals will also be reviewed and modified in light of the LQAS findings before they are finalized and printed. Training on these materials has already begun, and will be completed after the materials are finalized and produced. More general training on social mobilization and communications skills, as well as distribution of incentives for the volunteers, is also an on-going activity designed to both improve the quality of social mobilization for community participation in immunization and surveillance, and to enhance retention of volunteers (*Activity Milestones 2.2 and 2.3*)

With funding from the Gates Foundation, the CGPP-Angola secretariat team completed LQAS (*Activity Milestone 3.2*) training for CORE member partners' local staff in March 2009. The training covered both the administration and analysis of the LQAS survey technique; preparing field level staff not only to collect household survey data from their communities, but also to analyze these data themselves. During the training, the field staff team selected key indicators for assessment, including routine immunization coverage, most recent campaign coverage, awareness of AFP symptoms, and households having been visited by a CORE volunteer. The



team also determined mid-term and end-of-project targets for each key indicator. The team has completed the household interviews using their new LQAS sampling skills, and they will tabulate the data during the two week period from August 24 through September 4, 2009. The results of the data analysis will provide data on progress toward the critical milestone above. It will also compare key indicators this year to the mid-project target and the current project-wide average to identify poorer performing project areas for more intensive supervision and higher performing areas for exchange visits in the coming months.

## **INDIA**

***Critical Milestone: By 04/30/2009, 30% of blocks demonstrating 5% or greater decrease in resistance (to polio immunization)***

As discussed with the Gates Foundation, rather than conducting an LQAS in India, routinely collected project data is being used to assess the reductions in resistance in CGPP blocks. Analysis of calendar year 2009 data indicates that the milestone has been achieved. After reviewing the data, however, the CGPP team has concerns about the value of this indicator given that in the majority of blocks resistance has already been reduced to only a handful of households, the traditional unit of measure for resistance for polio eradication in India. While the numbers of resistant households (including households with unimmunized newborns) are high enough to prevent herd immunity (98% coverage) and achievement of an interruption in transmission, the numbers are low enough that a 5% decrease could refer to a statistically insignificant change. In order to better assess the actual challenge to achieving 98% coverage, the India secretariat team has hired a consultant to help reorganize and reanalyze the data, looking at missed children per round per block (See figure 2 below for a preliminary indication of reductions in numbers of missed children in two key CGPP Districts). An updated, meaningful review of this milestone will be released by September 10, 2009.

### **Health Camps and Children's' Rallies**

In India, the primary goal of CGPP's community-based social mobilization activities is to increase polio immunization coverage among children under five in high risk areas of Uttar Pradesh by reducing resistance and increasing participation in both routine and supplemental polio immunization. Funding from the Gates Foundation supported a number of key polio eradication behavior change communications/social mobilization activities that would otherwise have been abandoned in 2009 due to severe funding constraints. These include health camps that provide polio and other child vaccines to eligible children, vitamin A, health information and education, and other activities depending on the availability of Ministry of Health resources. By the end of May the CGPP partners had conducted 495 health camps (*Activity Milestone 1.2*) in very high risk communities in coordination with the Ministry of Health. These health service delivery activities are credited with improving community acceptance of the on-going, almost



monthly focus on polio SIAs in the face of other health constraints that are locally perceived as being of more importance than polio eradication. By the end of May, Gates Foundation funding had also supported 270 children's rallies, engaging school-age children in mobilizing their families and communities and bringing their vaccine-eligible siblings to the immunization booths during campaigns (*Activity Milestone 1.3*).

While anecdotal evidence indicates that these activities do contribute to participation in polio immunization, at this point we are not able to document direct correlations between conduct of a health camp in a community and that community's level of participation in the next campaign. Other factors including availability of vaccine and vaccination teams, seasonal migration, religious fatwabs, negative press and other factors also play a role. To tease out trends in the data, and to more deeply explore the factors that contribute to resistance, CGPP is completing a knowledge-attitude-practice study looking at the influence of health care providers on community members participation in polio immunization, and has engaged consultants to facilitate more in-depth analysis of the data.

#### *Community knowledge and practice*

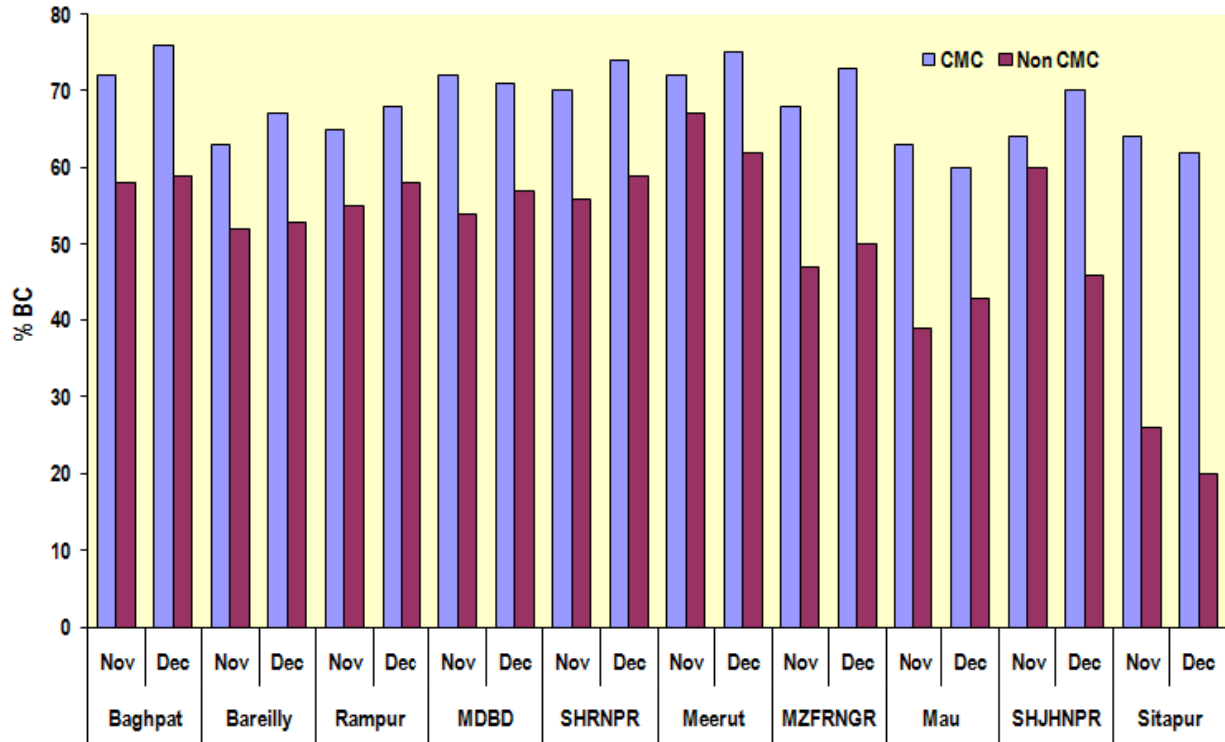
CGPP Community Mobilization Coordinators (CMCs) appear to be having a positive impact on participation in both polio immunization campaigns and routine immunization. The CGPP Baseline Survey conducted in the summer of 2008 indicated that CMCs contributed to mothers' awareness of campaigns, and to knowledge regarding child eligibility for polio vaccination. For example, among the mothers surveyed:

- ◆ 66% cited CMCs as the primary source of information on the most recent polio immunization campaign.
- ◆ 14% or more of mothers in CGPP areas cited CGPP-supported mosque announcements as a primary source of information on the most recent polio immunization campaign

Further evidence of the positive influence of CMCs on participation in polio immunization is shown in the Booth Coverage graph (Figure 1) below: CGPP routine data indicates that polio immunization campaign booth coverage was consistently higher in CMC blocks compared to non-CMC blocks in each project District during the last quarter of calendar year 2008.

Funding from the Gates Foundation made it possible to continue key CMC activities in calendar year 2009, to ensure continued high participation in polio campaigns in high risk communities. As shown in Figure 2, the project's ability to maintain key activities, and in some cases increase the frequency of those activities appears to have contributed to a reduction over time in the number of children in resistant households who remain unimmunized after each campaign.

**Figure1 : % Booth Coverage: CMC Area Vs Non CMC Area**



SIA Rounds, Oct-Dec 2008



**Figure 2: District level data describing Gates Foundation funded activities, levels of resistance, and missed children in CY 2009**

District Name *	24 <sup>th</sup> May 2009 Supplementary Immunization Activity (SIA) Round				5 <sup>th</sup> July 2009 SIA Round				26 <sup>th</sup> July 2009 SIA Round*** (mOPV3)				9 <sup>th</sup> Aug 2009 SIA Round (mOPV3)			
	Health Camps **	Rallies* *	Resistant Household s†	Missed Children from Resistant Households‡	Health Camps **	Rallies* *	Resistant Household s †	Missed Children from Resistant Households‡	Health Camps **	Rallies* *	Resistant Household s†	Missed Children from Resistant Households‡	Health Camps **	Rallies* *	Resistant Household s†	Missed Children from Resistant Households‡
<b>Muzaffamagar</b>	42	7	148	213	51	18	137	132	SIA round was not held				9	17	14	18
<b>Moradabad</b>	58	15	415	530	42	17	240	300	9	23	86	115	Two rounds held in July 09 so due to lack of time no health camps held in Moradabad			

*(Source: CORE Group Polio Project Community Mobilization Coordinator Registers)*



### *CMC Activities*

Funding from the Gates Foundation supported the CMCs' work, and impact, in a number of ways. The CMC's child register formats were reviewed and updated and new registers were printed for FY2010. CMC refresher training, and training on the changes in the registers, was conducted in late August, 2009 (*Activity Milestone 1.5*).

The first of a series of Gates Foundation and USAID-funded jamborees (*Activity Milestone 1.4*), celebrating the CMCs and their work and boosting their morale was conducted just before the April 2009 elections in UP. Feedback from CMCs and BMCs who participated in that jamboree indicates that the experience left them feeling "motivated . . . confident . . . ready to move forward" in working to eradicate polio. A CMC who received the "Best CMC" award at the jamboree stated "I sleep polio, I live polio, . . . I am associated in my heart with this programme. I will not rest till [polio] is eradicated."

Since one important element of the jamborees is the participation of local government officials, and campaign election laws prevent candidates participation in public activities during the campaign period, no jamborees were conducted prior to, during or immediately after the elections. The next five jamborees are scheduled to take place this Fall, when the summer heat has abated.

The role of CMCs and their success in mobilizing community members to accept and participate in immunization activities, and recognition of that success, is reflected in the fact that CMCs and the block mobilization coordinators (BMCs) who supervise them were engaged by the government of UP and its partners (WHO, CDC, the India Expert Advisory Group on Polio Eradication, and the National Polio Surveillance Project) in a recent study comparing the immunogenicity of different doses and methods of administration of Inactive Parenteral Vaccine (IPV) and monovalent Oral Polio Vaccine type 1 (mOPV1). The study group was infants six to nine months of age with high risk of poliovirus infection resident in CGPP CMC areas or UNICEF CMC areas in Moradabad district. Although the sample size was large (1500 to 1600) families to compensate for drop-outs, the CMCs enrolled 1002 children on the first day alone, with 494 children from CGPP areas. Relative to the expected drop-out rate of 50%, only 51 (10.3%) of the 494 enrolled in CGPP areas dropped out by the 3<sup>rd</sup> round of the study. CGPP lessons learned include the value of CMCs and local influencers (trained/oriented by CGPP), the value of microplanning, action to combat community resistance, household visits to remind enrolled families of the expected second study visits, pre- and post-counseling for families, and physicians visits for those who did not enroll as well as those who did enroll. CGPP is conducting a study interviewing the participating community-based staff about their experiences, exploring the role of incentives, etc. Results will be available by the end of 2009.

### *Behavior Change Communications*

The 2008 baseline survey also highlighted areas for improvement within the CGPP behavior change communications/social mobilization strategy through development of new messages to address gaps in mothers' knowledge of children's eligibility for polio vaccine

- ◆ 12% of mothers indicated that a child should not be given polio vaccine repeatedly

- ◆ 74% of mothers indicated that a sick child should not be given polio vaccine<sup>1</sup>
- ◆ 10% of mothers indicated that a newborn should not be given polio vaccine<sup>1</sup>
- ◆ only 31% of mothers surveyed in CGPP catchment areas were able to show their child's immunization card, and 47% of mothers indicated that they didn't have their child's card.

Funding from the Gates Foundation facilitated the development and production of a number of new materials designed to address these and other misconceptions and promote appropriate behaviors. For example, health education booklets for literate and non-literate women, and flip books for CMCs and health workers to use when meeting with mothers provide useful information on polio and routine immunization, vaccine safety, hygiene, management of children with diarrhea, etc. With Gates Foundation funding carrying bags for child immunization cards were purchased and distributed to mothers during discussions of the value of the immunization cards; together these are expected to promote card retention. On-going data collection and analysis, as well as planned research studies (*Activity Milestone 1.1*), will help to assess the impact of these materials, and inform future program and message adjustments as well as additional materials development.

#### *Routine Immunization*

Routine immunization is also an important aspect of polio eradication and prevention of child illness. Social mobilization and behavior change communications messages for mothers emphasize participation in routine immunization services as well as supplemental polio immunization campaigns. BCG and DPT3 coverage levels are lower in UP than in any other state in India, at 73% and 39% respectively. In an attempt to see if CGPP has made any difference in routine immunization coverage in the very high risk areas where CGPP CMCs work, BCG and DPT3 coverage as of January 2009 among children born in the period Oct 07 – Sept 08 was collated from all CMC areas in a block to give actual CGPP block coverage data. A block is only partially covered by CGPP CMCs and therefore CGPP block coverage data does not in any way represent the entire block. CGPP block coverage data is being compared with the district estimates drawn from the *District Level Household and Facility Survey (DLHS)<sup>2</sup>, Round 3, 2007-08* conducted by the Government of India among children 12-23 months old, although the coverage data from these two sources may not be strictly comparable. As described in a short report recently sent to the Gates Foundation from our India Secretariat office, in 42 (75%) of the 56 CGPP blocks in UP, BCG coverage in the given block exceeds the BCG coverage level for the District. In 37 (66%) of the 56 blocks, DPT3 exceeds the District level coverage; these blocks also were among those with higher BCG coverage relative to the District levels. (See Figure 3 below)

The CGPP baseline survey (2008) also showed that for children with immunization cards, a range of 87% to 93% of mothers in CGPP Districts had received BCG as confirmed by the immunization card. CGPP behavior change communications materials and research are further addressing current and potential impact on participation in routine immunization.

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<sup>1</sup> Unprompted responses of mothers asked to list categories of children who should not receive polio vaccine

<sup>2</sup> See the attached DLHS Fact Sheet of Uttar Pradesh.

**Figure 3: Block level BCG and DPT3 coverage in 37 high risk, high performing CGPP blocks compared with District level coverage for the same antigens**

S. No.	District / CORE Block Names	No. of Newborns (CMC Areas Oct 07-Sept 08)	BCG Coverage <sup>3</sup>	DPT 3 Coverage <sup>3</sup>
<b>1</b>	<b>Baghpat district<sup>3</sup></b>		<b>66</b>	<b>34</b>
	Baghpat block	1339	90	42
	Baraut block	1393	94	50
	Binauli block	1080	95	55
	Chaproli block	1272	87	40
	Khekhra block	1269	90	59
	Pilana block	1269	89	51
<b>2</b>	<b>Bareilly district</b>		<b>67</b>	<b>37</b>
	Bahedi block	988	72	43
	Bhojipura block	1303	87	51
	Dalelnagar block	647	92	67
<b>3</b>	<b>Mau district</b>		<b>81</b>	<b>52</b>
	Ghosi block	999	88	62
	Ratanpura block	641	83	53
<b>4</b>	<b>Meerut district</b>		<b>78</b>	<b>42</b>
	Hastinapur block	498	89	55
	Rohta block	1019	95	62
<b>5</b>	<b>Moradabad district</b>		<b>75</b>	<b>35</b>
	Munda Pandey block	2063	75	41
	Naroli block	1936	78	38
	Urban Zone-3 block	1082	88	63
	Urban Zone-4 block	1498	77	40
	Urban Zone-5 block	1299	75	44
<b>6</b>	<b>Muzaffarnagar district</b>		<b>77</b>	<b>42</b>
	Jansath block	1848	85	45
	Khatauli block	949	85	47
<b>7</b>	<b>Rampur district</b>		<b>68</b>	<b>33</b>
	Bilaspur block	1396	79	50
	Chamrua block	1087	94	60
	Swar block	1548	82	44
	Tanda block	865	74	42
<b>8</b>	<b>Saharanpur district</b>		<b>79</b>	<b>44</b>
	Saharanpur City	1291	87	67
	Nakur block	1064	97	75
	Sarsawan block	930	86	44
	Sunehty block	1325	94	71
<b>9</b>	<b>Shahjahanpur district</b>		<b>65</b>	<b>26</b>
	Bhawalkheda block	1253	71	47
	Jaitipur block	1369	84	44
	Kalan block	1533	85	50

<sup>3</sup> BCG and DPT 3 coverage estimates of a district are as per DLHS 3, 07-08. Whereas coverage data of a block is the collated data of all CMCs in that block and does not represent the entire block.

<b>10</b>	Mirzapur block	1713	90	38
	Sindhauli block	1295	88	63
	<b>Sitapur district</b>		<b>57</b>	<b>24</b>
	Biswan block	1084	81	51
	Machrehata block	1006	73	24
	Persendi block	1136	84	26
	Pisawan block	1183	80	32

## ETHIOPIA

### *Critical Milestone: LQAS data disseminated by 12/1/09*

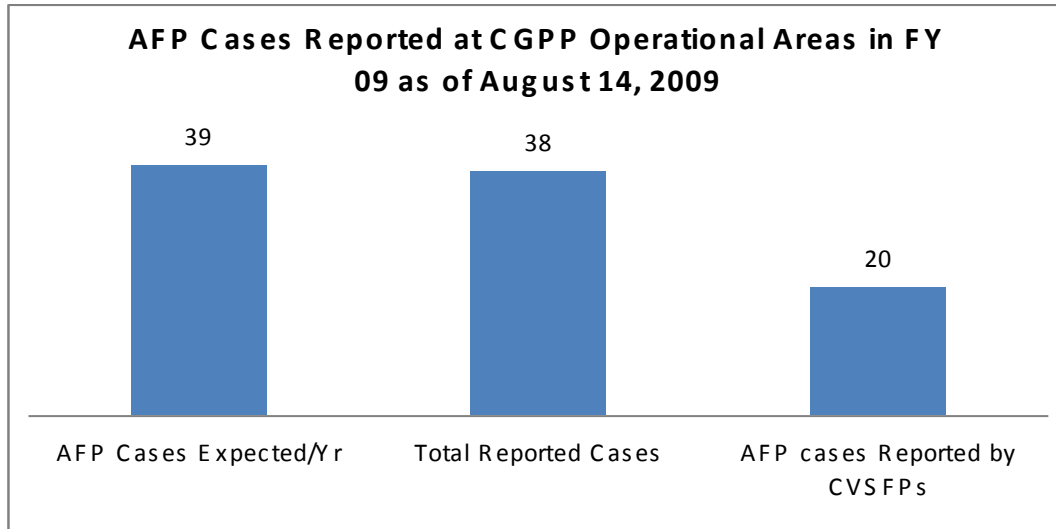
Although the Gates funding received for 2009 is not being used for direct implementation in Ethiopia, funding for implementation of an LQAS survey (*Activity 3.2*) has contributed to strengthening monitoring and evaluation capacity and use of data for program planning. Past data does indicate that the unique community-based approach to active surveillance in CGPP catchment areas in Ethiopia contributes to a measurable impact on quality of surveillance and community awareness of AFP. A case control study yielded results shown in Figure 4, below. As shown in Figure 5, CGPP volunteers are contributing to AFP reporting in project catchment areas, where AFP reporting was almost exactly at the anticipated level based on WHO indicators, and more than half of the cases were reported by CGPP-trained community volunteers.

A Gates-funded LQAS currently under way is expected to yield further information relative to last year's baseline study that will inform on-going project planning, resource allocation in FY2010, and the anticipated expansion into high risk areas in Ethiopia and across the border.

**Figure 4: Community awareness of AFP in Sodo Woreda (CGPP catchment area) and Meskan Woreda (non-CGPP)**

Indicator	Total Sample	Decision Rule	Sodo Woreda (case)		Meskan Woreda (control)	
			Correct	Adequate? ≥ 80%	Correct	Adequate? ≥ 80%
<b>Case definition</b>						
Key signs or symptoms of (AFP) polio (inability to move, sudden flaccid, paralysis of limbs)	19	13	16	Yes	2	No
Key signs or symptoms of Measles (any rash)	19	13	18	Yes	12	No
<b>Case detection</b>						
Reaction of Mothers when a child gets sudden flaccid and paralysis; any rash (go to health facility or inform for CVSFP)	19	13	18	Yes	9	No
<b>Case reporting</b>						
How soon after noticing AFP on your child would you take the child to the nearest health facility (As soon as possible, 1-14 days)	19	13	19	Yes	4	No
<b>Source of information</b>						
Providers of AFP (Polio), Measles and immunization education (CVSFPs).	19	13	17	Yes	0	No
Activities of CVSFP while visiting your home (HE, Check for AFP, Measles cases, SM)	19	13	17	Yes	0	No

**Figure 5: AFP cases anticipated and reported in CGPP areas in 2009**



**NEPAL**

***Critical Milestone: LQAS data disseminated by 12/1/09***

In Nepal, CGPP activities will end on September 30, 2009. As a result the Gates Foundation-funded survey (*Activity 3.2*) will serve as a final survey for the project. Preliminary findings will be reported at the CGPP close-out ceremony in Kathmandu in September and a final report will be produced by the end of December 2009. That report will be disseminated throughout the global CGPP partnership, including US-based and local partners, Ministries of Health, USAID, the Gates Foundation, UNICEF, WHO, and other stakeholders.