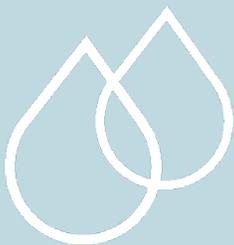




Core Group Polio Project (CGPP) Final Evaluation Report 2017



Results from 2012 -2017

This is a compilation of global and country final evaluation reports written by Judiann McNulty, independent evaluation consultant, with contributions from Angola, Domus Custodius - Tchikos Consultoria Empresarial (Pedro Sapalalo and Kussinduka Satureira); Ethiopia, Fasil Tassema; India, Ipsos Public Affairs (Sutapa Ray); HOA, GA Business Consultants Ltd. (Geoffry Alala); Nigeria, DARE Tech Company (Joshua Moriyonu and Toluope Aina); and South Sudan, HIGH PSL 9114 LTD (Peter Walyaula). This report was prepared by Kathy Stamidis, CGPP Monitoring and Evaluation Technical Advisor, and Lydia Bologna, CGPP Communications Technical Advisor, with technical oversight by CGPP Deputy Director Lee Losey.



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Acronyms

AFP	Acute Flaccid Paralysis
ANM/ASHA/AWW	Frontline government health workers in India
BCC	Behavior Change Communication
BMGF	Bill and Melinda Gates Foundation
CBS	Community Based Surveillance
CDC	Centers for Disease Control
CGPP	Core Group Polio Project
cVDPV	Circulating Vaccine Derived Polio Virus
CM/CMC/CV/VCM	Community Mobilizer/Community Mobilization Coordinator/Community Volunteer/Volunteer Community Mobilizer
DHS	Demographic and Health Survey
EPI	Expanded Program on Immunization
FGD	Focus Group Discussion
GAVI	Global Alliance for Vaccines
GPEI	Global Polio Eradication Initiative
HOA	Horn of Africa program (Kenya and Somalia)
HDA	Health Development Army (Ethiopia)
ICM	Independent Campaign Monitoring
IDPs	Internally displaced persons
IPC	Interpersonal Communication
KI	Key Informants
KII	Key Informant Interviews
LGA	Local Government Area (Nigeria)
MICS	Multiple Indicator Cluster Survey (UNICEF)
M&E	Monitoring and Evaluation
MOH	Ministry of Health
MTE	Mid-Term Evaluation
NGO	Non-Governmental Organization
NIDs	National Immunization Days
NNTS	Neonatal Tetanus Surveillance
NPAFP	Non-polio Acute Flaccid Paralysis
OPV	Oral Polio Vaccine
PA	Payam Assistant
PCE	Post Campaign Evaluation
SIAs	Supplemental Immunization Activities
SVP	Special Vaccination Posts
TBA	Traditional Birth Attendant
TWG	Technical Working Group
UNICEF	United Nations Children's Fund
WPV	Wild Polio Virus

INTRODUCTION

This is the final evaluation of the 2012-2017 project phase of the CORE Group Polio Project (CGPP), a multi-country, multi-partner initiative providing financial support and on-the-ground technical guidance to strengthen host country efforts to eradicate polio. CGPP began in 1999 with the CORE Group channeling USAID-funded grants to international and national NGOs to support polio eradication by mobilizing communities to take part in immunization campaigns, routine immunization, and Acute Flaccid Paralysis (AFP) surveillance.

The CORE Group Polio Project contributes directly to the Four Pillars strategy of the current Polio Eradication and Endgame Strategic Plan 2013 – 2018:

1. Strengthening of routine immunization services and expansion of coverage, including coverage with at least three doses of oral polio vaccine (OPV)¹;
2. Supplemental Immunization Activity with OPV to build and sustain population/herd immunity;
3. Mop-up - Outbreak response vaccination campaigns and,
4. Surveillance for Acute Flaccid Paralysis (AFP).

The CGPP has worked in a total of nine countries to contribute to the elimination of polio. The first phase of the CGPP included India, Ethiopia, Angola, Bangladesh, Nepal and Uganda. Once WHO declared Bangladesh, Nepal and Uganda free of polio, they graduated from the program; Angola joined the others in 2016. The CGPP later added Nigeria, South Sudan and the Horn of Africa (Kenya and Somalia).

Only Nigeria remains on the list of endemic countries, with no cases of wild polio virus (WPV) reported in the other CGPP countries since 2016. The CGPP continues in 2018 with a new infusion of funding from USAID and the Bill and Melinda Gates Foundation.

The CGPP is a major contributor to the eradication of polio in the target countries through quality interventions in supporting Supplemental Immunization Activities (SIAs), monitoring campaign quality, mobilizing the population to participate in campaigns and routine immunization, and community-based surveillance for AFP. In Africa, the CGPP has enhanced activities through the establishment of Special Vaccination Posts (SVP) at borders, promoting cross-border collaboration between neighboring at-risk countries and promoting other child health practices in both India and Nigeria.

At the national level in each country, the CGPP is engaged with influential groups of stakeholders leading polio eradication and planning for transition. The CGPP Secretariat in each country brings the community voice and pragmatic experience of field operations in difficult environments to the Interagency Coordination Committees (ICC) which also include WHO, UNICEF, MOH, Rotary International and other donors.

Those working in the polio eradication effort respect and value the CGPP for its ability to work in remote, insecure areas – hard-to-reach locations where other partners and even governments cannot readily access. The CGPP has been able to directly reach households with intensive promotion, resulting in persuading families to take their children for routine immunization and participate in supplemental immunization activities. The CGPP network on the ground is valued for increased AFP case detection and timely sample collection.

¹ In the CORE Group Polio Project countries of Angola, Ethiopia and India, the national policy for routine immunization is four oral polio immunizations.

For the 2012-2017 phase, the CGPP worked towards six objectives. The following is a list of Objectives, Intermediate Results, and Indicators:

- 1. Build effective partnerships between PVOs, NGOs and international, national and regional agencies involved in polio.**
 - IR1.1 Enhanced collaboration between CORE PVO members, MOH, spearheading partners, and other actors in polio eradication.
 - Indicators: # of CORE PVO members participating; # of ICC and ICC committee meetings attending by CGPP; # of Regional and International forums attended by CGPP
- 2. Support PVO/NGO efforts to strengthen national and regional immunization systems to achieve polio eradication.**
 - IR 2.1 Increased Number of Children, under-five years of age fully protected by Routine Child Immunizations.
 - Indicators: % of children 12 to 23 months with OPV3; % of zero dose children (never vaccinated); % of children 1 year and older with 7 or more doses of OPV; % of children under one with OPV birth dose; % of children 12 to 23 months fully immunized
- 3. Support PVO/NGO involvement in national and regional planning and implementation of supplemental polio immunizations.**
 - IR 3.1 Increased OPV coverage among children less than one year of age.
 - Indicators: % of children under 5 missed in each SIA; % of children with no doses of OPV; % of houses missed in each SIA; % of children 1 year and older with 7 or more doses of OPV
- 4. Support PVO/NGO efforts to strengthen AFP case detection and reporting.**
 - IR 4.1 Increased number of AFP cases identified within 14 days of onset with 2 stool samples 24 hours apart.
 - Indicators: Non-polio AFP rate of at least 2 per 100,000 in children under 15; % NPAFP cases with 2 stool samples with 14 days of onset AFP; # of silent areas in project target areas
- 5. Support timely documentation and use of information to continuously improve the quality of polio eradication.**
 - IR 5.1: Increased use of data to enhance immunization coverage and surveillance.
 - Indicators: Percentage of annual SIAs in which CGPP conducts Independent M&E; # of journal articles published by CGPP; # of presentation CGPP members make at conferences and regional and international forums
- 6. Support PVO/NGO participation in either a national and/or regional certification activities.**
 - IR 6.1: Formal engagement of CGPP secretariats and senior staff in support of certification. Indicators: # of Independent Surveillance Reviews with CGPP Participation; CGPP involvement in development of end game and legacy strategy; # of CGPP meetings with the IMB

CORE GROUP POLIO PROJECT IMPACT

Major Findings from the Endline Evaluation

- Community mobilizers in each of the countries are well-respected, knowledgeable and influential in convincing parents to seek immunization and are the top source of health information in hard-to-reach communities. They are the primary source of knowledge on polio and polio campaigns in CGPP focal areas. Their influence and credibility has grown over the life of the program.
- Coverage of routine immunization, including OPV3, in the CGPP target areas has increased and is now higher than national coverage data in most countries.
- The increases in percent of children 12-23 months fully immunized are particularly notable in Nigeria (from 33% at baseline to 57%) and in Ethiopia (from 24.7% at baseline to 43.6%).
- The use of newborn tracking and education from community mobilizers has increased OPV birth dose, with Ethiopia reporting increases from 52.0% to 54%; India from 64.2% to 78.9%; and Nigeria, from 54.9% to 98.6%.
- The CGPP has supported SIAs through monitoring, planning, social mobilization and logistical support with activities varying by country. Children under 5 missed in each SIA in Nigeria has decreased from 4.5% to 1.5%. In India, houses missed has decreased from 5.9% to 4.4%.
- Non-polio AFP surveillance (NPAFP) has been a success as measured by the indicator of identifying >2 per 100,000 children under age 15. Additionally, the average percentage of adequate stool samples is about 90% across five countries. Even in South Sudan, with challenges of long distances, minimal roads, and civil unrest, stool adequacy has reached 66% compared to the minimal number of stools collected by WHO prior to CGPP working in the target area.
- South Sudan has established a timely, accurate, and robust community based surveillance system. The MOH and partners depend heavily on reliable surveillance data to make decisions during and after campaigns. Post campaign monitoring has evolved to become a great strength of CGPP South Sudan.
- In 2014, polio was eradicated in India, despite deeply entrenched social resistance to immunization campaigns. The Secretariat developed innovative Behavior Change Communication strategies for social mobilization efforts. The use of child registries provided solid, up-to-date data to improve and track routine coverage rates, and allowed for the improvement of birth dose timing and tracking. These strategies have been employed elsewhere with success.

Project Innovations

Each of the countries has come up with new methods or strategies during the current phase; some innovations are now being replicated in the other CGPP countries:

- Kenya and Somalia led the Cross Border Health Initiative through establishing cross border health committees to convene inter-country border stakeholders to synchronize campaigns and other efforts to reach every child. The HOA Secretariat supported outreach to nomadic populations by providing social mobilization and transportation for health facility staff to support integrated routine immunization outreach.
- Ethiopia established a mobile device and web-based disease surveillance system, developed a system for newborn tracking of polio birth dose and strengthened cross border collaboration with CGPP HOA.
- India has developed strategies to motivate fathers to increase participation in seeking immunizations for their children. Under-served communities were reached mainly through interpersonal communication sessions, group meetings and the creative use of mixed media. The Secretariat has also developed special

certificates for parents who completed timely immunization of their children.

- Nigeria established a successful network of community volunteers and expanded their capacity to deliver quality health care interventions beyond polio eradication, such as WASH, nutrition and malaria prevention, and leveraged community structures to boost surveillance at all levels. CGPP was the first PEI partner to introduce RI Card holders, increasing RI Card retention.
- South Sudan instituted Independent Campaign Monitoring across the entire country to measure the reliability and accuracy of campaigns, recruited and trained nearly 2,000 “key informants,” such as traditional healers and birth attendants, religious leaders, and community leaders to improve CBS, and facilitated cross border meetings to synchronize campaigns and build relationships with neighboring country health systems.
- Angola utilized a network of 2,710 Community Health Workers to promote Community Based Surveillance or CBS, increased routine immunization using community registers, and leveraged skills of CHWs to tackle other health initiatives such as the use of treated bed nets and malaria drugs.

The Secretariat Model

At the very beginning of this initiative, the CGPP created the unique Secretariat Model to guide its work. Each CGPP country has its own Secretariat, a small team of neutral technical advisors, independent from any one implementing partner. The secretariat facilitates communication, coordination, and transparent decision making among all partners; the model closely pairs the community-level expertise of international and local NGOs with the knowledge and strategies of the Global Polio Eradication Initiative partners. Through this model, the countries effectively coordinate and promote civil society engagement in polio eradication, while simultaneously injecting a crucial community-level component through the focused activities of thousands of community health workers. The Secretariat in each country handles coordination with the host government and others engaged in polio eradication, such as UNICEF, WHO, Rotary International, and CDC.

The CORE Group Polio Project Today

When the CGPP started in 1999, polio was endemic in dozens of countries with thousands of new cases occurring annually. Since then, the CGPP has worked with more than a dozen international NGOs and more than 50 local NGOs to effectively implement polio eradication activities in polio-vulnerable areas of Angola, India, Ethiopia, Kenya, Somalia, Nepal, Nigeria, Uganda, South Sudan and Bangladesh.

Currently, the CGPP is working through nine international and 30 local NGO partners to reach conflict-affected zones and under-served populations such as refugees, internally displaced persons (IDPs) and nomads in very remote areas. The original premise of NGOs working in collaboration was realized by the joint proposals and neutral country Secretariat Model structure which provides the leadership and liaises with other Global Polio Eradication partners.

Through the determination and flexibility of the CGPP, the hard work of thousands of dedicated CGPP volunteers, and the focused leadership from the Global Polio Eradication Initiative, polio was reduced to three endemic countries and only 37 total cases in 2016. In 2017, the total number of WPV cases further declined to 22.

Today, the current CGPP countries remain at risk due to unvaccinated or under-vaccinated pockets of children. Civil unrest, vaccine hesitance or resistance, and porous borders through which nomads and IDPs transit from the under-vaccinated regions all add to the complexity of the challenge.

Programmatic Strategies

A very similar model is used in all countries, with some adaptations to the local context or differing emphasis of activities depending on local needs. The coordinated effort brings together the INGO and local NGO partners with the government and other partners in polio eradication. The central model includes the following efforts.

CGPP Interventions by Country during 2012-2017

Intervention	Result	Ethiopia	India	Kenya	Nigeria	Somalia	So. Sudan
Participation in national polio coordination	1.1	x	x	x	x		x
Strengthening routine immunization	2.1	x	x	x	x	x	
Planning and participation in SIAs	3.1	x	x	x	x	x	x
Independent or post-campaign monitoring	3.1, 5.1				x		x
Social mobilization	2.1, 3.1	x	x	x	x	x	x
Special vaccination posts at borders and Transit Strategies	2.1, 3.1			x	x	x	x
Work with nomadic populations	2.1, 3.1	x		x	x	x	x
Newborn tracking and vaccine registers	2.1, 3.1	x	x		x		
Work with IDPs or refugees	2.1, 3.1	x		x	x	x	x
Promoting cross-border collaboration	3.1	x		x		x	x
Community-based AFP surveillance	4.1	x		x	x	x	x

***AFP Surveillance in South Sudan was funded by the BMGF, not USAID.

CGPP South Sudan has unique activities of Independent Campaign Monitoring (ICM) also called Post Campaign Evaluation (PCE) and Special Vaccination Posts (SVP) on internal borders and international borders, along with Community- Based Surveillance (CBS) for AFP. The countries in East Africa, including Ethiopia, Somalia, Kenya, and South Sudan, are promoting cross-border collaboration between district governments for planning SIAs and tracking mobile families. Kenya and Ethiopia also have supported SVPs on their porous borders to reach nomadic and refugee populations.

The Indicator Tracking Table (see Annex A) lists the objectives, intermediate results, and indicators; these were measured either by routine monitoring or by survey comparisons from the baseline and end line surveys. In general, progress was made against all objectives, with variation between countries due to contextual challenges, such as civil unrest and militant group ideology. Besides fully engaging the partners in the national collaborative efforts against polio and now participating in documenting results and planning the post-polio transition, the country programs made their greatest progress in contributing to improved routine immunization coverage and coverage of OPV3 and to AFP surveillance including adequate stool samples. The specific progress and challenges for achieving results will be elaborated in the country-specific sections of this report.

Funding

USAID served as the sole funder of the CGPP from 1999-2006. Building from this successful history, CGPP attracted additional funding in certain countries from the Bill & Melinda Gates Foundation (BMGF), WHO,

UNICEF, GAVI and others. This continued funding stream enabled the CGPP to act with flexibility to refine its approaches when necessary, further building its credibility within the community. The table below shows funding details for each country.

CGPP Funding 1999-2022

Country	USAID	BMGF	WHO	UNICEF	Others
Angola	2000 -2016	2010 - 2016			
Bangladesh	2000 -2002				
Uganda	1999-2000				
Ethiopia	1999-2022				Int'l Vaccine Inst. (Apr 2015 - Nov. 2016; GAVI (June 2015 – December 2015) CORE Inc. (June 2015 – Dec 2015
India	1999 - 2022	2008 -2009 2010 -2012		2011-2012	
Nepal	2007 - 2012				
Nigeria	2014 - 2022				
Horn of Africa	2014 -2022				
South Sudan	2014 - 2022	2010 - 2018	2013	2016	



A father with young children waits outside the Nanan Health Centre in northern Turkana County, Kenya.

PROJECT RECOMMENDATIONS

After eradication of smallpox, a great deal of momentum was lost, as well as the community mobilization networks that had been developed before polio eradication started. As many stakeholders in the CGPP countries expressed, it is important not to lose the momentum and community structures of the CGPP when polio is eradicated, but instead to turn the focus to eliminating another health challenge.

Data-Driven Program Recommendations

- Birth dose coverage showed marked gains during the project period. However, there is still substantial room for improvement. The CGPP needs to develop country-specific messaging and strategies that encourage parents to give birth dose, while respecting and integrating traditions related to birth. One strong example here is Nigeria, where vaccinators now attend naming ceremonies; providing birth dose has become a routine part of the ritual in the CGPP areas.
- The CGPP must continue to find innovative and inclusive strategies to combat complacency, especially in countries that have been polio-free for a number of years. As campaign frequency decreases, it is important that communication messages remain strong and continue to inform parents of the importance of vaccination. Transition strategies should also include strong messaging.
- The percentage of children fully immunized increased in all of the CGPP countries. However, all remain under 80% (with CGPP India areas closing in at 77.7%). The CGPP must continue to advocate for full immunization and must develop new strategies to ensure coverage continues to rise. Community mobilizers play an essential role and must continue to emphasize the importance of routine immunization. Community influencers must be equally equipped with information and engaged.
- While coverage rates during campaigns are high, there is still a noted proportion of missed children and missed houses. New innovative strategies to ensure that children are not missed are needed to ensure that as campaigns decrease in frequency, they reach as many children as possible and maintain population immunity.
- Maintaining and even expanding a strong network of community based surveillance is necessary to ensure that polio does not re-emerge. Those training as part of the community based surveillance networks should continue to receive training on other diseases so this network can continue to concurrently provide surveillance for polio and other diseases such as malaria.
- Qualitative data supports the need for the CGPP to develop male engagement, female empowerment, and couple communication strategies and interventions. While mothers were identified as the caregivers of young children, they lack the power, influence, and resources to make decisions about vaccinations. Fathers and community influencers need to be engaged with correct information on the importance of vaccination.
- In the countries with cross border programming, an innovative standardized solution needs to be found to track polio and routine immunization of nomadic and refugee children. The CGPP can pursue this in the cross-border meetings to encourage identifying a feasible solution.
- Interviews with community mobilizers revealed a willingness and desire to have more training and expand their knowledge base to topics complimentary of polio. Continuing to pursue “add on” training and services including nutrition, pregnancy care, and other child health topics would not only strengthen the health of the CGPP communities, it would increase parents’ receptiveness to polio services. Additionally, equipping community mobilizers with other skills will help with their post-polio transition.

Monitoring and Evaluation Recommendation

- The project's Technical Advisor for Monitoring and Evaluation has begun to organize the project data and develop electronic systems for continual organization and updating. This process should continue to ensure that all data and information collected in the new phase can be easily utilized and lessons learned can be effectively shared.

Transition Recommendations

- In the two countries which have been part of CGPP from the beginning, the time has come to transition to a long-term means of promoting immunization. In India, the community mobilization, albeit a less intensive version, can transition to the AWWs and ASHAs, and in Ethiopia, to the HDAs and HEWs.
- There is much to be learned from the close-out of the CGPP Angola project. The failure to transition this project, resources, and internalize lessons learned is a key finding. Over the next 5 years, other CGPP country programs will transition and come to an end. It is essential that these lessons are well documented and not lost.
- Careful documentation of the process of preparing and mentoring/supporting social mobilizers would be useful for partners and national stakeholders who may wish to use the CGPP strategy of social mobilization in the future. The CGPP may wish to hire someone to help with this.
- Community based surveillance is a clear strength of the CGPP, and a method that has application to other infectious diseases including malaria, measles, and others. The CGPP should focus on ways to educate those outside of polio on CBS, and make strides to integrate it into other types of public health programming. Additional training manuals, tools, and information about CBS should be developed.



A woman administers oral polio vaccine in Kano State, Nigeria, February 2017.

EVALUATION METHODOLOGY

This evaluation is for the 2012-2017 project phase and is intended to document achievements, actions, and lessons. Findings will inform plans for the next phase.

Quantitative

A quantitative household survey was conducted in the country target areas, apart from South Sudan which is only working on surveillance and campaign monitoring; the Angola program closed in 2016. Each CGPP Secretariat contracted a local firm to collect and analyze the qualitative and quantitative data and to generate a report. The reports were reviewed by the evaluator and/or the CGPP Technical Advisor for M&E with requests for revisions or additional analysis as needed. The quantitative surveys were conducted between July and September 2017, with reports finalized by November 2017.

For the quantitative data collection, each country used the instrument from the baseline in 2012 or 2013. While having the same 50 core questions, countries were free to add additional questions. The survey collected information about OPV and complete immunization coverage, knowledge and attitudes about polio vaccination and knowledge about AFP as well as detailed demographic information on the respondent caregiver. The questionnaire was administered to the female or male caregiver of children between 12 and 23 months of age.

All countries used the standard WHO 30-cluster sampling methodology for the quantitative survey, but some used probability proportional sampling (PPS) to select the clusters. Sample sizes varied, depending on whether the local Secretariat wanted to look at differences between geographic areas or partners. The table below shows the sample sizes for each country.

Sample Sizes for CGPP Final Quantitative Survey

Country	Ethiopia	India	Kenya	Nigeria	Somalia
Sample size	660	612	1440	1499	480

Qualitative

The qualitative data collection in the five countries consisted of focus groups with female caregivers and with fathers separately along with individual interviews of community mobilizers, government health workers and Secretariat staff. Religious leaders were interviewed in Somalia, Kenya, and Nigeria. The qualitative data collection occurred during the same period as the quantitative survey, but guidance called for selecting different communities than those involved in the quantitative survey to prevent bias and interview fatigue.

During this evaluation, government health officials and other organizations or donors involved in polio eradication efforts cited the role CGPP has played in the reduction of polio. These comments are included in the country-specific sections later in this document. While the countries have made great progress, there is a real concern about complacency and sustaining sufficient polio immunization coverage. In three of the countries, there was a resurgence of WPV, after several years of reporting no cases. The CGPP played a major role in outbreak response activities. This highlights the importance of the CGPP's continuing efforts in AFP surveillance and facilitation of cross-border collaboration, as well as the support to strengthen campaign planning and routine immunization in the countries that no longer have reported polio cases.

The most visible and quantifiable result of the 2012 – 2017 phase of the CGPP is the increase in OPV coverage over the five years as shown in the table below. In looking at the comparison between final coverage in the CGPP and the WHO/UNICEF national estimates, it must be kept in mind that CGPP target areas are deliberately selected as those with the lowest coverage in the country from the onset. Therefore, there is a noteworthy accomplishment in bringing those levels up to or near the national estimate, let alone surpassing that level as has occurred in three of the CGPP target areas.

Changes in OPV3 coverage between baseline 2012 and final 2017 surveys (by card + recall)²

CGPP Country	Baseline % 2012 - 2013	Final %2017	WHO/UNICEF 2016 estimate % ²
Ethiopia	61.1	73.5	75
Kenya	40.2	94.0	88
India	82.6	90.2	86
Nigeria	47.2	62.3	49
Somalia	N/A	21.2	47

In the Somalia target area, there is still broad resistance to vaccines. In addition, Islamic militants are not allowing either campaigns or routine immunization in areas they control that adjoin the target area. Due to the continuing strife, families in those areas are often moving with their unvaccinated children to safer areas. Some seek health services, including vaccinations, in Kenya's health facilities located along the border.

Across the different countries, both government and WHO attribute the increased coverage in the CGPP target areas to the work of the project community mobilizers. They acknowledge that getting families to agree or even to seek out the polio vaccine was a major barrier. Project community mobilizers were able to overcome this challenge through their knowledge of the local culture and efforts to educate the community.

In the final survey, the respondents were asked where they had learning about polio in general and where they heard about the most recent polio campaign. In all five countries, the project mobilizers or volunteers were cited as the principal source of information about polio in general and about campaigns by large margins over any other source of information. The qualitative interviews with mothers and with fathers confirmed the credibility of the mobilizers and their reach directly to the households. The table below shows the role of the CGPP volunteers in spreading information about the recent campaign. Other sources of information are listed in individual tables found in each country section.

Percent of respondents who heard about the recent campaign from project mobilizer*

Country	% citing primary source is CGPP mobilizer	
	Baseline Survey	Endline Survey
Ethiopia	39.5	58.9
Somalia	-	43.4
Kenya	-	43.1
India	70.0	90.0
Nigeria	50.4	59.4

* for Ethiopia, this includes the government HDA volunteers working with CGPP

Indicators of improvement in caregiver knowledge about polio can be derived from the surveys. There is significant improvement in understanding of the timing of the first dose, increased protection from multiple doses, and symptoms of AFP. The data for this is presented in the country-specific sections below. These improvements can largely be attributed to the efforts of the project mobilizers per qualitative discussions with caregivers and key informants, many of whom also mentioned learning about other health topics besides polio from the mobilizers.

² <http://apps.who.int/gho/data/node.main.A831>



ETHIOPIA

Main Findings

- Ethiopia reported the last WPV case in January 2014.
- About 12,000 community volunteers and health workers have been dispatched along the vulnerable borders of South Sudan, Kenya and Somalia to reach nearly 13 million children under 15 years with polio vaccination.
- The development of a mobile device and web-based diseases surveillance system bolstered early case detection and reporting and contributed to a significant reduction of silent districts.
- An innovative newborn tracking system for the polio birth dose has contributed to a substantial upsurge in the OPVO immunization coverage rate.
- Cross-border collaboration strategies have reached migrant, mobile and hard-to-reach populations along the Ethiopia, Djibouti, Kenya, and South Sudan Somalia borders.

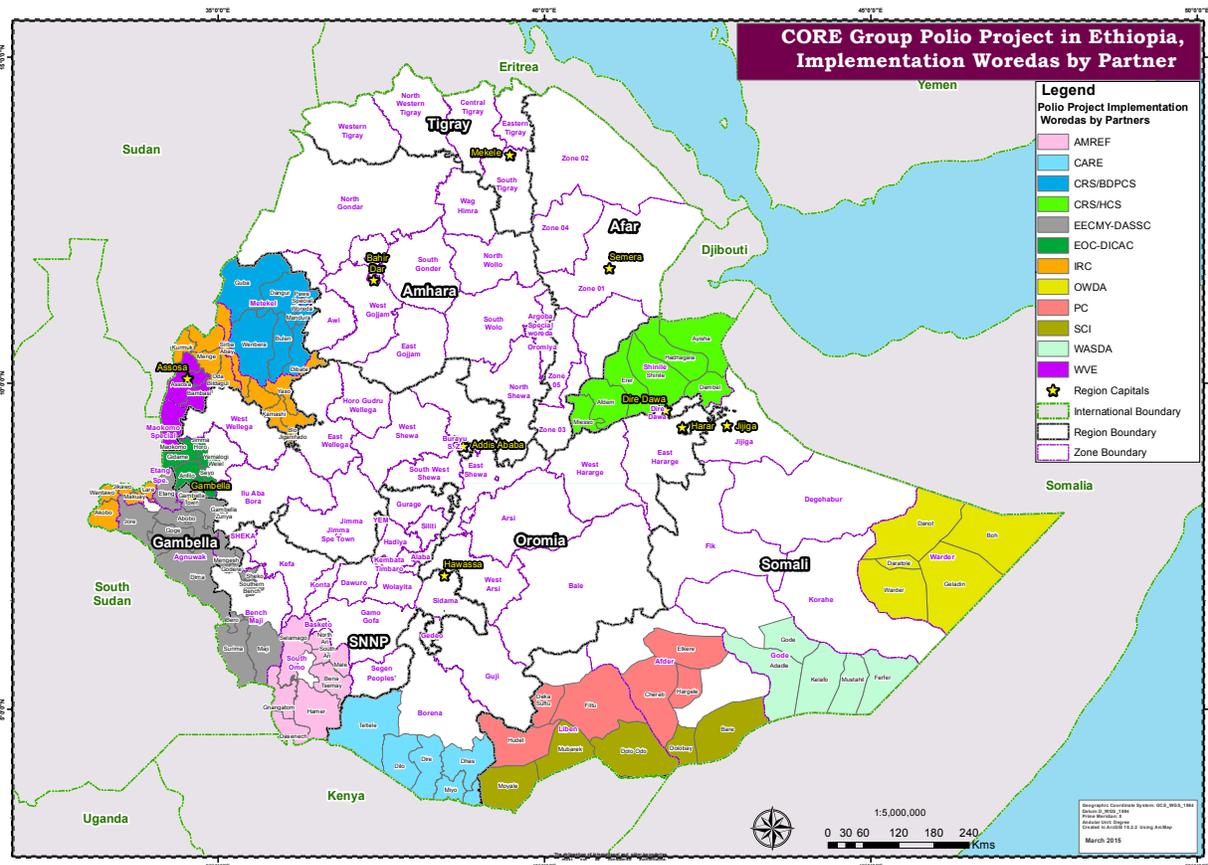
By the Numbers: Progress from 2012 to 2017

- OPVO coverage rose from 52.0% to 54.2%.
- OPV 3 coverage increased from 61.1% to 73.5%.
- Fully immunized children nearly doubled from 24.7% to 43.6% (according to cards only).
- Caregiver knowledge about the correct age to start polio immunization jumped from 39.1% to 55.8%.
- 58.9% of caregivers received campaign information from volunteers, a significant variance from 41.3%
- NPAFP rate increased from 2.2 to 2.8 and is greater than the 2.5 national average; stool adequacy improved from 87% to 92%.

Program Overview

The CGPP began in Ethiopia in November 2001 and has addressed a variety of challenges by reaching hard-to-reach communities with vaccination services and surveillance. As a country at high risk for importation from neighboring conflict-affected Somalia and South Sudan, Ethiopia continues to maintain high immunization rates and excellent surveillance.

The CGPP has focused on reaching underserved rural, pastoralist and semi-pastoralist areas to facilitate opportunities to vaccinate and maintain AFP surveillance quality. CGPP Ethiopia has trained and placed about 12,000 community volunteers and health workers along the vulnerable borders of South Sudan, Kenya and Somalia. As a long-time government partner, CGPP Ethiopia has worked closely with the country's health system on immunization and surveillance programs in hard-to-reach, pastoralist and border areas. CGPP uses the existing health system for joint planning, implementation and monitoring of activities.



CGPP Ethiopia presently collaborates with six international NGOs (CARE Ethiopia, Catholic Relief Services, Save the Children, World Vision Ethiopia, International Rescue Committee and African Medical Research Foundation) and five local NGOs which are cited below under Objective 1. These partners are implementing activities in 85 woredas (districts) of five regions in the country, reaching a total of 2,585,648 children under 15 years annually. Social mobilization efforts have reached 7,940,229 people in the past five years.

Key activities

CGPP Ethiopia established community based surveillance (CBS) with the use of mobile devices and a web-based system to allow transfer of information directly to the CGPP server in Addis Ababa. The m-Health system contributed to improved early case detection and reporting, improved stool adequacy rate and stool condition, and decreased silent districts in project implementation areas. The m-Health system also tracks pregnant women, newborns and defaulters and refers them for routine immunization and other health services.

To strengthen cross border collaboration, CGPP Ethiopia and CGPP Kenya-Somalia have coordinated government and implementing partners to reach migrant, mobile and hard-to-reach populations along the Ethiopia, Djibouti and Somalia borders. Efforts include identifying and mapping health facilities and crossing points and strengthening strategies for timely AFP case detection, routine immunization and supplemental immunization activities.

CGPP Ethiopia established a newborn tracking system for the polio birth dose that contributed to a significant improvement in the OPVO immunization coverage rate from 17.8 to 23.8 among children with cards, according to project survey data. Due to the efforts of CGPP Community Volunteers (CVs), 306,423 women have been identified and referred for neonatal tetanus vaccination, 181,192 newborns were identified and referred for vaccination and 71,904 defaulters under 1 year were referred for missed vaccinations in the last five-year period.

The CGPP supports timely documentation and data collection to improve the quality of RI and polio eradication. This activity consists of helping to establish recording, reporting and filing systems at target health facilities, woreda health offices and project field offices. This includes coaching on documentation and use of information for local decision-making.

The CGPP introduced AFP case detection in Ethiopia, using 11,650 volunteers to conduct house-to-house surveillance for AFP, neonatal tetanus, and measles while also tracking the vaccination status of pregnant women and newborns. CGPP Ethiopia has been supporting case reporting and transportation of stool samples.

On the national level, CGPP brings the voice of the communities to coordination meetings and is well-respected for their contribution in the target areas.

“On polio eradication, our main contributing partners are WHO, UNICEF and CORE Group. All contributed to EPI. But CORE Group plays a significant role for polio eradication in a hard-to-reach areas. First, they work at lower level to the level of health facilities, and have many implementing partners and work in various geographic areas taking in to account the local context. They are also providing support for routine immunization.”

—MOH official, EPI Team Leader, Addis Ababa, Ethiopia

Quantitative Findings and Discussion

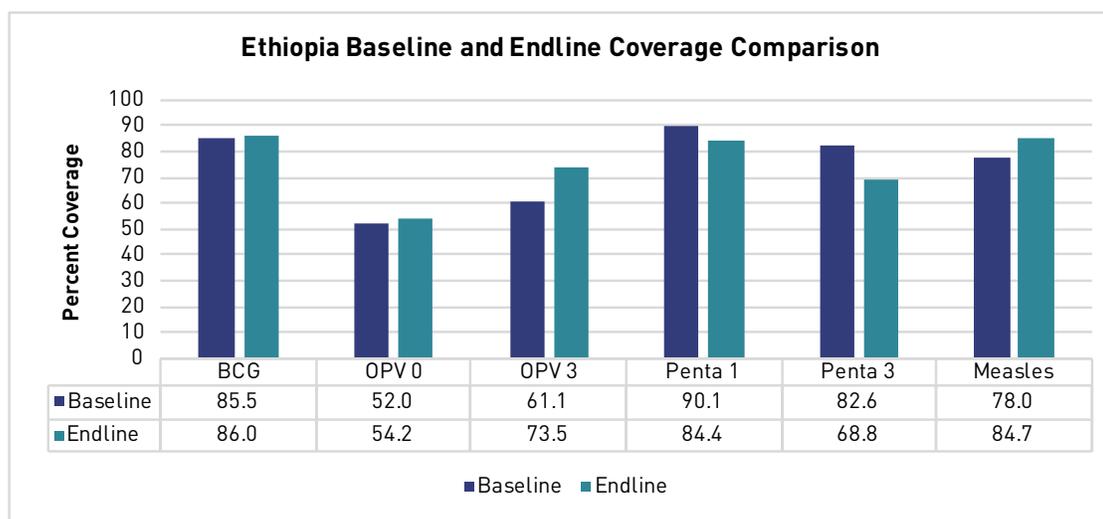
Objective 1: Build effective partnerships between PVOs, NGOs, and international, national and regional agencies involved in polio

CGPP Ethiopia has worked over the years with six international NGOs: Amref Health Africa, Catholic Relief Services (CRS), International Rescue Committee (IRC), Save the Children International (STC) and World Vision (WV) and CARE and with various local NGOs: Ethiopian Evangelical Church Mekane Yesus, Ethiopian Orthodox Church, Pastoralist Concern, Organization for Welfare Development In Action (OWDA) and Wabishebele Development Association (WASDA.) Due to unsatisfactory performance, WASDA was replaced in FY2017 with local NGO OWDA . In FY2017, CARE discontinued its work after 15 years in the Oromiya region of the Borena zone and was replaced by the Ethiopian Orthodox Church. The Consortium of Christian Relief and Development Association (CCRDA) serves as the host to the Secretariat.

Objective 2: Support PVO/NGO efforts to strengthen national and regional immunization systems to achieve polio eradication

Comparisons between baseline and final surveys show both successes and failures in meeting indicators of routine immunization coverage in the CGPP focal areas. The final survey shows that vaccination coverage in the project areas of Ethiopia is high when verification by card and mother’s history is combined, as shown in the graph and table below.

- The % of children 12 to 23 months with OPV 3 in Ethiopia increased from 61.1% at baseline to 73.5% at endline based on Card + Caregiver recall. The project did have success increasing OPV3 coverage. Instability and the decrease of polio campaigns provided barriers, but the project was able to overcome these.
- The % of children under one with OPV birth dose increased from 52.0% to 54.2%. Most children in the CGPP focal areas are born at home, making it difficult to administer timely birth dose. However, CGPP Ethiopia has made gains with child registers and tracking pregnant women, helping to increase the chance of birth dose being administered.
- The % of fully immunized 12-23 month on children increased from 24.7% at baseline to 43.6% at endline. (This data is presented from immunization card only)



When calculating coverage solely from immunization cards, marked gains were seen in routine immunization coverage in CGPP focal areas for both OPV0 and OPV3. OPV0 coverage rose from 17.8% at baseline to 23.8% at endline. Most children in CGPP focal areas are born at home, making it difficult to administer timely birth dose. According to the cards, OPV 3 coverage increased from 35.2% at baseline to 45.2% at endline. (Additional charts are available in Annex B).

Endline Vaccination coverage by data source and vaccine, CORE Group Polio Project Areas, Ethiopia

Vaccine	Not vaccinated		Card		History		Card + History		EDHS 2016
	n	%	n	%	n	%	n	%	%
BCG	94	14.0	299	44.5	279	41.5	578	86.0	69.2
OPV 0	308	45.8	160	23.8	204	30.4	364	54.2	27.1
OPV 1	114	17.0	333	49.6	225	33.5	558	83.0	80.6
OPV 2	134	19.9	321	47.8	217	32.3	538	80.1	71.7
OPV 3	178	26.5	308	45.8	186	27.7	494	73.5	56.4
Penta 1	105	15.6	334	49.7	233	34.7	567	84.4	73.2
Penta 2	134	19.9	324	48.2	214	31.8	538	80.1	65.1
Penta 3	210	31.3	310	46.1	152	22.6	462	68.8	53.2
Measles	103	15.3	274	40.8	295	43.9	569	84.7	54.3

Caregivers were also asked about their child receiving polio drops during campaigns. An impressive 94.3% of caretakers affirmed that the child had taken polio drops during a campaign. This is slightly up from the baseline of 90%. With campaign coverage hovering at 90% or above, the program will need to find creative ways to measure impact. No data was analyzed for participation in the most recent campaign or percentage of households visited by vaccinators.

Among those who have cards for verification, the highest drop-out rate (18%) is between Penta 1 and Measles. The 2016 Demographic and Health Survey (DHS) national averages (card + history) are presented for comparison. This confirms that coverage in the remote, difficult border areas of CGPP is higher than national averages as shown in the 2016 DHS data in the table below. Coverage of antigens using card + history was not significantly different at final from baseline.

Retention of cards is problematic with only 56% of respondents able to show the card at the time of the survey. Still, this is an improvement over the 45% of cards seen in the baseline. Of the families without



Mothers participate in a Community Meeting outside the health post in Banna Woreda in Ethiopia.

cards, 57% said the card was lost, but another 26% reported that the card had been kept in the health facility. Vaccination rates calculated by card along are much lower than card + history. In fact, BCG is noted in only 44.5% of the cards, even though 85.7% of all children have a BCG scar. This indicates that vaccinators need more motivation, training and supervision to assure that data is accurately recorded in the cards. This is an issue that might be addressed through health systems strengthening.

The researcher responsible for the quantitative survey used multivariate analysis to find the factors among socio-demographic and health care-seeking variables, which are associated with having a child who is fully immunized with the nine expected doses of different antigens. The significant factors include living in an urban area, attending 4 or more ANC visits, child born in a hospital, caregiver receiving information about polio from a community volunteer (mobilizer or HDA), child having received polio vaccine during a campaign, and the caretaker religion. Mothers having less than 3 years of education were less likely to have fully immunized children. The project will have to decide how best to use this information to strengthen mobilization activities.

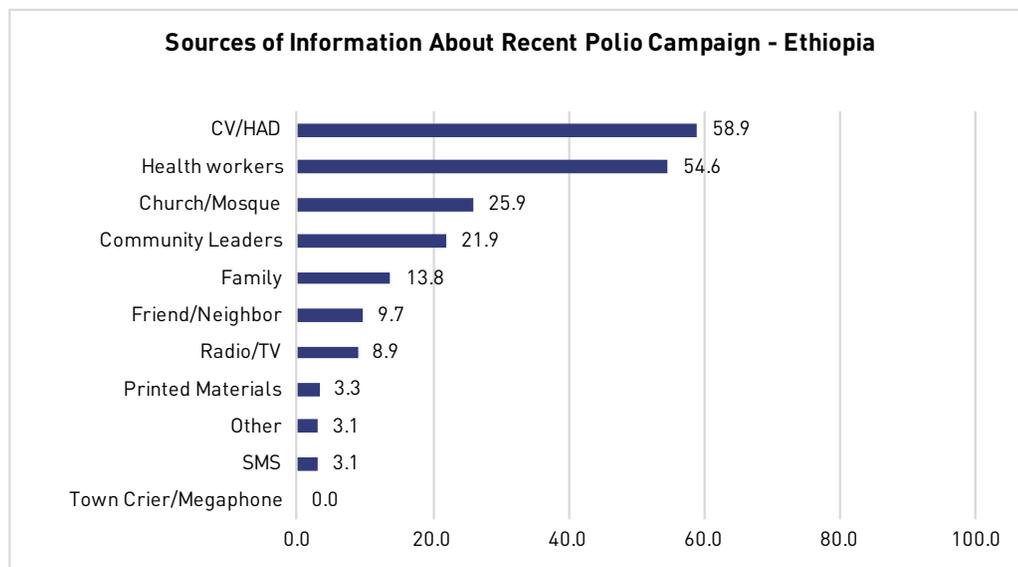
Objective 3: Support PVO/NGO Involvement in national and regional planning and implementation of supplemental polio immunizations.

Following the 2013-14 WPV outbreak in the Horn of Africa including Ethiopia in the past 5 years, a total of 21 polio campaigns were conducted (3 NIDs and 18 SNIDs) in CGPP implementation areas. As the key immunization partner, the CGPP secretariat and implementing partners actively participated and supported the campaigns (technical support provided during pre, intra, and post campaign activities, transportation support – vehicle and fuel support, social mobilization activities by CVs/HDAs-banners posted and leaflets distributed during the campaigns). On average the campaign coverage was more than 95%, according to country data.

- The % of children 1 year and younger with 7 or more doses of OPV decreased from 37.7% at midterm to 17.7% at endline. This decrease was due to the lesser number of national and sub-national SIAs conducted in Ethiopia. During FY14, seven rounds were conducted; during FY16 this was 4 rounds; and by 2017, only 2 rounds of SIAs were conducted. This means that children had fewer opportunities to receive 7 drops.

Community Education and Mobilization

In the final survey, caregivers were asked for their source of information about the recent polio campaign. Most heard from the “community volunteers”, a category that contains both the CGPP mobilizers and the Health Development Army (HDA) volunteers. The chart below shows sources of information that were mentioned. There appears to be an increase from baseline where 41.3% of caregivers said they got the campaign information from volunteers compared to the 58.9% in the final survey.



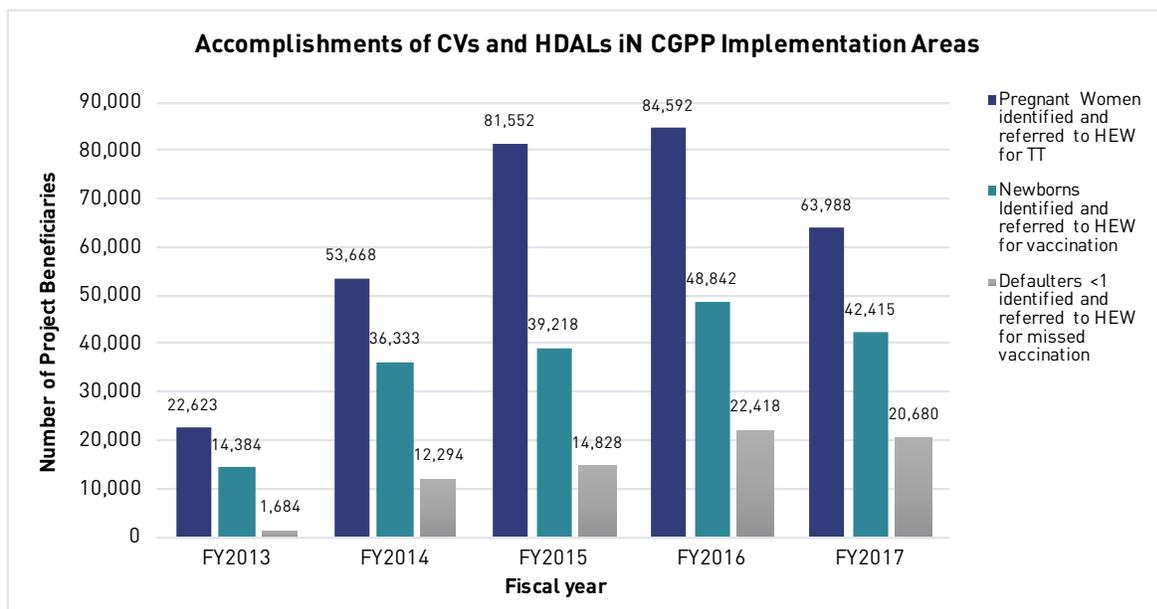
Another survey question asked about the source of information about polio and results are somewhat different, as seen in the following table. Information from the endline survey shows notable increases in the percentage of survey respondents who indicated that health workers (45.7% at baseline to 74.9% at endline) or community volunteers/HDAs (31.8% at baseline to 58.7% at endline) were their preferred sources of information about polio. Community leaders and friends and neighbors were the next most common answers.

Sources of information about Polio	Baseline %	Endline %
Health workers	45.7	74.9
Community Volunteer/HDA	31.8	58.7
Community Leader	-	23.2
Friends/Neighbors	5.0	23.2
Radio/TV	2.6	10.9
Family	1.0	16.2
Television	-	2.3
Church/Mosque	-	4.7
Printer materials	0.7	4.9
SMS	-	2.8
Nowhere	8.3	-
Other	15.9	-

Sources of information were disaggregated by gender in the table below. Just as is aggregated data, health workers and CVs/HDAs were the most mentioned sources of information about polio for both men and women. Although the sample of men is very small, a larger percentage of men than women access SMS messages. Also of note, church/mosque was rarely mentioned by either men or women as a source of information about polio.

Source of Information about polio by sex of respondents in final survey				
Source of information about Polio (multiple response)	Women (n=589)		Men (n=28)	
	Number	Percent	Number	Percent
Health workers	439	74.5	23	82.1
Community Volunteer/HDA	339	57.6	23	82.1
Friends or Neighbors	134	22.8	9	32.1
Community leaders	129	21.9	14	50.0
Family members	94	16.0	6	21.4
Radio or TV	66	11.2	6	21.4
Church/Mosque	27	4.6	2	7.1
Printed Materials	25	4.2	5	17.9
SMS	11	1.9	6	21.4
Other	20	3.4		-

The accomplishments of CVs and HDAs extend beyond children to impact pregnant women as well. The chart below details impact of activities from 2012 -2017. Tracking pregnant women and newborns has allowed women and children to be referred for vaccination. During the project period, 306,423 women have been identified and referred for neonatal tetanus vaccination; 181,192 newborns were identified and referred for vaccination; 71,904 defaulters under one year of age were referred for missed vaccinations.



In the final survey, 60.4% of caretakers stated that they had been visited by a community volunteer at their home. This was essentially the same as the baseline response of 61%. When CGPP relied on their own volunteers, home visits were the priority activity. Now, CGPP is working through the government volunteers (HDA) in most woredas and they are not required to prioritize home visits, rather the HDA meet

regularly with groups of women. The women are still receiving information on polio and immunizations, but not through home visits.

Knowledge of Caregivers

In the Ethiopia final survey, caregivers were asked knowledge questions about repeated polio doses, timing of the first dose, and knowledge of AFP symptoms. For all of these topics, knowledge increased significantly from baseline in 2013 to the final survey.

Caregiver knowledge on the age at which polio immunization should start was observed as an improvement from baseline (39.1%) to final evaluation (55.8%) survey. A positive finding is that the proportion of mother/caretakers who reported don't know the age at which the first dose should be administered declined from the baseline value of 34.5% to 14.6% during the final evaluation.

Level of accurate knowledge of caregivers in CGPP baseline and final survey

Topic	Baseline %	Final %
Age of first polio immunization	39.1	55.8
Multiple doses give more protection to child	59.5	78.3
Knowledge of AFP symptom of limp limbs	57.4	82.0

While most of the caregivers (78.3%) stated that more polio doses give more protection and there were few who didn't know any effects, there is a fairly static percentage who think it might be harmful.

Those who had heard of AFP were asked to name symptoms and the 82% who said stop walking or crawling is a significant increase from baseline, as is the 60% who cited limp limbs. It is encouraging that the majority know both symptoms.

Objective 4: Support PVO/NGO efforts to strengthen AFP case detection and reporting

The CGPP introduced the use of community based surveillance in Ethiopia, following the example of CGPP in Angola. CGPP is working with a strong force of 11,650 CVs and HDAs who are trained to conduct house-to-house disease surveillance for AFP, neonatal tetanus, and measles while also tracking the vaccination status of pregnant women and newborns. CGPP community volunteers play an active role in the community based AFP surveillance system in Ethiopia. They are active in checking and responding to cases. The NPAFP rate for CGPP areas was 2.2 at baseline and 2.8 in 2017. This is greater than the national average of 2.5. CGPP has been influential in ensuring that stool samples are collected and transported. When needed, partners have transported stool samples for testing. As a result, stool adequacy has improved from baseline (87%) to endline (92%).

One of the most significant program innovations during the grant period was to design and establish mobile and web-based disease surveillance under the m-Health System. This system was rolled out in mid-FY2015 and was essential to strengthening the surveillance system in CGPP implementation areas by improving early case detection and action. Additionally, the stool adequacy rate was improved, particularly in districts that had previously been difficult to access. The mobile system allowed for the identification of sampling and transportation needs to be handled more efficiently.

AFP Cases Detected and Reported by CVs/HDAs using M-Health Mobile system

Year	AFP cases expected	AFP cases total reported	AFP cases reported by CVs/HDAs	CVs/HDAs reported cases verified in WHO line list
2015	48	32	31	23
2016	50	34	29	27
2017	52	75	47	23

Objective 5: Support Timely Documentation and Use of Information

Over the last 5 years, CGPP has sought to improve documentation, information sharing, and the use of data for decision making. During the grant period, nine peer-reviewed journal articles were published in the Ethiopian Medical Journal, and six additional articles are pending publication in the Ethiopian Journal of Health Development. Twenty four immunization and surveillance related papers were presented at national, regional and international forums by CGPP staff. These included presentations at the American Public Health Association, Ethiopian Public Health Association, IGAD international Conference (South Africa, Kenya and in Ethiopia) and quarterly immunization and surveillance review meetings.

Baseline, midterm, and endline evaluations were completed and shared with partners and stakeholders. Findings from these evaluations were used to inform program decisions making and strategy design.

Objective 6: Support PVO/NGO participation in polio certification activities

The Ethiopian Secretariat is a member of the African Region Certification Committee (ARCC) and has participated in document review and simulation exercise meetings. It is a member of the surveillance review assessment team and has supported efforts to establish immunization and surveillance related recording, reporting and filing systems and structures at all target health facilities, *woreda* health offices and project field offices, a key activity for certification process.

CGPP Ethiopia has contributed to a transition plan for the entire country as a key member of National Polio Transition Planning Committee (NPTPC). Since transition efforts began in 2016, the Secretariat has completed mapping of polio personnel and physical assets, developed a detailed plan of action and key transition strategies for essential and non-polio functions, drafted a budget for the transition plan and developed supportive documents.

Qualitative Results

The same Ethiopian firm that collected the quantitative data also conducted the qualitative component of the evaluation. The entire team of data collectors participated in a 2-hour orientation with the final evaluation leader to discuss the purpose of the data collection and questions as well as tips on facilitating focus groups and conducting interviews. This was followed by more in-depth training from their team leader with emphasis on probing questions. The qualitative data was collected in July and August. Analysis was conducted by the global M&E Technical Advisor. Available data was complete and well collected. The quality of the research is good, in that the responses show that the questions were asked as intended and that there was sufficient probing to elicit valuable additional information and insights.

Views of the Secretariat

The Ethiopia Secretariat feels that their biggest accomplishment of this phase was successfully expanding to the much larger geographic area of 85 *woredas*. By the end of 2016, they had reached 1.7 million people in these remote border areas with routine immunization, community –based surveillance, and health education. They are proud of the digital CBS system, introduced in mid-2015, which transfers the information directly to their central server in Addis Ababa. The implementation of this system has improved early case detection and reporting. Data is more efficiently transferred and available to CGPP staff in Addis Ababa to be used for programmatic decision making. Additionally, this system has led to improved stool adequacy rates and stool condition. CGPP Ethiopia supports transportation of stool samples for testing. Quicker notification of suspected cases has allowed for more adequate identification, collection and transport.

The challenges have included adapting to a new cadre of volunteers for the community education and mobilization. About the time this phase was starting, the Government of Ethiopia (GoE) launched the Health Development Army (HDA), a structure of volunteers intended to reach every household with health promotion activities. In all but Somali District, the CGPP now relies on these volunteers, but finds

better results with the community volunteers under their direct control. Utilizing the HDAs requires more project resources for supervision and follow-up

Another challenge is the decentralization of government, which has meant building relationships at lower levels where some local officials are more motivated and responsive to the issue than others. CGPP Ethiopia, working in hard to reach, pastoralist areas and along the porous border, has been recognized and appreciated by the government at all levels. This synergetic effort has brought encouraging results in polio free certification and immunization coverage rate improvement in the country. CGPP is using the existing health system for joint planning, implementation and monitoring activities. Most of the activities of CGPP Ethiopia are at the community level and linked with the lower level government health system as this can be sustained with minimal cost. The large and distant target area creates an on-going management challenge for Secretariat and partner staff to make oversight visits.

Findings from Field Work

The women's focus groups identified the community mobilizers, along with health extension workers (HEW), as key sources of information about vaccination and child health. They said the community mobilizers don't just provide information, but also influence others by serving as role models, particularly in taking their children to be vaccinated. The women in the FGDs said they could see the benefits in this way.

"We did not believe the community workers about vaccination until we saw they do so. Since they did show us while they vaccinate their children, we trust the community workers."

—Mother, Metekel

For sources of information on polio and health, the men in FGDs mentioned the HEWs and health posts, but also mentioned other sources.

"Information on vaccination is received during campaigns from the health extension workers, sometimes from school, from churches and spiritual places, and health posts with nurses."

—Father, Kelem Wallega

Both fathers and mothers in the focus groups described the community volunteers as having a much broader reach than solely polio immunization. The community mobilizers are able to use established relationships and interactions with communities and families to transfer other important health information. Men mentioned that the mobilizers make home visits and talk not only about vaccination but also about environmental hygiene and other health conditions. They are a trusted source of information, as shown from the quantitative and qualitative data. Community mobilizers themselves felt they had the ability to be a source of information as well, and requested additional training to help their communities with other health-related issues

Comments about the role of community leaders were mixed. Some interviewees claimed community leaders had played a role in changing attitudes in favor of immunizing children, while others said they should be more engaged.

The community volunteers are aware that they have been able to convince other parents through their modeling immunizing their children and spoke of other behavior changes they have made as a result of their training as mobilizers. They explained that their work has grown easier because, in the beginning, they encountered lack of credibility and even disrespect from community members. Over time, they have built good relationships and strong trust with the community members and with the health extension workers. They persevered because they thought the mission of polio eradication was important.

The community mobilizers explained their role in the community as a bridge between information, health posts and the community members they serve. They say that for community members, particularly in rural areas, they are the first, and sometimes, only source of information. Because of this, they request more training on a range of other health topics.

The findings on decision-making about immunization do not match the final survey results, which found that, in most cases, the parents together make the decision, or the mother makes the decision alone. This was reported by the pre-dominantly female respondents (640 out of 672). In contrast, in the women's focus group, many mentioned that the father makes the ultimate decision. Others said the mother may decide, but she must ask the husband for permission or for money to travel. Men in the focus groups tended to say the fathers make the final decisions, even if the wife comes to him having made her decision. The power of men in decision making is an important finding for the program, as it could be used to inform additional interventions around male engagement in future phases of the program.

Stakeholder Views

In Ethiopia, the research team interviewed various national level stakeholders, including representatives of the MOH, UNICEF and Rotary International. They cited the challenges of achieving coverage in a country as large and diverse as Ethiopia. The stakeholders commended the CGPP for creating a strategy and system to work alongside the government rather than in parallel. Improving the existing system made it possible to use resources effectively and for greater reach as well as influencing the system that will remain after the CGPP work is finished.

The stakeholders are appreciative of the role CGPP has played, particularly at the community level.

“They are working in a hard-to-reach areas... that is a big contribution. Working and establishing a system in the areas where the government health system has been weak, because they are working around borders so that establishing/strengthening the system in such areas is a big contribution.”

—Immunization Specialist, UNICEF, Addis Ababa

“Moreover, CORE Group implements in a high risk and poorest areas with high importation risk places with refugees, bordering especially from South Sudan, West Africa, in this areas core group contribute critically. Their support is very comprehensive (capacity building, cold chain) to sustain the EPI program in some high-risk areas. Unless, we able to sustain this support..., for instance surveillance is mandatory and should be so sensitive.”

—MOH official, EPI Team Leader, Addis Ababa, Ethiopia

The MOH official mentioned that there has been a decrease in vaccine-preventable diseases in the CGPP target area now that the communities have been persuaded not only about polio vaccine but about immunizations in general. These areas had previously been considered unreachable.

Stakeholders spoke about the importance of a planned and thoughtful transition, and strongly expressed the need to maintain the structures and networks that have been improved. They cited the importance of documenting and sharing the successes and lessons learned as one means of ensuring the infrastructure is not lost, particularly the community role in transition.

“CGPP has provided for community ownership, lower level presence for all partners, and community engagement and also working with health facilities, help to sustain the activities and working in a hard- to-reach areas. We must not lose this, and must let others understand.”

—(MOH, EPI Team Leader, Addis Ababa)

Specific Conclusions and Recommendations

Overall, quantitative results substantiate the significant impact the CGPP has had in the difficult border areas of the country. Not only is OPV coverage higher than the national average according to DHS but also overall antigen coverage is notably higher than the DHS national average. In addition, caregiver knowledge of polio and AFP has increased since baseline.

The large network of volunteers is detecting and reporting AFP cases. NGO partners are often providing transport for stool samples. WHO data now includes the cases reported by the volunteers. The AFP case detection rate is higher than the national average.

National leaders consider the CGPP a valued partner in polio eradication and clearly understand the role the CGPP has played in improving the EPI system at all levels, but most especially appreciate the significance of the community-level work. During the coming transition, the CGPP can help assure that the community outreach structure remains strong, including training and supporting HDA volunteers to assume the role of mobilizers.

The multivariate analysis of possible factors affecting complete immunization status revealed that religion is a statistically significant factor, with children of Orthodox and all other Christians far more likely to be fully immunized than either Muslims or families with traditional beliefs. The final survey showed that most caregivers are not hearing about polio or polio campaigns from churches or mosques. During the next phase, CGPP partners may want to expand the work they have started to more actively engage religious leaders, particularly those from Islam and traditional groups, in promoting immunizations.

There is inconsistency between the qualitative and quantitative data about decision-making within the household for immunizing children. There was also no consensus within the focus groups. In spite of this lack of clarity, it seems that men have a role and must be motivated and empowered to support women for vaccination and other health care needs of their children. The survey results and FGD findings suggest that men are reached through home visits and health workers, but also through SMS and radio.



INDIA

Main Findings

- India was declared free of polio virus in 2014; the last case was reported three years earlier in 2011.
- Intensive social mobilization efforts have been crucial to overcoming resistance to reach 0.5 million children with polio vaccination.
- Micro planning at the sub-district level has contributed to improved supplemental polio immunization and routine immunization coverage and to AFP surveillance.
- Highly effective behavior change communication strategies and advocacy efforts have included interpersonal counseling, tracking of newborns and visiting with families to promote timely immunization and adoption of positive immunization behaviors.

By the Numbers: Progress from 2012 to 2017

- OPV3 coverage rose from 82.6% to 90.2%.
- 80% of households were visited by vaccinators at their house during the most recent campaign; 96% said their child had received OPV during every SIA round.
- OPV O or birth dose rose from 64.2% to 79.9%.
- In 90% of households, the community mobilizer was the primary source of health information, up from 70%.
- Zero-dose children decreased from 1.5% to 0%; children age 1 year and older with 7 or more doses of OPV jumped from 90% to 100%.
- Missed children during SIAs declined from 8.6% to 7.8%.
- Booth coverage during campaigns moved upward from 77.3% to 83.4%.
- Project volunteers reported more than 25% of total AFP cases.

Program Overview

In 1999, India had one of the highest incidences of WPV of any countries. As a result, the CGPP began to support government efforts initially in the 10 most-affected states. The decline of cases was dramatic. By the end of the first phase of CGPP's work in 2004, WPV cases were found only in four states. By the end of the second phase in 2009, WPV cases had been contained to the two densely-populated states of Bihar and Uttar Pradesh (U.P.) in the north. The last case of WPV was reported in 2011, with India declared polio-free in 2014. Re-importation, however, continues to be a concern due to neighboring Pakistan and nearby Afghanistan with endemic wild poliovirus.

The Government of India led the polio eradication effort against significant odds. Millions of children had to be immunized by overcoming considerable resistance due to fear and doubts among the population. The primary role of the CGPP has been social mobilization to reduce fear (most recently of side effects) and resistance by helping families and communities understand the OPV will protect their children from paralysis.

During the current phase, the CGPP works through 3 international NGOs and 10 local NGO partners to strengthen population immunity for polio through increased quality of SIAs and RI implementation. The program currently focuses on selected districts in the state of Uttar Pradesh, which has pockets of low immunization coverage. The map below shows the target areas and partners.

2. **Block Mobilization Coordinators (BMCs)**

Each BMC is responsible for social mobilization activities at the block level and overseeing and leading the CMCs.

3. **District Mobilization Coordinators (DMCs)**

Each DMC is responsible for supervising the BMCs and providing oversight to all social mobilization activities of CGPP in the district. S/he works closely with other district officials from UNICEF, WHO and the MoH.

In an effort to reduce disease susceptibility among children under age two and to optimize the home visits of the CMCs, the program includes interpersonal counseling (IPC) of families on additional topics beyond immunization, including promotion of exclusive breastfeeding, hygiene, and care of the sick child. The CMCs track newborns and visit their families to promote timely immunization and adoption of positive immunization behaviors. The table in Annex F illustrates the impressive number of IPC (home) visits and group meetings executed by the CMCs.

The program, furthermore, has employed a variety of innovative BCC activities: video van, e-rickshaw rally, magic show, street drama, barbers' involvement to encourage male clients to immunize their children, certificates for motivating parents for timely immunization of their children, and training both volunteers and the government's Accredited Social Health Activists (ASHAs) in communication skills to promote improved family practices.

Assisting the government at the sub-district level with micro-planning improves the quality of AFP surveillance and supplementary immunization campaigns. This includes monitoring and helping the health facilities to improve data collection and use. The CGPP is a founding member of the Social Mobilisation Network established in 2002 in U.P, along with UNICEF and other partners where it was agreed to have a common nomenclature, system of working and monitoring, and division of areas where mobilisers would be placed to avoid duplication of efforts. CGPP India is an active participant of the Social Mobilisation Working Group at the national level.

At the national level, the CGPP is also a member of the Immunization Action Group (IAG) with WHO, UNICEF, Rotary and the MOH. It is actively engaged in the discussions about transition now that India has been declared polio-free. The CGPP participated in the WHO transition planning meeting in the MOH in 2017. The government's transition document is being finalized.

Quantitative Findings and Discussion

Objective 1: Build Effective Partnerships between PVOs, NGOs, and international, national, and regional agencies involved in polio

CGPP India has partnered with three international PVOs, Adventist Development and Relief Agency (ADRA), Catholic Relief Services (CRS) and Project Concern International (PCI) and 10 local NGOs. The local NGOs are: Innovative Approach for Social Development Society, Malik Social Welfare Society Rampur, Society for All Round Development, Adarsh Seva Samiti, Jan Kalyan Samiti, Mahila Jagriti Sewa Samiti, Meerut Seva Samaj, Sarathi Development Foundation, Holy Cross Welfare Trust and Gorakhpur Environmental Action Group. This group of partners has remained unchanged.

PVO Partner	NGO Partner	Work Districts
ADRA	Innovative Approach for Social Development Society (IASDS)	Baghpat
	Malik Social Welfare Society Rampur (MSWS)	Rampur
	ADRA India (PVO)	Bareilly
PCI	Society for All Round Development (SARD)	Meerut
	Adarsh Seva Samiti (ASS)	Moradabad
	Jan Kalyan Samiti (JKS)	Muzaffarnagar & Shamli
	Mahila Jagriti Sewa Samiti (MJSS)	Moradabad & Sambhal
CRS	Meerut Seva Samaj	Saharanpur
	Sarathi Development Foundation	Shahjahanpur & Sitapur
	Holy Cross Welfare Trust	Sitapur
	Gorakhpur Environmental Action Group	Mau

During the 5-year grant period, CGPP India attended 15 regional and international forums to share the work of CGPP and contribute to polio eradication initiatives. Nationally, the CGPP attended 7 IAG meetings.

Objective 2: Support PVO/NGO efforts to strengthen national and regional immunization systems to achieve polio eradication

During the grant period, India was successful at meeting and exceeding its routine immunization indicators. The final survey found that OPV coverage through routine immunization has increased significantly since the baseline in 2012, with the biggest gains in OPV0 and OPV3. OPV coverage in India, even in these difficult districts, can be considered excellent. The OPV3 coverage is at 68% in Uttar Pradesh according to NFHS 4 U.P., while CGPP focal areas top 90%. The chart below shows the positive trend since 2010.

Percent of children receiving OPV doses through routine immunization according to vaccination cards (vaccination/congratulatory cards)

OPV dose	Statistics	Survey 2010 (n=185)	Survey 2012 (n=489)	Survey 2015 (n=627)	Survey 2017 (n=368)
OPV0	Estimate (%)	61.1	64.2	81.7	79.9
	95% Confidence Interval	54.1 – 68.1	60.0 – 68.5	78.6 – 84.7	75.8 – 84.0
OPV 1	Estimate (%)	89.9	91.2	95.5	96.2
	95% Confidence Interval	85.4 – 94.1	88.7 – 93.7	93.9 – 97.2	94.2 – 98.2
OPV 2	Estimate (%)	82.7	87.5	92.3	94.3
	95% Confidence Interval	77.3 – 88.2	84.6 – 90.5	90.3 – 94.4	91.9 – 96.7
OPV 3	Estimate (%)	76.2	82.6	87.9	90.2
	95% Confidence Interval	70.1 – 82.4	79.3 – 86.0	85.3 – 90.4	87.2 – 93.3

- The % of children 12 to 23 months with OPV3 increased from 82.6% to 90.3%. India has increased and continues to maintain a high level of OPV3 coverage, that exceeds the goal for coverage.
- The % of children with OPV birth dose increased from 64.2% at baseline to 79.9% at endline, successfully reaching the 80% mark. Community mobilizers have made inroads with the families and communities they work in and this has likely had led to a steep increase in birth dose (OPV0).

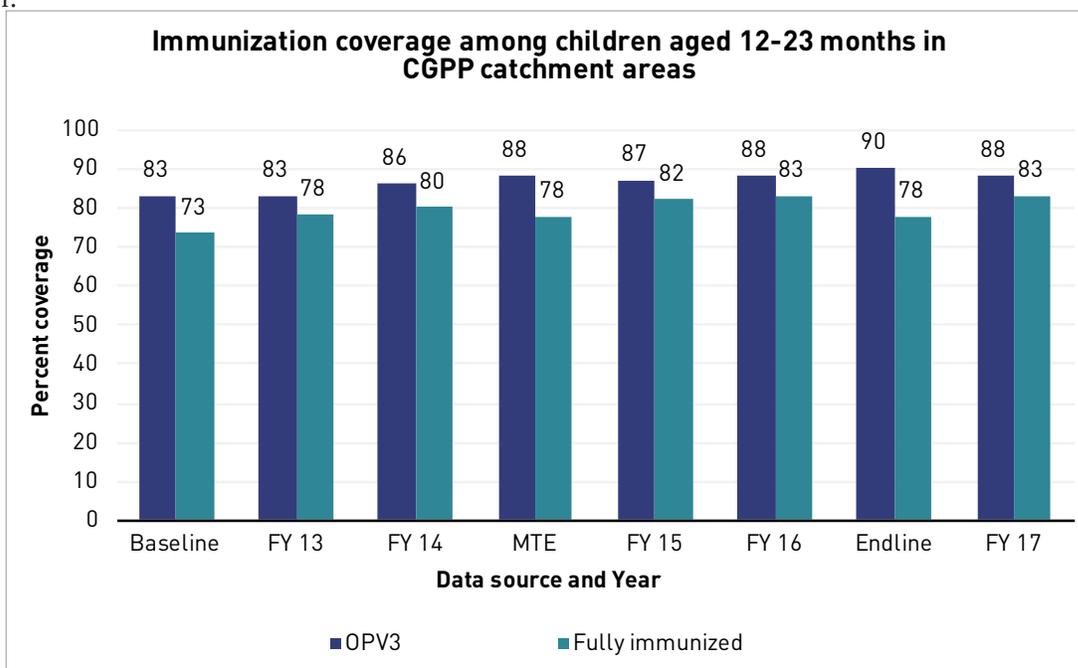
- Encouraging trends were also found for the percentage of zero dose children, decreasing from 1.5% at baseline to 0% at endline.
- 77.7% of children 12-23 months are fully immunized as verified with the government vaccination card, compared to the 73.4% complete coverage reported in 2012. Until 2014 and 2015, the CGPP was distributing a “Congratulatory Card” to caregivers on which immunizations were recorded and some families have used these instead of the government vaccination card. These are presumably more accurate, but again, the complete coverage difference between 2012 and 2017 is not statistically significant.

Percent children received full immunization according to most reliable data source of surveys

Data source	Survey 2012 (Vaccination cards)	Survey 2015 (Vaccination cards and CORE’s congratulatory cards)	Survey 2017 (Vaccination cards and CORE’s congratulatory cards)
Coverage (%)	73.4	77.5	77.7
95% Confidence Interval	69.5 – 77.3	74.2 – 80.8	73.5 – 82.0
Sample size	(n=489)	(627)	(n=368)

Retention of cards, whether issued by government, private clinic, or the CGGP Congratulatory Card (*Badhai*) remains a concern. When asked, 33% of caregivers said they didn’t have a card and another 12% said they had one but could not produce it. This is a vast improvement over the 56.6% who did not have cards in 2015. Of those who had cards in 2017, 78% had them stored in the polybags supplied by CGPP, which shows that the development and distribution of bags was helpful. Finding these polybags very useful, many of the other CGPP countries adopted their use.

CGPP monitoring data shows much higher rates of full immunization coverage as shown in the graph below. Rather than being based on card retention and cards being properly filled out, this data is collected in registers maintained by the CMCs during their home visits to the 500 families they each monitor.



Objective 3: Support PVO/NGO Involvement in National and regional planning and implementation of supplemental polio immunizations

CGPP India supported 26 SIAs that were held during the 5-year period beginning in 2012. CMCs helped to mobilize communities and parents, manned immunization booths, and went house to house with mobilizers to ensure that children were not missed. The progress of CMCs in reaching children and households led to CGPP India meeting its campaign-related indicators.

- At baseline, 5.4% of houses in CGPP districts were missed during campaigns, dropping to 4.4% at endline. The consistently lower percentage of missed houses among CMC areas compared to non-CMC areas is notable.
- The percentage of missed children declined from 8.6% at baseline to 7.8% at endline, remaining under the <10% target.
- Percentage of children 1 year and older with 8 or more doses of OPV increased from 90% at baseline to 100% in the endline survey. Through extensive campaigns and the use of both booths and house to house mechanisms during campaigns, CGPP India has ensured that children have 8 or more doses. In 2017, 80% of households in the survey reported that the most recent SIA campaign had vaccinators visit their house and 96% of caregivers reported their child had received OPV during polio during every SIA round.
- Booth coverage is an important component of SIAs in India. CGPP supports these booths, and encourages all children in focal communities to be vaccinated at booths. Special mobilization activities like children’s rallies, inauguration of booths by influential persons, and *bullawa tollies* (bands of child volunteers used to mobilize children from their communities) were conducted to attract more children. During the period from 2012 to 2017, booth coverage during campaigns rose from 77.3% to 83.4%, meaning that more than 80% of children were vaccinated during campaigns at booths alone.

Community Education and Mobilization

In terms of sheer numbers reached, the CGPP efforts to educate and mobilize the target population are a major achievement. The table below gives the numbers for FY17. In just one year, the CGPP mobilizers reported hundreds of thousands of direct contacts, primarily through home visits, and were also involved in organizing or contributing to thousands of meetings. The complete listing of activities by district is found in Annex F.

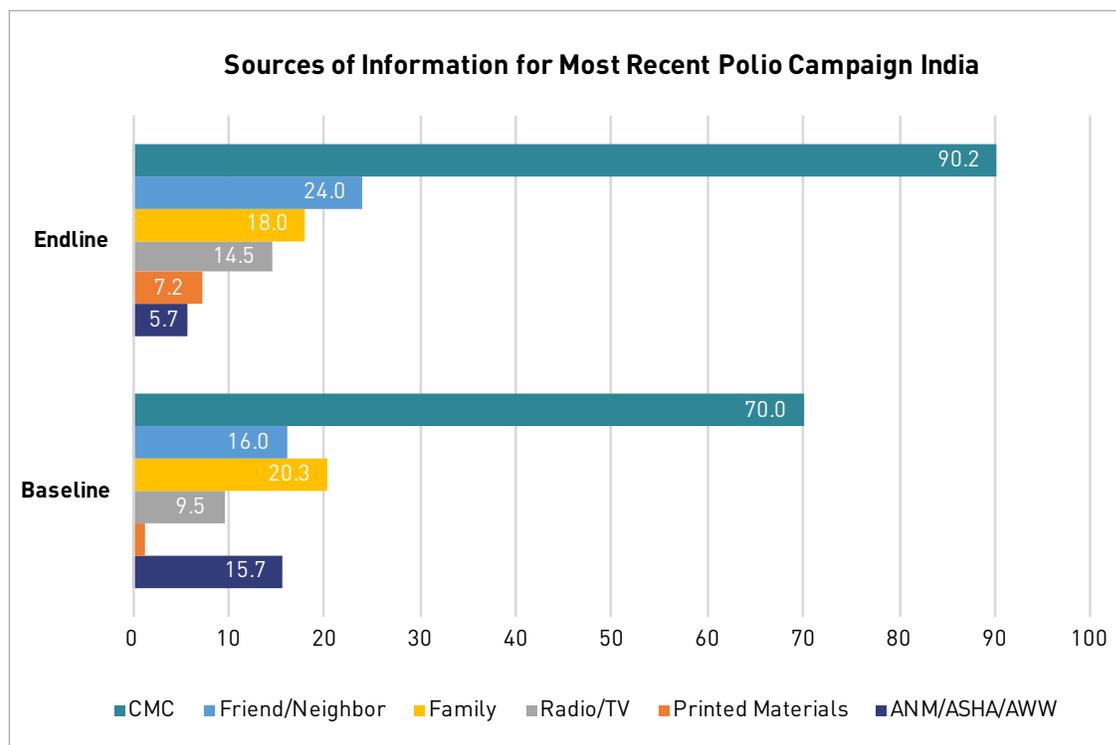
Key social mobilization activities in CGPP India: October 2016 to September 2017

Activities	#IPC visits	Number of group meetings				Number of coordination meetings*	Participation in number of VHSNC meetings**	Number of special activities (in selected areas)	
		Mothers/ Adoles-cent girls meetings	Fathers/ Adoles-cent boys meetings	Interface/ Influencers/ Religious leaders meetings	Total			Community meetings	Barbers meeting
CGPP India	323,717	24,857	909	2,029	27,795	296	1,186	235	38

* Number of coordination meetings with frontline govt. workers of health and ICDS department (ASHAs & ANMs)

** Village Health Sanitation and Nutrition Committee (VHSNC) meetings are organized at the community level

In the final survey, when asked from whom they learned about the recent SIA, an astounding 90% said a source of their information was the community mobilizer, up from 70% in the 2012 baseline. Only 6% reported learning about the polio round from the frontline government workers (ANM, ASHA, or AWW). Three-fourths of respondents said they had been visited at home by a CMC during the past 3 months, but few of these individuals could name the topics discussed, saying only that it was “health topic.” The table below shows stated sources of information about the most recent campaign.



Knowledge of Caregivers

In spite of the intensive efforts of the mobilizers, a small percentage of families do not have accurate information about polio vaccine, according to the final survey results. Twenty percent of respondents believe multiple doses of OPV may cause harm. Twenty percent feel that certain children should not receive the vaccine, including those who are ill, newborns, and disabled children. The most frequently mentioned was ill children. Only 43% were aware of the timing of the first dose, but this message is complicated now that the majority of women are delivering in health care facilities instead of at home. Sixty percent of respondents know about AFP.

Because the CMCs have so much contact with households, CGPP India added dissemination of child health messages like use of oral rehydration therapy (ORT) and the importance of hand washing to their role. The final survey included questions to assess improved hygiene and sanitation practices as well as management of diarrhea. A significant increase in hand washing practices as well as ORS use for diarrheal episodes was seen between baseline and endline.

Child Health Practices According to the Final Survey

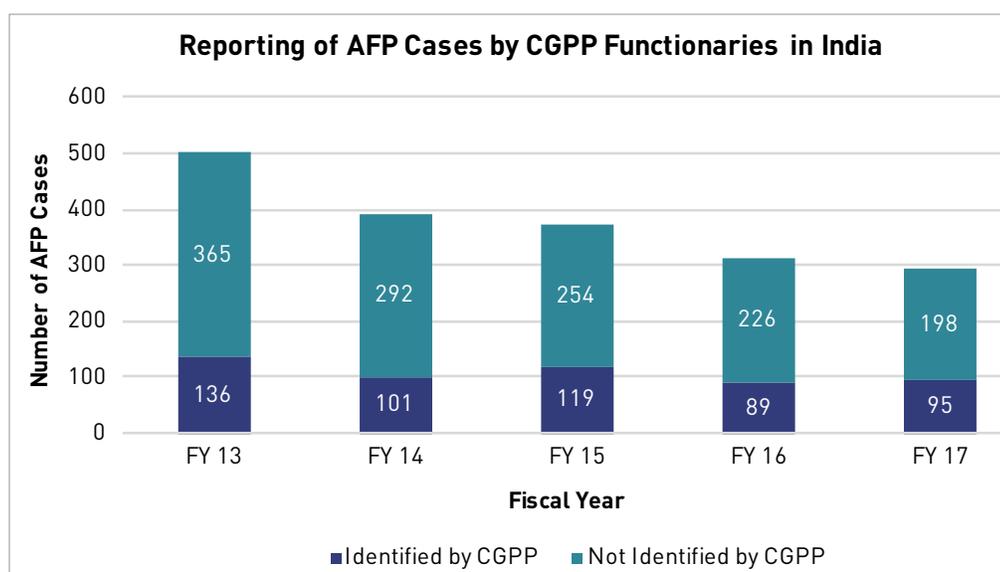
Key child health practice	Baseline 2012	MTE 2015	Endline 2017
Washing hands with soap after defecating	54%	71%	70%
Soap and water available at latrine (among those with latrines)	NA	57	62
Child with diarrhea given ORS	48%	48%	67%

Objective 4: Support PVO/NGO efforts to strengthen AFP case detection and reporting.

- India successfully exceeded the NPAFP target of >2.0, both at baseline and endline. While the NPAFP rate decreased from 23.7 to 12.3 at endline, this remains well above the target. According to AFP surveillance indicators reported by WHO in the week No. 37, 16th September 2017, the aggregated NPAFP rate for the entire state of Uttar Pradesh was 12.3 per 100,000 children under 15 years. All the 12 districts of CGPP India reported more than the desired rate of 2.

- Stool adequacy was 86.8% in CGPP focal areas at endline successfully, exceeding the WHO target of 80%.

The India polio program has a robust facility-based surveillance system and includes community surveillance and environmental surveillance. CGPP CMCs are also trained and sensitized to look for AFP cases in their respective areas and ensure timely reporting to the nearest health facility. CGPP functionaries report AFP cases at the grassroots level and provide a key component of the CBS system in CGPP catchment areas. Over the project period, they have reported more than 25% of the total AFP cases in CGPP catchment areas. The percentage has increased from 27% at baseline to 32% of AFP cases (95 out of 293) in the FY 17 reported by CMCs and BMCs.



Objective 5: Support timely documentation and use of information

CGPP India has been engaged in extensive efforts to document and share lessons learned through publications, conferences, and regional and international forums including APHA, CORE Group Conferences, and the World Congress on Public Health. The Secretariat Director, Dr. Roma Solomon, is a member of the Transition Independent Monitoring Board (tIMB) and contributes to discussions about the transition of polio programming and lessons.

During the program period, 4 journal articles were submitted for publication and 3 of these were published. CGPP staff presented at 14 international forums from FY12 to FY17, including the American Public Health Association Conference, The 15th World Congress on Public Health, the Prince Mahidol Award Conference and bi-annual CORE Group Meetings.

The CGPP has adeptly used data and knowledge of community dynamics and intricacies to tailor programming to address barriers to immunization. These adaptations have allowed the program to stay relevant, agile, and responsive to the needs of the catchment communities. One example of using intimate knowledge of the community to solve non-compliance is the Barbershop Initiative. CGPP community work identified that while men were the decision makers in many households, vaccination messaging was not always reaching them at the same rate as women. To engage men, particularly fathers, CGPP identified barber shops as a place of congregation for community men. Barbers have good relationships and influence among men, and their shops act as a hub for men to discuss issues that are important to them. Therefore, CGPP designed an intervention and training for barbers. Selected barbers were trained on the importance of OPV/IPV, routine immunization, information on polio, and communication strategies. The preliminary results in the communities have been positive, with more men understanding and being engaged with immunization messaging.

Objective 6: Support PVO/NGO participation in either national and/or regional certification or transition activities

Regional certification took place on March 27, 2014. The CGPP India Secretariat Director is a member of the Polio Transition Independent Monitoring Board (TIMB). Dr. Roma Solomon also attended 1 IMB meeting in the U.K.

Qualitative Results

Qualitative evaluation data was collected by a firm contracted in India. The data collection took place during the month of August. Due to timing, a limited amount of qualitative data was collected across the five districts and there were no national-level interviews of stakeholders. The international consultant provided an orientation to the data collection firm and assistance with the report.

Findings

CGPP India may gain some useful insights for planning BCC activities and for re-focusing efforts in the new phase. With guidance from the CGPP M&E specialist, the India Secretariat may benefit from doing further analysis of the qualitative results. Other findings are presented here in reference to project strategy and accomplishments.

While the quantitative survey respondents rarely mentioned the government frontline workers (ANMs, ASHAs, AWWs) as sources of information about polio in general or polio rounds, the men and women in focus groups mentioned significant interaction with these frontline workers, particularly in announcing SIAs and their meeting with households to persuade families to immunize their children. The CGPP continues to work in the most difficult areas, and those with the lowest vaccination rates. One example of this is the state of Haryana, which struggles with vaccination coverage and surveillance. The CGPP intends to support government efforts at mobilisation there since some areas remain at high risk for polio. The work of CGPP in Uttar Pradesh remains crucial to maintain population immunity. CMCs have strong communication skills and connections with the communities they serve, making them relevant and very necessary. Their work will ensure that population immunity remains high and eliminate the possibility of a susceptible group of children being built in vulnerable areas. Eventually, through its legacy plan, the CGPP plans to transfer the skills of its mobilizers to government frontline workers like ASHAs.

Religious leaders are actively involved in promoting immunization, including polio campaigns. The Imams interviewed asserted that there is nothing in Islam against immunizations. Parents in FGDs, CMCs, and government frontline workers also mentioned support for immunization from religious leaders and that they can be called up to convince families to immunize their children or resolve a household dispute on the matter.

Remaining resistance to immunizing children seems to stem primarily from fear of side effects such as pain or swelling at the injection site or fever. Some people mentioned the earlier fear that immunizations, particularly the polio vaccine, might make children sterile, but the implication was that this is not a current belief.

While mothers tend to be primary caregivers for young children, they were not identified as primary caregivers. When asked who makes health related decisions for children, both male and female FGD respondents said that mothers and fathers made those decisions together. However, when probed about this process, it became clear that men typically have more control of these decisions. Women must ask for permission and money before seeking care.

“They sometimes are not in favour of vaccinations and mostly the grandmothers are also not, then elders of the community are gathered at their house, they will explain the father and then he agrees for the vaccination.”

—FGD with fathers, Baghpat



Hand washing demonstration during a mother's meeting in Baghpat, India in May 2017.

Interestingly, converse views were also given by some fathers, stating that mothers in fact have more decision-making power than fathers.

CGPP India has used and will continue to use strategies to address decision-making power and gender in its focal communities. They have sought to engage men through the Barber Shop Initiative and peer groups, and should continue to implement gender transformative initiatives going forward.

The project staff, particularly the CMCs, are motivated by doing something helpful, by building relationships with the community members and by achieving a high level of credibility. They are well-known and appreciated by the frontline workers, who credit much of the success in eradicating polio to the home visits, tracking registers, and community education around polio.

“There were cases where mothers used to take the child and run away from the polio centre, so there were many kids who didn't get polio vaccines. But now people know the fact that there are only few cases of polio only because of the polio vaccine, so now they are also coming forward and giving vaccines to their children.”

—PRI from Moradabad

District health leaders mentioned also the support for micro-planning and training programs for community leaders. Government workers want CGPP to continue to support other immunizations and public health efforts.

“CORE has played a very major role in making resistant families understand the benefits of the Polio Eradication Program...They [mobilizers] should be shifted to other programs instead of ending their duties.”

—District Immunization Officer, Moradabad District

Specific Conclusions and Recommendations

From the perspective of partners, government at all levels, staff, and the local population, the CGPP in India has played a major role in the eradication of polio in India through the intensive on-the-ground-intervention.

The commitment and vision of the leadership of the CGPP Secretariat in India has placed the CGPP in a key role nationally and enabled its success in collaborating with government at all levels. The strategy pursued has worked well, putting significant human resources on the ground to influence popular opinion about immunizations. Secretariat Director Dr. Solomon has a new vision for the transition phase to build on rights-based demands of the Indian populace for social services and education benefits. *“I want to get the people to demand immunization for their children the way they have learned to demand [other government benefits].”*

The major barrier to immunization of children appears to be fear of side effects such as pain and fever rather than religious reasons or fear of sterilization. As the current persuasive messages and materials reflect this, CMCs and government frontline workers should continue to be given information on dealing with this barrier.

The qualitative research verified that there are continued misbeliefs preventing immunizing ill children and about possible harm from multiple doses of polio vaccine that must be addressed through the community work and through mass media.

It is difficult to evaluate the efficacy of the other related interventions to break transmission and promote polio vaccination that the CGPP has undertaken in addition to polio eradication without additional data. From the comments of focus groups, the CMCs may need more orientation to effectively promote behaviors that are linked to supplement immunization efforts. For example, hand washing at critical times and breastfeeding practices are examples of behaviors which need to happen multiple times per day as opposed to deciding to take a child to the immunization post occasionally. Formative research may be warranted to understand the existing child health behaviors and barriers to improving them.

While there may be some hope that the government will assimilate the CMCs, it seems most prudent to focus this next phase on building the capacity of ASHAs to continue community mobilization in the future. Currently, CGPP CMCs provide over 300,000 IPC activities to their focal communities. The CGPP will continue to work towards transferring these skills and capacity to government workers. It is evident that the ASHAs will never be able to achieve the same level of contact as the CMCs and will need additional skill building on communication and supportive supervision to reach CMC standards. Building their capacity would include not only expanding training of the ASHAs and AWWs in the target districts, but also working at the national level to improve their pre-service training for behavior change communication, community mobilization, immunization, and baby tracking.

The CGPP should continue until these activities become habitual, especially in the field of baby tracking which the CMCs are adept at. In addition to this, the project also needs to build skills of the ASHA supervisory cadre, the *Sanginis*. This can be scaled up to the national level as the CGPP is a part of the working group on revision of the government training manuals. Losing the capacity that has been built in CMCs and failing to transfer this to the government system could have dire consequences for maintaining population immunity and the health of the poorest communities.



HORN OF AFRICA: KENYA AND SOMALIA

Main Findings

- Launched in 2014, the Horn of Africa program has become a well-respected leader of cross border polio eradication and community based surveillance activities by working directly with health facilities in Kenya and Somalia.
- In Kenya, Special Vaccination Posts along Kenya's borders to Somalia and South Sudan have been established to reach nomads and pastoralists.
- The project targets about 466,225 children under five in Kenya and about 108,597 children under five in Somalia.
- NGOs and civil society have earned a significant voice at the country and regional levels.

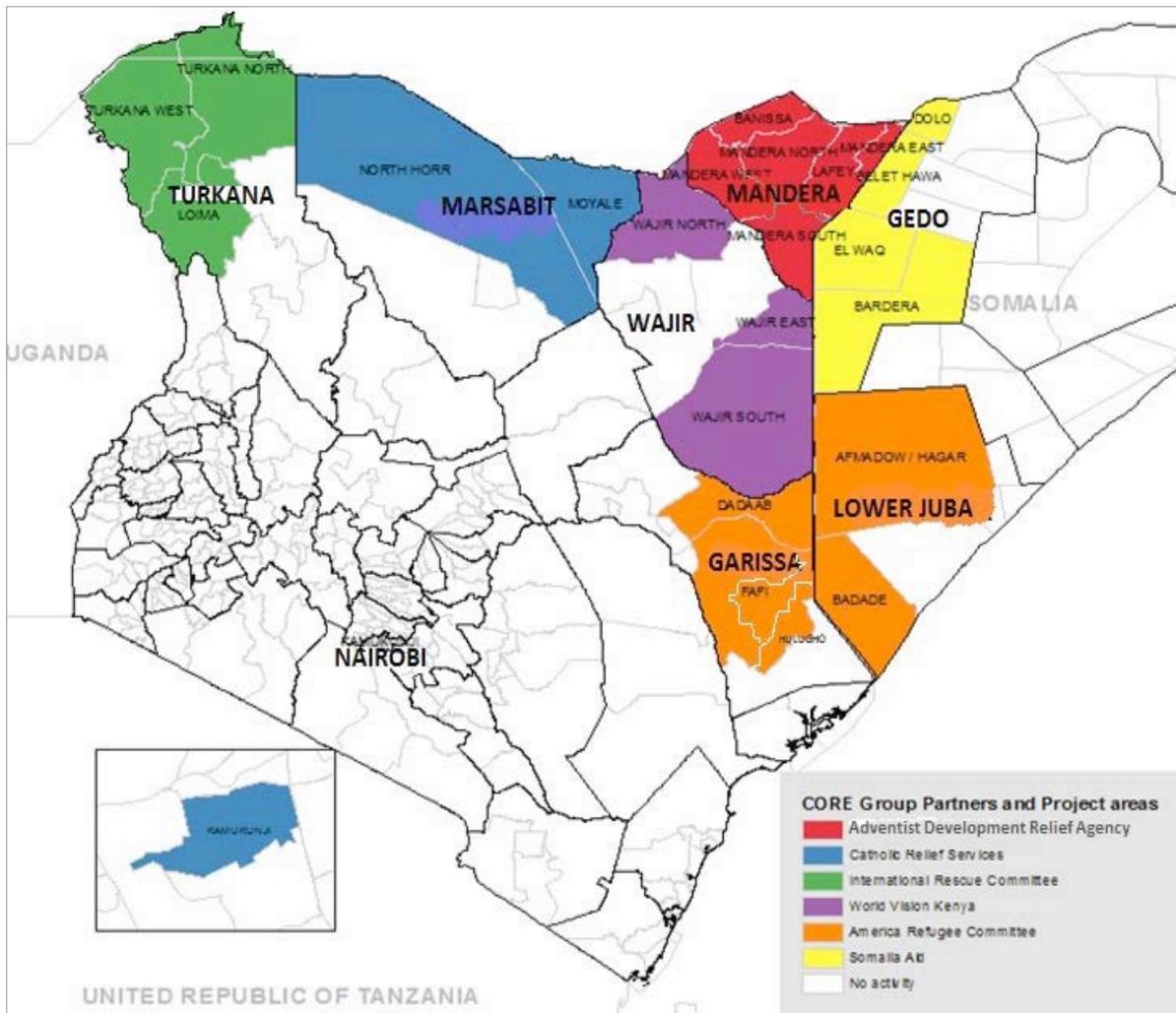
By the Numbers: 2012-2017

- In Kenya, OPV3 rates catapulted from 57% to 94%; OPV 0 rates ticked upward from 64% to 67.9%.
- In Somalia, more coverage with OPV has been reported than any other immunization.
- Nearly half the respondents in both countries said they learned about coming campaigns from the CMs.
- In Somalia, 88% had been visited by a community mobilizer other than for campaign promotion during the past six months and 75% in Kenya.
- 19.2% of children and 24.8% of houses were missed during campaigns in Kenya, compared to 5.2% of children and 8.7% of houses in Somalia.
- Kenya reported a Non-Polio AFP rate of 2.5 and 87% stool adequacy rate while Somalia reported a NPAPF rate of 4 and 94% stool adequacy rate.

Overview

The Horn of Africa region was hit by a wild poliovirus outbreak in April 2013 with a large number of cases: 194 in Somalia, 14 in Kenya and 9 in Ethiopia. While the outbreak occurred primarily in Somalia, it quickly spread into Kenya and Ethiopia. All the Somalia polio cases belonged to cluster N5A that was known to have been circulating in northern Nigeria since 2011. At around the same time, the Global Polio Eradication Initiative (GPEI) had entered a new phase with a significant reduction in case counts in endemic countries and a heightened recognition of the risk for the international spread of the virus. In May 2014, WHO declared polio a public health emergency and issued recommendations requiring proof of polio vaccination for travel to and from polio-afflicted countries. The CGPP Kenya and Somalia was created to prevent and respond to any future outbreaks by building upon existing NGO child survival experience and expertise.

The Kenya and Somalia Secretariat is based in Nairobi and supports polio eradication activities through networks at the community, sub-national, national and regional levels. The project works directly with 88 health facilities in Kenya's six counties and 16 health facilities in Somalia's two regions. CGPP Kenya-Somalia works through five international NGOs: International Rescue Committee, Catholic Relief Services, World Vision-Kenya, Adventist Development and Relief Agency and Somali Aid, a local NGO.



The CGPP also targets parts of Nairobi where there are large concentrations of Somali refugees who were found to be under-vaccinated. In Kenya, CGPP targets about 466, 225 children under five and, in Somalia, about 108, 597 children under five.

The greatest challenge to HOA polio eradication is the potential for cross-border transmission of wild poliovirus through mobile populations, and the CGPP has accordingly chosen to focus on improving eradication efforts among cross-border communities and mobile populations. CGPP-HOA also works closely with the CGPP Ethiopia and South Sudan programs in cross-border collaboration.

Special Activities

The Cross Border Health Initiative (CBHI), established by CGPP, has cemented CGPP's place as a leader in cross-border polio initiatives and the employment of bold and innovative strategies to reach every child with the polio vaccine. The CGPP facilitated the formation of Cross Border Health Committees (CBHC) to improve information sharing between border counties and districts in Kenya and Somalia in response to the history of cross border outbreaks. Border health administrators, health facility officials, and other selected representatives organize cross border meetings with health officials, WHO, UNICEF and NGO partners to map vaccination sites, share data, synchronize NIDS, map population movements and cross border points and establish cross border vaccination points. This cross-border initiative has brought together inter-country border stakeholders to discuss and plan ways to jointly combat circulation of polio. Joint action plans, which focus on activities to be carried out in individual countries, activities needing synchronization, sharing of information, and joint review and planning, have been developed.

CGPP HOA is called upon by other organizations interested in doing cross-border programming for advice and information. Further, when a WHO official familiar with the CGPP cross border work moved to Chad, he remembered the example of CGPP and invited one of the CGPP staff to attend a meeting in Chad to initiate cross border collaboration in the Lake Chad Basin. She was able to share the CGPP experience in the Horn of Africa and give advice.

The government of Kenya is concerned about the potential of disease importation from Somalia and South Sudan. They have created Special Vaccination Posts which they supply with vaccines and staff. CGPP provides technical assistance and outreach to the transient populations. CGPP HOA has facilitated the use of Nomadic Outreach Services to reach special populations including peri-urban settlements, nomads, and pastoralists as well as slum dwellers in urban towns. CHVs are trained to inform health facilities when new settlements and nomads arrive in their communities to ensure they are included in vaccination campaigns and mobilization. When the final survey asked where to get a child vaccinated, many caregivers on the Somalia side mentioned the health facilities in Kenya.

Quantitative Findings and Discussion

Objective 1: Build Effective Partnerships between PVOs, NGOs, and international, national, and regional agencies involved with Polio

The Kenya Somalia program was established in 2014 in response to the WPV1 HOA outbreak that began in May 2013. In FY17, field activities were implemented by five International NGOs in Kenya: American Refugee Committee (ARC), Adventist Development and Relief Agency (ADRA), International Rescue Committee (IRC), Catholic Relief Services (CRS) and World Vision (WV) covering Garissa, Mandera, Marsabit, Turkana, Wajir and parts of Nairobi counties. In Somalia, ARC and Somali Aid, a local NGO, worked in the Lower Juba and Gedo regions. Early on, the Kenyan Red Cross provided support to the program for a limited time; World Vision Kenya later joined the effort in 2016.



Providing outreach services to the nomadic community in Kenya's Mandera County, which is located along the Kenya-Ethiopia border.

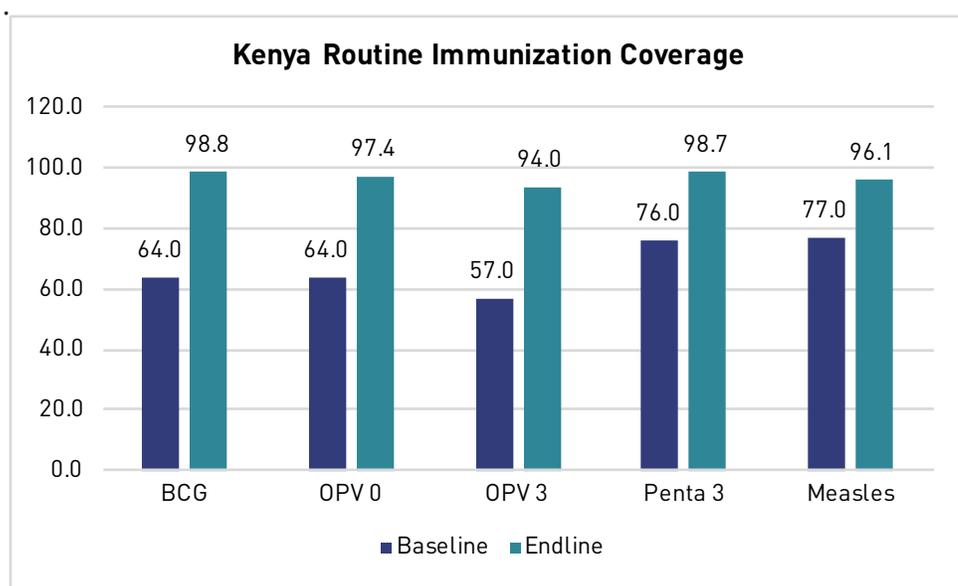
The Secretariat leads the Cross Border Initiative to reach high-risk mobile populations with immunization and surveillance activities along the borders of Kenya, Somalia, Ethiopia, South Sudan and Uganda through organizing cross border health committee meetings at local and regional levels. At the sub-national levels, the Secretariat works closely with the county and sub-county governments and with the MOH at the national level with strong working relationships with the Integrated Disease Surveillance and Response Unit, KEMRI, and the National Vaccine Immunization Program. CGPP Kenya-Somalia has a strong presence at WHO/UNICEF coordination meetings and the HOA TAG meetings.

Objective 2: Support PVO/NGO efforts to strengthen national and regional immunization systems to achieve polio eradication.

Kenya

Immunization coverage for all antigens in Kenya is very high, according to the CGPP final survey. This is similar to the 2015 DHS data for most antigens, however, that study found a national average for OPV of only 66% and slightly lower measles coverage at 87%. This provides evidence that CGPP has increased OPV0 coverage and possibly RI in the target area.

- CGPP Kenya successfully contributed to steeply increasing vaccination rates (card +history) for OPV3 from 57.0% at baseline to 94.0% at endline.
- OPV 0 coverage showed a dramatic climb from 64.0% at baseline to 97.4% at endline. This is likely due to strong tracking and social mobilization efforts by CGPP mobilizers.
- The percentage of children fully immunized showed a modest gain from 58.0% to 61.3% from baseline to endline



- While baseline data was not available, the % of children under 1 with 7 of more doses of OPV was 58% at endline; the % of zero dose children was 3%.

Somalia

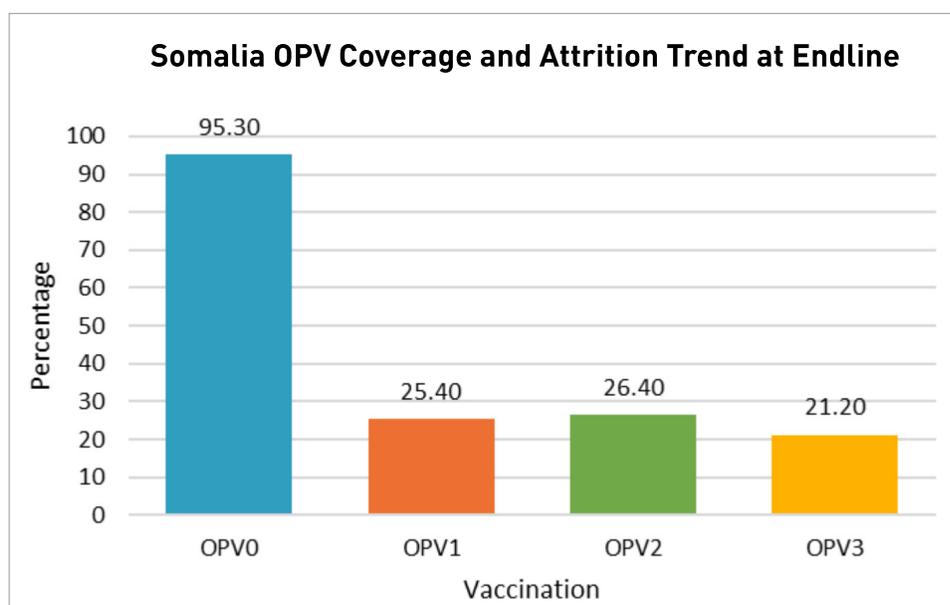
Baseline data were not collected from Somalia. The 2017 endline is the first survey data collected in the project areas. At the time of midterm data collection in other program areas, activities in Somalia were in the process of initiation. In Somalia, immunization coverage is very poor except OPV 0 and BCG, which is good, and there is more coverage of OPV 1, 2 and 3 than of any other antigens as shown in the table below. The target project areas are accessible for campaigns and some RI, but there are other areas nearby (outside of project areas) where no children are immunized. This raises concern for future

disease outbreaks. The CGPP survey found that only 4 children out of the 485 surveyed were completely immunized.

Vaccination coverage by vaccine and verification source, CORE Group Polio Project Areas, Somalia

Vaccine	Not vaccinated		Card		History		Card + History	
	n	%	n	%	n	%	n	%
BCG	126	26.0%	11	2.3%	348	71.8%	359	74.0%
OPV 0	23	4.7%	11	2.3%	451	93.0%	462	95.3%
OPV 1	362	74.6%	11	2.3%	112	23.1%	123	25.4%
OPV 2	357	73.6%	11	2.3%	117	24.1%	128	26.4%
OPV 3	382	78.8%	9	1.9%	94	19.4%	103	21.2%
Penta 1	469	96.7%	8	1.6%	8	1.6%	16	3.3%
Penta 2	474	97.7%	8	1.6%	3	0.6%	11	2.3%
Penta 3	473	97.5%	8	1.6%	4	0.8%	12	2.5%
Measles	472	97.3%	5	1.0%	8	1.6%	13	2.7%

The chart below summarizes OPV coverage and trend which is better than other antigens except BCG.



The survey collected other information relative to immunization coverage and recent polio campaigns which is summarized in the table below. There is little difference between campaign awareness and participation between the two countries. The greater difference is in routine immunization.

Summary of immunization information from the CGPP 2017 final survey for the Horn of Africa

Household immunization information	Kenya %	Somalia %
Child ever received polio vaccine in a campaign	97.7	94.2
Child received the vaccine in the most recent campaign	69.4	68.0
Household was visited by a vaccinator during the most recent campaign	71.7	55.7
Caregiver was aware of the most recent campaign	69.4	61.4
Caregiver learned of the campaign from a project mobilizer	43.1	43.4
Immunization card seen	48.3	2.3
Dropout rate BCG-Measles according to cards	20.0	54.5
Child completely immunized (card + history)	23.5	0.08

The multivariate analysis of socio-demographic factors associated with complete immunization was possible for Kenya, but not for Somalia where so few children were completely immunized. Factors that were significantly associated with complete coverage in Kenya include urban residence, mother ever having attended school, the child receiving drops in a polio campaign, and the caregiver learning about polio from a CGPP mobilizer.

Objective 3: Support PVO/NGO involvement in national and regional planning and implementation of supplemental polio immunizations

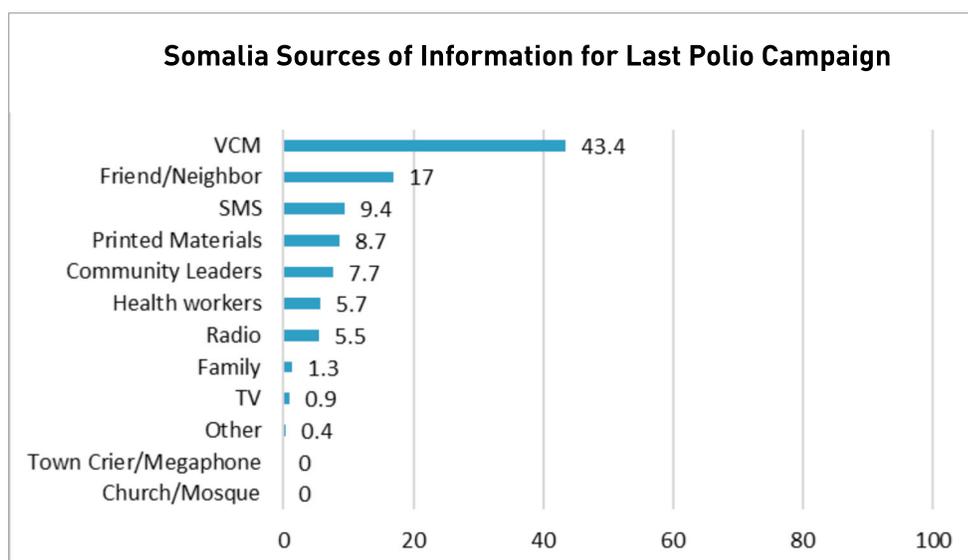
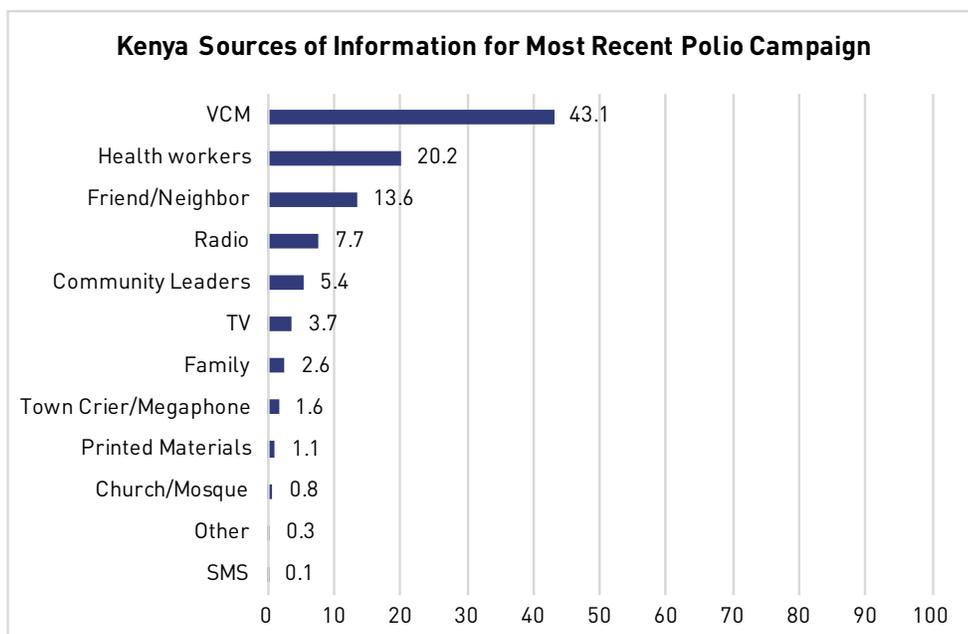
Since the start of the program, CGPP HOA has participated in two SIAs and sub-National campaigns in program focal areas in Kenya and 16 campaigns in focal areas of Somalia. CGPP Somalia NGO partners supported these campaigns with promotional materials and social mobilization. Difficult terrain, the mobility of the population, and security remain obstacles to reaching all children during campaigns. Baseline data was not available.

- At endline, 19.2% of children and 24.8% of houses were missed during campaigns in Kenya, compared to 5.2% of children and 8.3% of houses in Somalia focal areas.
- At endline, 3.5% of children in Kenya and Somalia focal areas had not had doses of OPV. Baseline data is not available for either country.

Community Education and Mobilization

In spite of difficult conditions, the CGPP community mobilizers are active, as verified by the final survey. When caregivers in Kenya were asked where they find information about polio, 93% mentioned the CM. Seventy-five percent of respondents said they had been visited by a CM other than for campaign promotion during the past six months. In Somalia, 88% had been visited by a CM, and all could remember the name of the CM.

Nearly half the respondents in both countries said they learned about coming campaigns from the CMs. Other sources of information about campaigns were mentioned less than 10%, except for being informed by friends and neighbors and that reached 17%. No one in Somalia mentioned receiving the information from a religious leader or institution, and only 0.8% mentioned this in Kenya. Community leaders were cited by 7.7% in Somalia and just 5.4% in Kenya.



Knowledge of Caregivers

Caregivers were asked specific questions to assess their knowledge about polio. The level of correct knowledge was quite high as shown in the table below. The caregivers attribute their knowledge to the community mobilizers.

Level of accurate knowledge of caregivers in CGPP final survey

Topic	Kenya %	Somalia %
Age of first polio immunization	86	86.8
Multiple doses give more protection to child	84	92.2
Knowledge of AFP	n/a	86.0

Objective 4: Support PVO/NGO efforts to strengthen AFP case detection and reporting

- The AFP rate in CGPP Kenya focal areas is 2.5 and is 4 in Somalia. Both are up from >2 at the start of program activities in the HOA.
- Stool adequacy has also shown improvement since the start of the program, from 83% to 87% in Kenya and from 81% to 92% in Somalia. Silent areas were not recorded at baseline. However, at endline, 6 sub-counties in CGPP areas of Kenya, and 1 district in Somalia in CGPP focal areas, are silent areas.

In both Kenya and Somalia, the CGPP has collaborated with the training of volunteers to conduct AFP surveillance, and the volunteers began reporting cases in FY 2016. When CVDPV was detected in Nairobi in 2016, CGPP trained and deployed 226 volunteers to visit nearly 7,000 households. They found two AFP cases. In Turkana County, CGPP provides a transport allowance to enable timely sample collection and transport to the national laboratory.

The CMs are attached to a health border facility and act as a link between community and facility-based staff for the purposes of mobilizing and sensitizing the community to utilize immunizations services (RI & outreach clinics). CMs also report any disease conditions key among them being AFP cases, measles, and others. This helps in creating trust, improving coordination and strengthening the partnership between the communities (who are mainly pastoralist/nomadic), and health facility staff. The nomadic communities are highly mobile shifting with their animals and belongings. The health facility staff, with the support of the community mobilizers, guide them to the nearest health facility once the pastoralist crosses the border to the neighboring country.

CMs do active case search for suspected AFP cases. They also report on other cases of illness seen during their daily activities such as measles, whooping cough, acute watery diarrhea and support tracing immunizations defaulters. The project supports the quarterly mother to mother engagement meeting at the health facilities to sensitize caregivers on the importance of routine immunizations, breastfeeding, and personal hygiene. AFP suspect case reporting is done through the CGPP project officer, the MOH and WHO field officers and finally to the national team including the Secretariat. The ability of CGPP CMs to detect and report AFP cases has improved since the inception of AFP surveillance activities. At baseline, 0 % of AFP cases in CGPP Kenya focal areas were reported by CMs. This has grown to 34% of cases being identified by CGPP CMs at endline.

Objective 5: Support timely documentation and use of information

CGPP HOA has presented and shared strategies, challenges, and successes with a variety of national, regional, and international forums. Since the inception of the program, CGPP HOA has participated and presented at 11 different regional and international forums including the HOA TAG meetings, National Surveillance Reviews, APHA, and the CORE Group Conferences.

During the 2013 outbreak, CGPP HOA worked extensively with the national MOH, WHO-Kenya and UNICEF to document the outbreak and successful strategies and has since worked on documenting the successes of the cross-border health initiative.

CGPP HOA co-authored two articles on the cross-border initiative in the HOA and community-based surveillance that were published in the open access journal, WHO African Health Monitor, 2014. The CGPP HOA was featured in a paper submitted to the USAID Collaborate, Learn and Adapt case competition <http://usaidlearninglab.org/cla-case-competition>.

Objective 6: Support PVO/NGO participation in either national and/or regional certification or transition activities

CGPP participated in Kenya and Somalia Polio outbreak simulation exercises (POSE). The project provided technical support in coordination with WHO Kenya and WHO-Horn of Africa coordination office to the MOH-Kenya in ensuring a robust outbreak plan and response. In July 2017, CGPP Kenya also attained

membership in the National Polio Experts Committee and participated in AFP case validation as per the Horn of Africa Technical Advisory Group (HOA-TAG recommendations). The project also participated in the National Coordination Committee Meeting where all polio partners shared best practices and planned for the key activities to focus in partnership with MoH National office, WHO-Kenya, and UNICEF-Kenya. The CGPP Kenya/Somalia Secretariat plays an active role in legacy and transition planning in the HOA TAG meeting and national platforms.

Qualitative Results about Project Implementation

Views of the Secretariat

The Secretariat sees the cross-border coordination meetings as one of the biggest successes although there are challenges in following through on the work plans that have been made. WHO has told the CGPP leadership that they value the contribution to the cross border collaboration.

A major challenge to the CGPP work on both sides of the border is weak health infrastructure. Health facilities on the Somalia side are far apart, poorly staffed and supplied. On the Kenya side, there is high staff turnover, which was exacerbated this year by a doctor's strike, followed by a five-month nurses' strike. The latter affected coverage of the most recent campaign.

Findings from Field Work

The community mobilizers are well-known and well-respected. Focus group participants explained how frequent interaction with mobilizers had changed their attitude about polio vaccination. They also mentioned learning about AFP. Women in Somalia agreed that husbands make the decisions about whether to vaccinate the child and provide the needed resources, but bigger barriers are the distance to health facilities, long queues there, insecurity in the region, and lack of proper identification to cross into Kenya to access the vaccination posts there. For their part, men feel that keeping their wife and children safe from violence in the region is more important than seeking immunizations. Nomads also mentioned the need to move frequently for pasture and water for their livestock. This is why people in the region are appreciative of the polio campaigns that bring vaccination to their house and mobile clinics that come to their village.

The community mobilizers said they are proud of their work and motivated by being recognized in their communities. They say they would like more training or refresher training on AFP surveillance and routine immunization and training on behavior change related to health care seeking. No mention was made of challenges regarding cultural gender norms interfering with access to men or women. One of the Somali mobilizers explained how they go about convincing families for immunization.

"We come across many cases where mothers and fathers refuse to vaccinate their children during campaigns and bar vaccinators from their homes. In such cases, community mobilizers sit down both parents and educate them on the importance of vaccination. The village opinion leaders such as the traditional birth attendants, traditional healers, religious leaders, village administrators and, sometimes, mothers whose children are victims of AFP are contacted to talk to families."

—Abdifatah Hussein Ibrahim, community mobilizer, Dhobley

Apart from teaching communities about polio and the importance of vaccinations, community mobilizers say they are involved in community health education on good health-seeking behavior and many health practices, referring sick persons to the nearest health facilities, AFP surveillance, mapping of persons with disability and mobilization of community members for upcoming events other than for vaccination. The AFP cases identified during surveillance are immediately reported to the project staff, WHO focal person and the district surveillance officer, while the parent is advised to take the child to the health facility.

The community mobilizers feel that the CGPP is making an impact and cite the increase in OPV coverage and AFP case detection. They mentioned challenges of inadequate health facilities and limited project funding for transport for their work. Most feel they have good support from their supervisors.

It seems that the community mobilizers in Kenya also function as general community health volunteers for the implementing partners. Those interviewed were unable to differentiate their role in the CGPP clearly, and some felt that persuading families to immunize children is taking too much of their time.

Religious leaders were interviewed but reported they do not have information about polio or campaigns to share with others. They said it would be possible to link this with other social issues they are addressing.

There is a great deal of additional information in the Somalia and Kenya qualitative reports that will be of value to CGPP Horn of Africa for planning activities and approaches and overcoming challenges.

Stakeholder Views

In Somalia, district health officials feel CGPP has made a significant contribution. The main reasons provided are that the CGPP through its partners (Somali-Aid and ARC) has played a significant role in strengthening capacities of facility-based health workers, MoH officials, and community mobilizers to effectively carry out polio vaccination campaigns, routine immunization and AFP surveillance in the region and as a result increasing vaccination coverage in hard-to-reach locations. They mentioned the trust and ownership of the CGPP activities by the communities.

“Before the inception of CGPP interventions, families had limited access to health care services and many children were reported missing polio vaccination. This has since changed because the majority of the mothers can now access vaccination services and those far away from the health facilities can be reached through the community mobilizers and vaccinators.”

—Nuur Bixi Osman, JMOH Field coordinator, Dhobley, Lower Juba.

WHO and UNICEF greatly value the partnership with the CGPP. They say they are unable to work in the insecure border areas and the CGPP has not only increased coverage and AFP surveillance through the local partners in those regions but is also able to obtain useful information and data to share with them.

Specific Conclusions and Recommendations

The CGPP is working in very challenging conditions, particularly in Somalia. Any success in increasing coverage or conducting campaigns is commendable, and the survey documents the effectiveness of the community mobilization in achieving a good level of OPV coverage.

The focus of the CGPP on Somali refugees in Kenya seems critical since their overall immunization coverage in Somalia border areas is so low (at 0.08% in the CGPP survey) with the potential of polio or other immuno-preventable disease outbreak among the refugees or transients. This would likely not impact the highly immunized Kenyan population but would be a burden on the Kenyan health care system.

Since coverage is so high in Kenya, it would seem logical for the CGPP to focus most resources on reaching Somalis and South Sudanese who are arriving as refugees or temporarily crossing the border, perhaps by supporting more special vaccination posts.

From the coverage data, it seems that the government of Kenya has figured out a way to reach the nomadic populations with routine immunizations. It would be most useful to share this successful strategy with all neighboring countries, including Ethiopia, which has under-vaccinated nomadic populations.



NIGERIA

Main Findings

- Nigeria interrupted the polio virus for two years before the discovery of 4 cases of WPV1 and 2 cases of cVDPV2 in July and August 2016 in security-challenged Borno state.
- Nearly 2,000 community volunteers reach about 500,000 children each year living in high-risk and hard-to-reach locations.
- Volunteer Community Mobilizers (VCMs) have succeeded in reducing drop-out rates due to house-to-house visits; they also deliver interventions beyond vaccination and surveillance, including WASH, malaria prevention and nutrition services.
- Community Informants (CIs) have been crucial as assistants to VCMs through identifying and reporting suspected AFP cases within their settlements.
- The widespread use of community registers by community mobilizers successfully document vaccination history of all children, track pregnant women and newborns, and are used by mobilizers to encourage parents to seek routine immunization for their children.

By the Numbers: Progress from 2012 to 2017

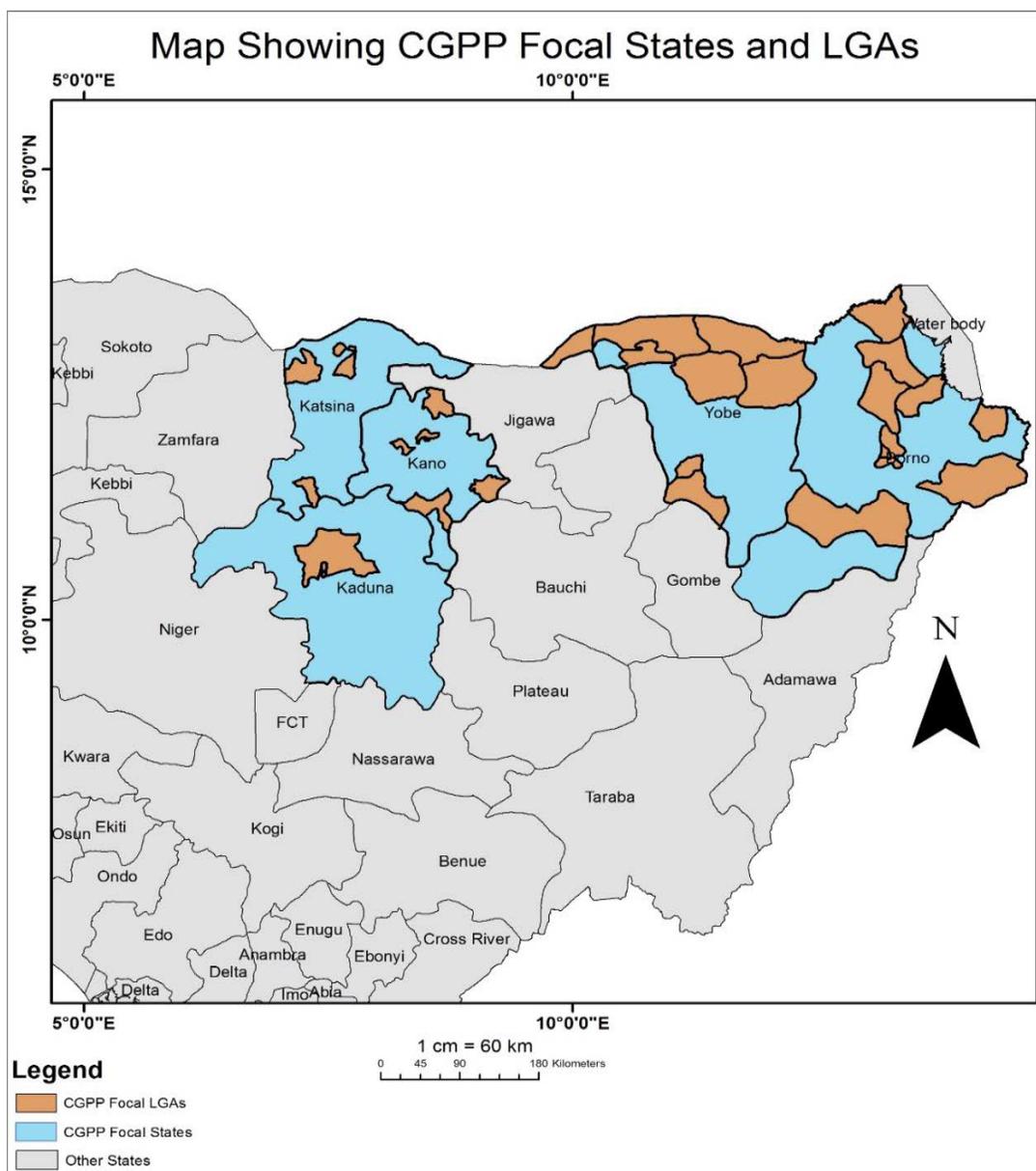
- OPV3 coverage increased from 47.2% to 62.3%
- OPVO or birth dose rose from 54.9% to 98.6%
- 72.8% of respondents reported that VCMs were the primary source of information about polio, up from 54.2%.
- Fully immunized children have increased from 33% to 57%.
- Zero dose or never vaccination children fell dramatically from 45.1% to 1.4%
- The percentage of missed children dropped from 4.46% to 1.5%.
- The Non-Polio AFP Rate climbed from 13.6 to 19.6.

Program Overview

Nigeria is designated as a polio-endemic country with increasing numbers of cases from 2000-2006, peaking at 11 cases in 2006. The number of cases waned somewhat until 2011. After the discovery of wild poliovirus in 2012 when 101 cases were reported in the northeast, the government was again galvanized to conduct SIAs and increase surveillance. The CGPP Secretariat laid the groundwork with the national government and supporting agencies to enable CGPP to join the renewed effort against polio. The CGPP launched polio eradication activities in Nigeria in 2013 with sub-grants to three NGOs to contribute to the goals of the national emergency action plan in high-risk areas by integrating with ongoing child health services. The CGPP joined the other implementing partners under the general operational auspices of the National Polio Emergency Operations Center (EOC) and state EOCs. The project has promoted collaboration between the CGPP members, their local NGO partners, the national EOC, local Ministries of Health, WHO, UNICEF, Rotary, CDC and local levels of government.

The number of cases dropped dramatically with no cases reported in 2015 but, in 2016, four new WPV cases were recorded. This underlined the importance of continuing intensive efforts including campaigns and routine immunization, especially among the population affected by the unrest in the target states. To increase coverage, the government has enlisted the support of the army in reaching the most insecure areas.

The CGPP partners are International Medical Corps (IMC) in Borno and Kano States; Catholic Relief Services (CRS) in Yobe and Kaduna States and Save the Children in Katsina State. The three NGO partners work through seven community-based organizations. The project is reaching nearly 500,000 children with routine immunization and polio eradication interventions across the five program states and in 32 Local Government Areas (LGA).



The project works with 1,995 Volunteer Community Mobilizers (VCM) and 243 Volunteer Ward Supervisors (VWS) who promote participation in campaigns and routine immunization and conduct surveillance for AFP case detection. Their role is critical to reaching previously inaccessible populations and reducing drop-outs through house-to-house contacts.

Key Activities

Due to cultural norms, it was considered critical to find women to serve as VCMs, however this was challenging in the conservative Islamic communities where women are generally not active in public. Since community leaders were likely to recommend a relative, CGPP devised a broader selection process between the LGA teams and a Ward Selection Committee comprised of the traditional leaders and religious leaders, with selection criteria provided by the CGPP Secretariat and local partners. The proposed candidate was then vetted and given final approval by the local partner. Some of the most important criteria for selection is that the volunteers must reside in the settlement or catchment they are serving, speak the local language, and be respected in their communities. This has allowed volunteers to build extremely strong bonds with the families they visit, and they have become trusted sources of information about polio, vaccinations, and health.

CGPP enlisted and trained community informants (CI) to aid the VCMs in their efforts to detect AFP cases. The CIs include traditional birth attendants, herbalists, patent medicine vendors, and traditional bone setters. This effort has resulted in high rates of reporting suspected AFP cases. There are, however, some LGAs with significant security risks where AFP surveillance is not possible.

VCMs are the backbone of the program in Nigeria, giving information and support to communities and playing an active role in the polio surveillance system. CGPP Nigeria recognized the potential for even greater impact in the communities they serve. Over the past several years, community mobilizers have shown that they are also able to successfully deliver add-on quality health care interventions beyond vaccination/surveillance. VCMs in Nigeria have been trained on WASH (Water, Sanitation, and Hygiene), malaria prevention, nutrition, and other important health care services. The use of simple, often pictorial, community-based BCC tools in local languages has helped to build trust, raise awareness, increase buy-in, and improve health outcomes.

Quantitative Findings and Discussion

The results of the quantitative survey were analyzed separately for each state as well as for the whole project area. Here, the results for the entire project area (all states) are presented. The results by state will be of value to the Nigeria CGPP Secretariat and partners for planning purposes.

In Borno state a large percentage of respondents (28.3) were fathers, whereas in the other states 86.3 to 99.7% of respondents were female caregivers. This may have distorted findings since fathers are less likely to know the history of a child's immunizations and may not have been exposed to the education provided by the VCMs, who are mostly female. In the analysis, results are consistently lower for Borno than the other states.

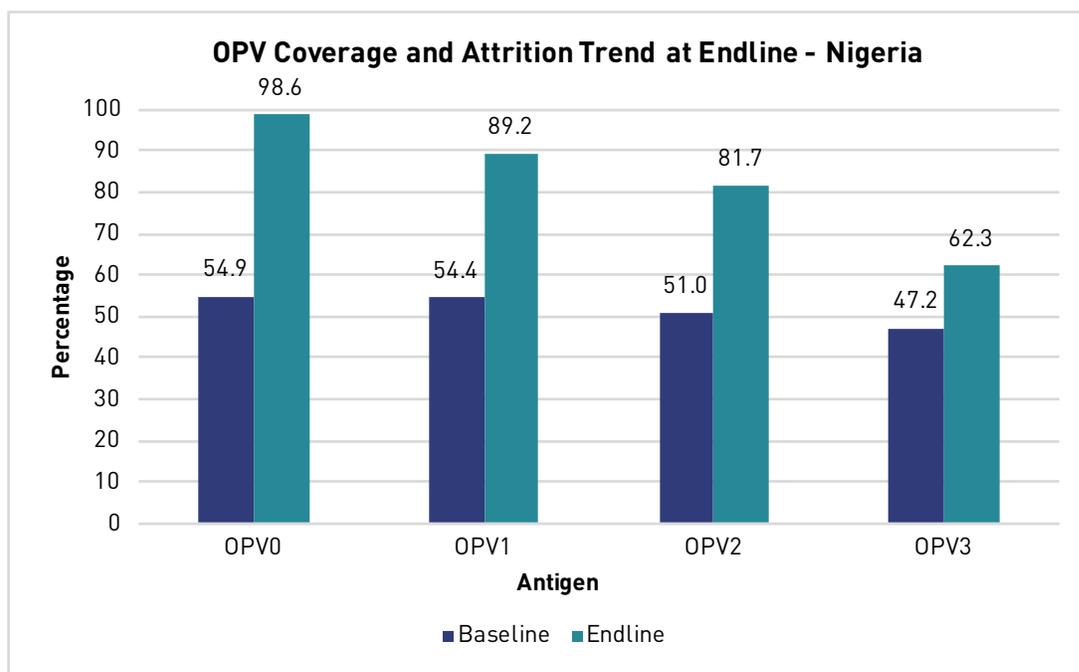
Objective 1: Build effective partnerships

CGPP Nigeria has consistently partnered with three international NGOs: Catholic Relief Services, International Medical Corps, and Save the Children and seven local NGOs under their supervision. The seven community-based organizations are the Archdiocesan Catholic Healthcare Initiative (ACHI-DACA) in Kaduna; Federation of Muslim Women Association of Nigeria (FOMWAN) and WAKA Rural Development Initiative in Yobe; Family Health and Youth Empowerment Organization (FAYHE) and the Healthcare and Education Support Initiative (HESI) in Katsina; Community Support and Development Initiative (CSADI) in Kano, and African Healthcare Implementation and Facilitation Foundation (AHIFF) in Borno. Previously, Public Health Services Systems (PHSS), Community Development Foundation (NIRA) and Yetim Care Foundation (YETIM) implemented projects in FY14.

CGPP Nigeria maintains active membership in both the national and local EOCs, ensuring that the voice of the NGO community is heard.

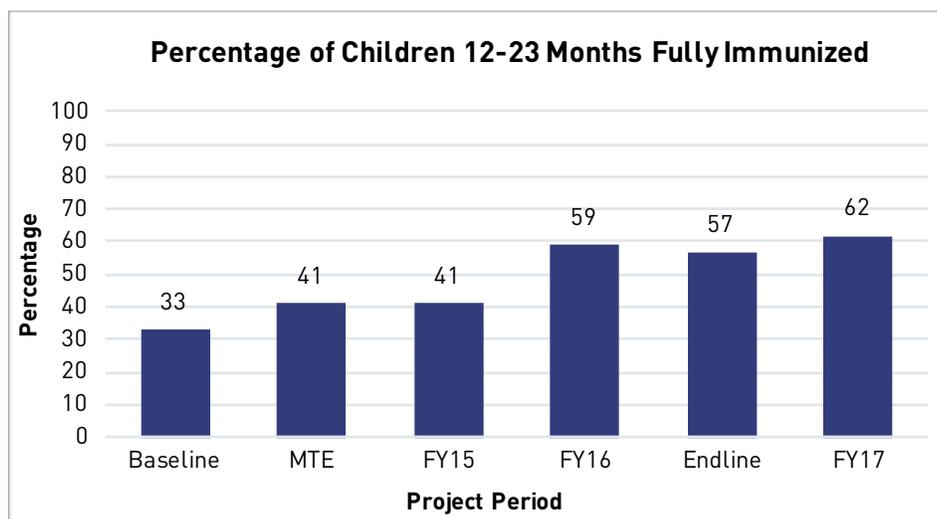
Objective 2: Support PVO/NGO efforts to strengthen national and regional immunization systems to achieve polio eradication.

Immunization coverage has greatly increased in the target area over the life of the project. The CGPP has met and exceeded the routine immunization indicators set forth by the program. The number of children under 5 who are fully immunized has increased steadily since CGPP Nigeria began work, and has expanded during the program period, both OPV0 and OPV3 coverage have risen. Considering that the CGPP is working in the hard-to-reach areas and with some mobile populations, the level of coverage is impressive.



Marked improvements have been found for birth dose (OPV 0), OPV3, and fully immunized over the life of the project. (calculated card plus recall)

- An increase was also seen in OPV3 coverage, which improved from 47.2% at baseline to 62.3% and endline. CGPP VCMs work closely with the families in their communities, encouraging them to vaccinate their children on time.
- OPV0 coverage rose from 54.9% at baseline to 98.6% at final. This dramatic change is likely due to the dedication and inroads of VCMs in the communities, tracking pregnant women and newborns, and encouraging parents to seek out birth dose.
- The percentage of zero dose (never vaccinated) children decreased dramatically from 45.1% at baseline to 1.4% at endline.
- The percentage of children 12 to 23 months who are fully immunized in CGPP focal areas has increased steadily since the program began, improving from 33% baseline to 57% at endline (and 62% at the end of FY17).



While significant gains in OPV coverage were achieved, there is room for improvement in the consistency of receiving OPV. There was a decline in the consistency of children receiving all required OPV, thus the dropout rate is greater at endline than it was at baseline (Graph in Appendix E).

Card retention has increased from 19% at baseline to 31%, and many more respondents said they had received a card at some time. Loss of cards is understandable when there are population displacements due to man-made or natural disasters. The project should continue to focus on ways to ensure retention. VCMs should make these conversations a priority with the families in their communities.

Objective 3: Support PVO/NGO involvement in national and regional planning and implementation of supplemental polio immunizations.

CGPP Nigeria has played an active role in supporting the planning and implementation of SIAs in CGPP focal areas. The CGPP Director is an key contributor and member of the National Emergency Operations Center (EOC) and CGPP field partners and staff are strong participants in local EOC meetings.

During SIAs, CGPP VCMs are active in supporting the campaign activities in their communities. Many travel in groups with vaccinators to help negotiate vaccination and non-compliance, and to provide credence and trustworthiness for the families in their communities. These strong efforts and connections within communities and knowledge of communities successfully impacted coverage during campaigns in CGPP focal areas.

- At baseline, an average of 4.46% of children in the CGPP focus areas were missed. This has dropped below to 2%, to 1.5% in FY17.

Average Missed Children in SIAs in CGPP focal states of Nigeria

	September 2014 (%)	September 2015 (%)	September 2016 (%)	September 2017 (%)
Borno	5.5	2	1.4	0.15
Kaduna	7	2.5	0.9	0.3
Katsina	5	3	3.7	5.4
Yobe	4.8	3.4	1.4	1.7
Kano	0	3.7	2.1	0.02
Average	4.5	2.9	1.9	1.5

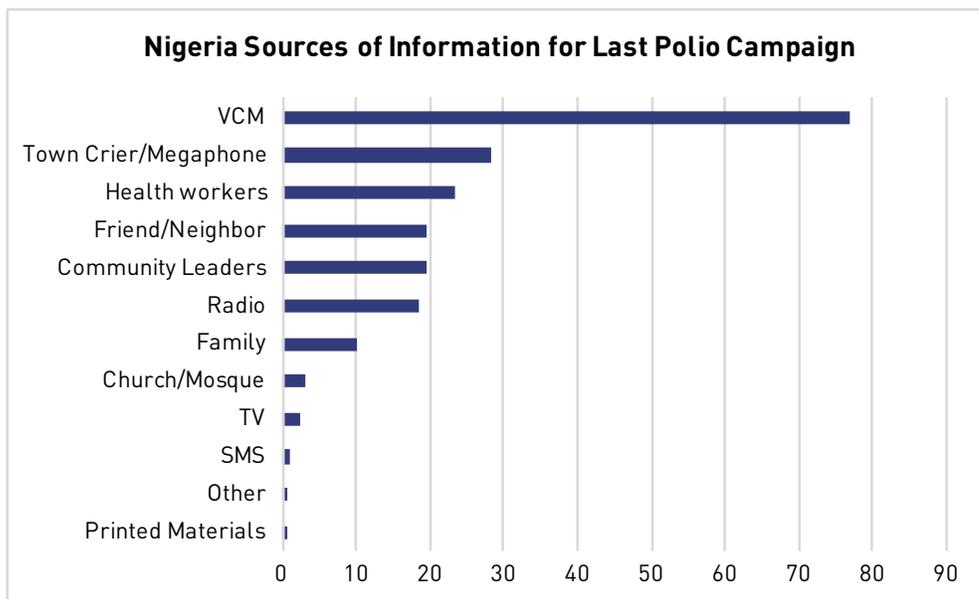
- The percentage of children receiving 7 or more doses of OPV has also increased markedly from FY15 (66.3%) to FY17 (92.6). Due to the polio outbreak of 2016, campaigns in Nigeria are frequent, giving children ample opportunity to receive the targeted 7 doses.
- The percentage of children with no doses of OPV decreased sharply from the baseline value of 4.1% to 1.6% at endline. As stated above, frequent campaigns and effective community mobilization have resulted in children receiving more doses.

Community Education and Mobilization

Data from the final survey illustrate the major role of the CGPP community mobilizers. Over the program period, VCMs have become even more prominent and trusted sources of information in their communities. At baseline, 54.2% of respondents said VCMs were one of their primary sources of information about polio. This number climbed to 72.8% in the endline survey. Comparatively, health workers were found to be the second most trusted source of information, mentioned by 29% of participants in the endline survey, compared with 24.24% at baseline.

Top Five Sources of Information about Polio Identified by Survey Participants		
	Baseline	Final Evaluation
1	VCM (54.2%)	VCM (72.8%)
2	Radio (42.3)	Health worker (29%)
3	Health worker/Hospital (24.4%)	Town crier (27%)
4	Friend/neighbor (14.9%)	Radio (22%)
5	Others (7.6%)	Community Leaders (20.2%)

The chart below shows the significance of the VCMs in announcing the most recent polio campaign; 77.0 % of those survey said VCMs were their source of information for the most recent polio campaign. Also, notable in the chart is the minimal role of religious institutions, SMS, and print materials.



Eighty-five percent of caregivers across the target area said the VCM had visited them at home other than on campaign days. This is excellent considering that some of the population is displaced and moved to IDP camps. The project currently reaches approximately 98,620 people (children and adults) in the 6 IDP camps where the CGPP has community mobilizers.

Knowledge of Caregivers

The final survey results show that caregivers have relatively high levels of accurate knowledge about polio but there is room for improvement on knowledge of AFP and the symptoms as seen in the table below.

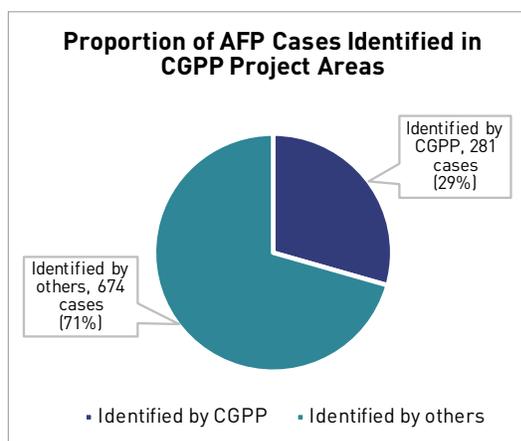
Knowledge improvements since baseline are not as notable as the increases in immunization coverage.

Knowledge changes among caregivers from baseline to final survey

Topic	Baseline %	Final %
More doses of polio vaccine give more protection	73.8	79.0
Timing of first dose	74.2	86.4
Knowledge of AFP	54.0	62.9
Knowledge of AFP symptoms (stops walking)	57.9	62.3

There are wide variations in knowledge levels between states, with the most deficit in Borno and the highest levels in Kano and Kaduna. As mentioned in the limitations, more men were interviewed in Borno which may account for lesser knowledge since the female mobilizers talk to women.

Objective 4: Support PVO/NGO efforts to strengthen AFP case detection and reporting.



To support community based surveillance, CGPP-trained Community Informants (CIs) assisted VCMs to identify and report suspected AFP cases within their settlements. CIs included Traditional Birth Attendants (TBAs), Patent Medicine Vendors (PMVs), bone setters and herbalists. VWS received reports of suspect AFP cases and referred them to the CGPP LGA Coordinator. In turn, the LGA Disease Surveillance Notification Officer (DSNO) began a case investigation.

The Non-Polio AFP rate has climbed steadily since the initiation of the CGPP Nigeria program. At baseline, the NPAFP rate was 13.6 and at the end of FY 17, it was 19.6. CGPP VCMs and CIs played a key role in AFP surveillance

in CGPP focal areas. In FY17, CGPP VCM/VIs reported 29% (281 or 674) cases reported in project areas.

Stool adequacy has remained high throughout the life of the program, at 98%. Due to violence and displacement, 2 LGAs remain silent in Borno state. VCMs attempt to visit these areas when possible, however, these efforts have not been successful.

Objective 5: Support timely documentation and use of information to continuously improve the quality of polio eradication.

CGPP Nigeria has been consistently engaged in the improvement of accurate data collection, timely documentation, and sharing of information. Baseline, midterm and final evaluations were performed by external evaluators during the project period. Data was collected through surveys from beneficiaries and through interviews and focus groups with beneficiaries and key stakeholders. This information was not only used to ground and establish program strategies, it was also shared with key polio stakeholders at local, national, and international levels. The CGPP Nigeria Secretariat Director has presented at a variety of forums including the American Public Health Association Conferences and CORE Group Conferences,

sharing the successes and lessons learned of the program. A total of 11 regional and international forums were attending for presentations during the project period. Some of the highlights are in the table below. CGPP Nigeria also authored or co-authored 8 peer-reviewed journal publications.

Project Year	Highlight of International Presentations and Forums Attended
FY15	<ol style="list-style-type: none"> 1. International M&E workshop in Nairobi, Kenya 2. The 143rd Annual American Public Health Association (APHA) meeting in Chicago, USA.
FY16	<ol style="list-style-type: none"> 3. APHA Colorado, USA, October 2016 4. Lake Chad Basin Technical Coordinating Task Team, Abuja, November 2016
FY17	<ol style="list-style-type: none"> 5. Expert Review Committee (ERC) on Polio and Routine immunization Meeting, Sept 2017 CORE Group Global Health Practitioners Conference, Baltimore. September 2017

Community registers are, perhaps, the most successful documentation strategy employed by CGPP Nigeria. These registers are maintained by the nearly 2,000 community mobilizers of the program. The registers are used to document vaccination history of all children, track pregnant women and newborns, and are used by mobilizers to encourage parents to seek routine immunization for their children at prescribed intervals. The data from these registers are sent from the local level to the state and Secretariat level on a monthly basis. The introduction and use of ODK (Open Data Kit) software has allowed the data from community registers to easily be tallied and sent to the Secretariat for review. This process has made data sharing more accurate and efficient.

Vaccination cards play an important role in the documentation of vaccination history for children. CGPP Nigeria has worked to improve the retention of vaccination cards among parents in CGPP focal communities. The MTE showed a drop in the card retention, from 19.2% at baseline to 15.2% and MTE.

Survey Timepoint	% of caregivers who retained and showed their child's vaccination card to the data collector
Baseline	19.2%
Midterm	15.2%
Endline	31.0%

Consistently documenting and looking closely at program progress, successes, and challenges has allowed the program to improve its strategies, redirect resources, and initiate new programming and interventions. The program quickly learned that program strategies must be community based, and respect the cultural and community norms. Interventions that worked for polio in southern Nigeria did not work in the CGPP focal areas. The program has continued to use data and solid documentation produce change and understand what works in its community.

Objective 6: Support PVO/NGO participation in certification and transition planning

CGPP Nigeria is at the front and center of the Nigeria certification and transition efforts. As a member of the Polio Transition Technical Task Team (PT4), CGPP is working with the Government of Nigeria and other partners to ensure the effective and seamless transition of Nigeria's polio infrastructure to support identified areas of need in Nigeria's Primary Health Care delivery system. CGPP Nigeria is presently providing technical support to the development of the business case for operationalizing the transition of polio infrastructure to support broader PHC goals in Nigeria. In addition, the CGPP has completed its asset mapping and is now poised to support the successor of the VCM network being championed by the National Primary Health Care Development Agency (NPHCDA). The successor to the VCM network is known as CHIPS, which stands for Community Health Influencers, Promoters and Services. All VCMs and other community health workers like Traditional Birth Attendants (TBAs) will be transitioned into CHIPS.



Community volunteer from Kaduna giving oral polio vaccine in February 2017.

In terms of certification, CGPP Nigeria has been part of three Out Break Response Assessments (OBRA) organized by the Global Polio Eradication Initiative (GPEI) to assess the quality of Nigeria's response to the 4 cases of WPV detected in Borno state in 2016. The OBRA is one of the critical activities used by GPEI to assess a country's readiness for certification. In addition, surveillance is one of the critical areas assessed before a country is certified polio free. If surveillance is not strong and robust, it will be assumed that it is not that cases do not exist, but rather that the surveillance system is weak and unable to detect the WPV cases in circulation.

CGPP Nigeria is aligned with the Nigeria Polio Legacy plan to transition the polio infrastructure to support Primary Health Care services. CGPP Nigeria has mapped and estimated the cost of its resources. CHIPS, the above-mentioned new cadre of community workers, will work at the community-level to improve access to healthcare as part of the Government of Nigeria's effort to improve access to care and the revitalization of 10,000 primary health care centers.

Qualitative Results

Views of the Secretariat

The Secretariat Director believes the biggest accomplishment has been working with local people in their community to be agents of behavior change; not only to increase polio coverage, but also to improve household health practices including hygiene, breastfeeding and nutrition, and to build links between households and health facilities for RI. He feels that this more integrated approach has really increased acceptance of vaccination. He says the CGPP has been able to reach into the most insecure areas to bring services and education. A sidebar accomplishment has been strengthening the capacity of the local partners in financial management.

He cited the biggest challenge is the lack of government prioritization at both national and local level. The national government still hadn't provided the funding for 2017 for routine immunization as of October. The LGAs frequently don't come through with the funding they are supposed to provide for transportation and mobilization activities for campaigns.

Findings from Qualitative Fieldwork

The focus groups confirmed that the VCMs are a respected and accessible source of information, particularly for women. The men's focus group brought out the need for male VCMs as they say men do not listen to or take instructions from women. At the same time the men in the FGDs pointed out that the male VCMs would not be allowed in their compounds to vaccinate or talk to women. The men in the focus groups further pointed out that their culture does not permit them to sit comfortably with non-related women at vaccination sites, health facilities or in community meetings. These comments highlight the complexity of the local society where the CGPP is working.

Women spoke of the barriers to vaccination and reasons for noncompliance. They said that women in their communities had low decision-making power, as a result of cultural norms. They described the marital relationship as women being submissive to men. However, some women stated that they could use their “womanly power” to persuade or convince their husbands through a “humble” appeal.

In cases where these appeals fail, women rely on community heads and religious leaders to convince their husbands. Some of the women also highlighted that their mother-in-laws have more decision power on their child’s immunization than the mothers themselves.

Some women, particularly in Yobe and Borno, pointed out that immunizations take lower priority than finding food or dealing with other more immediately lethal diseases like typhoid and malaria. They expressed frustration that the polio campaigns can reach them, but other badly needed health services and medicines don’t.

The religious leaders who were interviewed expressed support for immunizations and cited passages of the Quran to support it, however, some acknowledged that there is some residual belief that vaccines are intended to sterilize children. One stated that the repeated rounds of polio give rise to this suspicion. All those interviewed are supporting the CGPP in persuading men to immunize their children.

The interviews with the VCMs revealed that they consider their job as prestigious and say the work has built their self-confidence, also giving them more influence in their community on other matters.

“As a VCM I like the fact that I get to meet a lot of people who are now very free with me. They are always happy to see me and so am I. As soon as they sight me they start to shout ‘aunty polio, aunty polio’, it’s an exciting thing for me. I like the way they accept me wholeheartedly. The job has made me a more confident person; I can walk into any place now with head up high. I talk to parents freely. I can now express myself. My job is really exciting and I love what I do.”

—VCM in Ungwa Rimi, Kaduna North

VCMs highlighted several barriers to OPV uptake including: religious and traditional beliefs, lack of understanding on the part of men and fathers, fear of the side effects of too many rounds of IPDs, feeling polio vaccine is unnecessary, and having children battling malnutrition.

VCMs have used various strategies to overcome these barriers. They spoke of difficulties and being embarrassed or rejected by their communities and even friends when they first started advocating for vaccines. However, VCMs said that the consistency of their contacts with families, community dialogues, and compound meetings allowed them to establish trusted relationships with the families in their communities. They have been able to build trust and become valued sources of information.

Higher level CGPP staff mentioned many challenges in their work. Foremost among these is the continuing insecurity in the region with harassment and some kidnappings of NGO staff. They feel their workload is excessive and would like to see staff numbers expanded. As to acceptance of immunization, staff members say that the major barrier is gender, in that mothers do not make the decision, rather, it is the husband or mother-in-law.

Stakeholder Views

The Incident Managers for the State Emergency Operation Centers (EOC) praised CGPP for their contribution to increasing overall vaccination coverage through coordination with the EOC and the social mobilization.

“CGPP has always supported polio and immunization programs in the state. The strength of CGPP is in social mobilization and strong supportive supervision which reflects in the activities of their VCMs.”

— IM of Yobe State.

National level stakeholders also expressed appreciation for the CGPP efforts. The representative of Rotary International interviewed stated that one major lesson learned is the importance of effective communication from the project leadership down to the grassroots project personnel. The CGPP has an effective communication system that gives project staff and volunteers a clear sense of direction and this effective communication is also being adopted by partners to pass the right message to the caregivers.

“We, the partners, commend the effort of CGPP although we are advocating that this good works should be scaled up and extended to other LGAs and states if possible and when Nigeria is totally free[of polio], they should look into the area of malaria , WASH and other existing problems”

—Rotary International official

“I can conclusively say that CGPP has done well and has contributed a lot in efforts to eradicate or interrupt polio in Nigeria. The story will be incomplete without mentioning CGPP. They have contributed tremendously in mobilization for RI, provision of human resource and finance, they have contributed in terms of supervisory work plan execution at all levels, they have contributed in terms of co-ordination, so I think they should be sustained, so that the huge investment that have been made in the people that have brought this impact should not be a waste”.

—Mr. Joseph, UNICEF representative

Specific Conclusions and Recommendations

The CGPP has played a very important role in helping the Nigeria polio eradication partners reach communities in the most insecure areas to significantly increase coverage of OPV and all routine immunizations. Coverage of OPV and RI in the target areas, which are conservative, insecure and remote, is now higher than the rest of the country.

Recruitment of female VCMs has been a success in that they can enter compounds to meet with women and vaccinate children. However, there is a strong need to have male VCMS who can persuade men about immunization, since fathers make the decision whether or not immunize a child. In the cultural context, female VCMs cannot interact with the fathers. It may be worth exploring whether married couples can be recruited to make the home visits together.

The CGPP has worked with some religious leaders and those interviewed are convinced that immunization is acceptable, however, the final survey showed that caregivers are not hearing announcements from the mosque. Since men are decision-makers, the religious leaders can play a significant role in convincing them about immunization and other health behaviors. Engaging religious leaders should be expanded.

The current strategy of giving VCMs training to promote other health and nutrition behaviors is good use of resources since they are making home visits and can provide information on practices that families need besides immunizations to improve child health.



SOUTH SUDAN

Main Findings

- Three cases of circulating vaccine-derived polio virus (cVDPV2) in 2014 and 2015 exposed South Sudan's high vulnerability to another polio outbreak.
- Wide-reaching Independent Campaign Monitoring activities began in 2014; 550 data collectors have assessed the quality of each campaign (reaching 2.6 million children just in 2017).
- Obtaining strong data on missed and zero dose children has guided critical mop-up campaigns in areas of poor coverage to reach every child.
- With the help of 3,000-plus community informants, community-based surveillance has been expanded in the conflict areas in the northeast; the BMGF-funded efforts have contributed to an upswing in the Non-Polio AFP rate from 1.2 to 3.7.
- The number of silent areas (those areas not reporting any AFP cases) has been reduced from 56% to 11.8%.
- Special Vaccination Posts have been erected on borders between states and countries; through these posts, 54, 120 children were vaccinated in 2016.
- UNICEF has funded social mobilization activities through community mobilizers.

Program Overview

South Sudan remains at risk of a polio outbreak because of large numbers of unvaccinated or under-vaccinated children whose families are on the move due to conflict or as nomadic groups. An outbreak of the circulating Vaccine-Derived Polio Virus (cVDPV) in a camp for internally displaced persons (IDP) in 2015 underlined the country's vulnerability.

The South Sudan CGPP effort is unique in that it was initially funded by the Bill & Melinda Gates Foundation (BMGF) rather than from the USAID grant. This is an example of how the USAID funding that was already invested in developing the Secretariat model and CGPP credibility in other countries was leveraged to access funding from another donor. Starting in 2011, BMGF wanted CGPP to primarily support routine immunization efforts being mounted by the new government with support from BMGF, WHO and UNICEF.

Initially, it took the project time to get acceptance by the Polio Technical Team comprised of the Ministry of Health, WHO and UNICEF because CORE Group and the CGPP were unknown in South Sudan. The MOH and supporters watched and waited to see what results CGPP would produce. Now, the team, and particularly WHO, see CGPP as a valued player. This was evident during this final evaluation when WHO proffered the consultant access to their database on polio activities and coverage.

Much of the work undertaken in the early phase was in the eight counties along the southern border with the Democratic Republic of Congo and Uganda, where there were large numbers of IDPs and refugees, many of whom had never been vaccinated. Besides supporting routine immunization, CGPP was involved in some supplemental campaigns and AFP surveillance. Work under BMGF funding expanded to include implementation of Special Vaccination Points (SVPs) between states and at international borders.

The first of the USAID funding came in 2014 after a request by the MOH and advocacy with USAID regional office. This USAID funding was for leading independent monitoring of polio campaigns country-wide, then,

later adding the cross-border initiative. In October 2015, at the request of the national Polio Technical Team and BMGF, CGPP changed focus to AFP surveillance in the conflict-affected areas of the northeast in the states of Jonglei, Unity, and Upper Nile. This required a major shift for the CGPP to find five local NGO partners and recruit staff to cover 29 counties, as well as to develop protocols and strategies to work in these highly insecure areas. The map below shows the current geographic focus and the partners. In addition, CGPP continued Independent Campaign Monitoring (ICM) in all other counties and support to SVPs.



Key Activities

Post Campaign Evaluations

At the request of the national EPI Technical Working Group (EPI TWG), the CGPP began conducting post-campaign evaluations in 2014. These efforts resulted in a more reliable and accurate picture of campaign coverage. More specifically, data collected by monitors contributed to developing and planning campaigns that resulted in increased numbers of children who received oral polio vaccine for the first time.

Community-based Surveillance (CBS) for Acute Flaccid Paralysis

The AFP surveillance has been the primary focus of the most recent phase of the CGPP in South Sudan. WHO agreed to assume this responsibility when South Sudan was created, but was unable to carry out this function effectively for multiple reasons. First of all, as a UN agency, their staff are subject to severe restrictions on travel in conflict areas. Secondly, they have been unable to fill or maintain filled, all the field officer positions in the border areas, due to bureaucratic challenges. This situation is currently improving due to additional funding from BMGF, however, the field officers do not have their own transport to go investigate AFP cases.

Cross border partnerships

The South Sudan team has facilitated cross border meetings to enable more children to be vaccinated and have made significant contributions to building relationships with neighboring state health systems, thus directly reducing the risk of polio cases being imported from neighboring states.

Evaluation Methodology

The final evaluation in South Sudan was a unique exercise for several reasons. First, the project has shifted primary geographic focus to conflict-affected counties in the northeast and, due to insecurity it would be very difficult to conduct household surveys. Secondly, the principal project activities are more appropriately measured by outputs rather than an outcome such as vaccination coverage. Additionally, measuring coverage would be further complicated by the population displacements due to conflict and the mobile populations of nomads.

Therefore, the CGPP arranged for a comprehensive qualitative evaluation, which is augmented by project monitoring data, and more importantly, by the consultants being able to access WHO and UNICEF quantitative reports on activities. The qualitative evaluation, conducted by an external team of consultants, included document review, review of available monitoring data at CGPP and also from implementing partners, as well as field visits to conduct interviews and focus groups.

A complete evaluation report was prepared and submitted to the CGPP. This document will be invaluable to CGPP, particularly the South Sudan team, in making future plans and decisions. The key findings and recommendations are summarized below.

Objective 1: Build effective partnerships between PVOs, NGOs, and international, national and regional agencies involved in polio

CORE Group Polio Project has worked in South Sudan since 2010. In FY17, the Bill and Melinda Gates Foundation funded community based surveillance in 34 counties in three states; UNICEF funded social mobilization activities through community mobilizers and USAID funds have been used since 2014 to conduct independent campaign monitoring in the entire country.

During the initial phase, the CGPP work along the border with Uganda was carried out by American Refugee Committee, AMREF and World Vision. The shift to the three insecure states in the northeast necessitated finding local NGO partners able to function there. At endline, the South Sudan Secretariat worked through three local NGOs - Bio Aid, Universal Network for Empowerment Agency (UNKEA) and Support for Peace and Educational Development Program (SPEDP) to conduct community-based AFP surveillance in three conflict-affected states and Kapoeta East County in Easter Equatoria State due to significant population movement. One of the initial local NGO partners, CAD, misappropriated BMGF and UNICEF project funds (and not USAID funds) in 2015 and was removed from the project, replaced by Bio-Aid.

CGPP South Sudan has built strong relationships with a broad range of partners and stakeholders. The Secretariat team works closely with the MoH, WHO, UNICEF, JSI and CDC-Afenet as a member of the national EPI TWG and is involved in ICC activities.

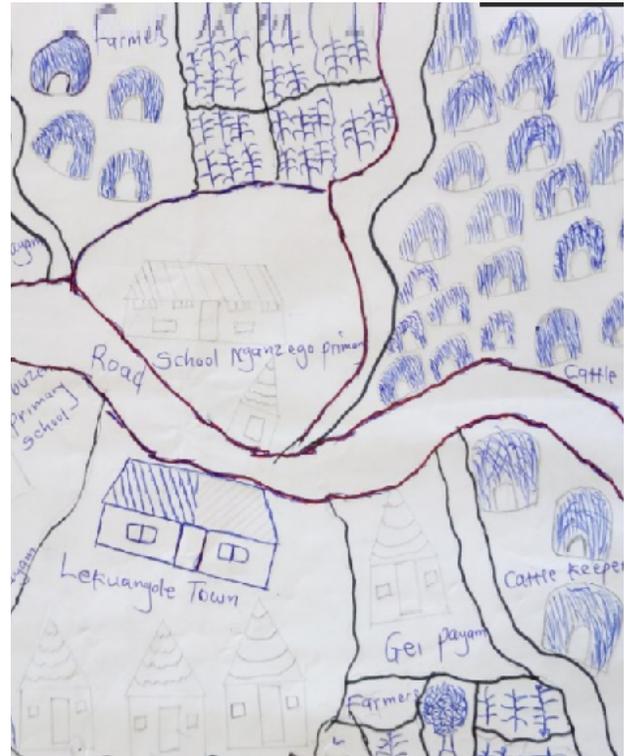
Objective 2: Support PVO/NGO involvement in national and regional planning and implementation of supplemental polio immunization

Independent Campaign Monitoring (ICM)

South Sudan is reliant on external support for routine immunization services. CGPP has been the leader in South Sudan for Independent Campaign Monitoring of SNIDs and NIDs in all states. The project uses semi-structured interview guides for Post Campaign Evaluation (PCE) developed by the MOH with the assistance of WHO. In each of the Payams, 4 clusters are chosen with selection based on the poor performing areas. In each cluster, ten households are selected randomly. Every child under five in the household is included. PCE is conducted 4 times a year and the findings shared with the government and WHO. Four accessible payams per county are selected (with the exception of Juba with 6 selected payams), and 4 accessible



Research team on the road to the airfield in South Sudan



Payam Assistant map showing Payams, Bomas, cattle camps, routing and important social centers

clusters per payam are chosen. A total of 10 households in each cluster are then selected. The first household is randomly selected, and each household after is systematically selected using a selection paradigm. When a household is selected, all eligible children present at the time of the survey are included. The monitor then checks for finger markings, indicating vaccination during the campaign.

“PCE is done to be able to inform the next vaccination campaign, to be able to plan, such that the children who have not been reached will be given the first priority during the next campaign.”

—County Supervisor, Kapoeta East

The PCE questionnaire not only documents coverage, but also collects information on possible AFP cases, and about pre-campaign social mobilization and communication components which are handled by UNICEF. The data is used by the MOH and WHO to take corrective measures, particularly when vaccinators did not cover all areas or collected children in a central location instead of going house-to-house. The project deploys central supervisors who train local data collectors, usually teachers who serve as independent monitors.

Specifically, the CGPP seeks to obtain reliable data on missed children to help guide mobilization and programming, assess the quality of NIDs/SNIDs (including coverage, awareness on SIAs, reasons for missed children and reasons for zero dose children), and to guide immediate mop-up campaigns for poorly covered areas (<10% missed children).

CGPP South Sudan conducted national independent campaign monitoring (ICM) for four polio campaigns, targeting approximately 2.6 million children under the age of five in FY17. The South Sudan team trained and deployed more than 550 data collectors who assessed the quality of the country’s campaigns.

“Using PCE data, the MOH follows up to hold those areas accountable that are not performing well. Sometimes the Vaccinators are told to go back and address the households with children not vaccinated.”

—County supervisor, Kapoeta East.

Cross-border Coordination

The cross-border efforts were initiated by WHO, but at a higher government level. The CGPP took over and focused on coordination at the equivalent of district level, sponsoring meetings and cross-visits to build relations between health officials for planning and communication. The meetings have created space for sharing information and for deciding on action points which are followed up at the next meeting to ensure implementation. The following excerpts from the minutes of cross border meetings show the type of issues, recommendations and agreements.

Example of Resolutions from Recent Cross-Border Meetings

Purpose	Issue	Resolution
South Sudan, Uganda and the Democratic Republic of Congo Cross Border Collaboration Meeting for Polio Eradication. Arua Uganda Dec 2016	<ul style="list-style-type: none"> Massive presence of Sudanese refugee children without or insufficiently vaccinated Koboko District data for cross border activities not segregated Breakdown/destruction/looting of the Cold Chain Insufficient documentation of foreign children taken by immunization services Prosecution of participants by border services 	<ul style="list-style-type: none"> South Sudan, Uganda and the DRC agreed to support continuous coordination among them through sharing of updates on cross-border surveillance activities, EPI activities Involve every district/sector bordering the 3 countries. Involvement of Custom officials and security officials to be part of such meetings. DRC and Uganda partners agreed to step up their routine immunization activities along border cross points to ensure that South Sudanese Refugees are immunized. The three countries agreed that each cross-border Health Committee should step up Resource Mobilization efforts so that joint cross border coordination meetings can be conducted at least twice in a year

Special Vaccination Posts

The CGPP has collaborated with the government to establish six SVPs on borders between states and 16 SVPs on international borders. In FY 16, the SVPs reached 54,120 children. The number of SVPs fluctuates as some close due to insecurity and new ones are opened. A total of 22 have been established; as of August 2017, only ten were operational.

Besides assuring that IDPs and refugees crossing from an area with poor coverage receive oral polio vaccine, these posts are also important for reaching the nomads, particularly those that cross back and forth into Kenya and Ethiopia. These nomadic groups often miss out on routine vaccination in one country or the other. The SVPS are conducted with the local health departments, and the CGPP gives a sub-grant to the NGO partners who recruit and train vaccinators. The idea is to eventually shift the SVPs completely to the government; in the meantime, the SVPs will be funded under the new phase of USAID support to the CGPP.

The CGPP staff in South Sudan explained that the SVPs currently only give the oral polio vaccine and there is no tracking. Even if the family has a child health card from South Sudan or a neighboring country, it is not marked, nor is the child marked in any way. However, children vaccinated during campaigns receive a finger mark.

“CGPP has introduced more vaccination posts including state borders and cross country where children are brought for vaccination instead of moving longer distances including places where WHO cannot reach.”

—WHO consultant

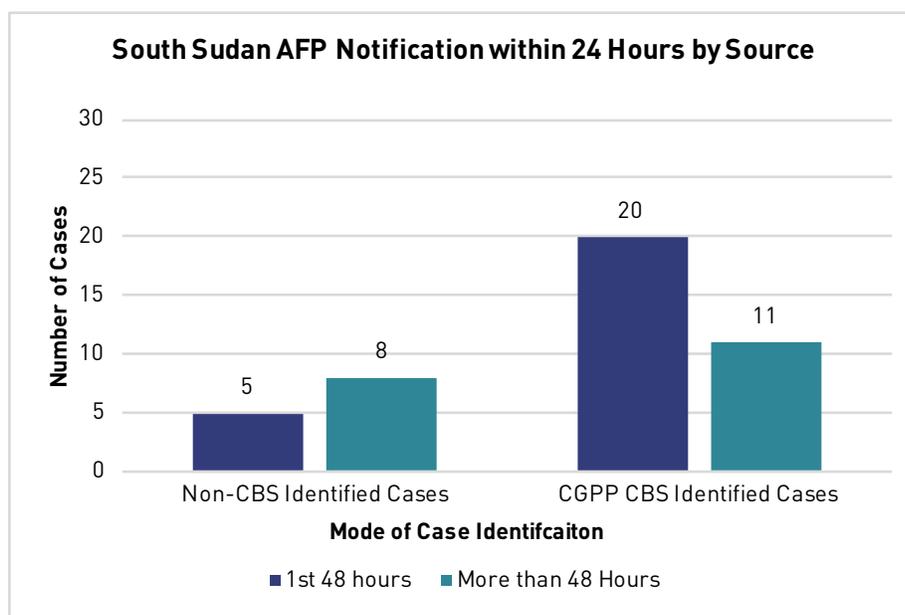
Objective 3: Support PVO/NGO efforts to strengthen AFP case detection and reporting

The CGPP has created a cadre called Payam Assistants (PA), supported by staff called County Supervisors. The PAs work with an expanded network of nearly 2,000 “key informants” which includes traditional healers and birth attendants, religious leaders, and community leaders. All have been trained to identify and report AFP cases to the PA, and thus, to CGPP and WHO. Where there is a WHO field officer, the CGPP transports him to investigate the case and collect samples, which are then sent to the lab in Juba. If there is no WHO field officer, the CGPP County Supervisor has been trained and authorized to collect the sample and send to the Juba lab, with WHO arranging the transport of the sample.

Each PA, supported by the County Supervisor, creates a map of their target area, indicating each and every household and the landmarks. With this map, it is easy to track home visits and to identify houses with suspected AFP cases for follow-up. The CBS has been very effective as shown in the graph below.

Analysis of WHO line list for 2016 and 2017 list indicated the following:

- A total of 78 AFP cases have been reported from January 2016 to June 2017 in the counties where the CGPP is operational. Of these 44 (56.4%) were through the CGPP CBS
- 38.2% of 34 AFP reported cases in 2016 were through CBS
- 70.5% of 44 AFP reported cases by June 2017 were through CBS



Source: WHO line list for 2016 and 2017

NPAFP rates for 2016 and 2017 were 3.93 and 3.6 respectively. Evaluation results reveal that the CGPP has increased community awareness on polio by providing necessary information in the community to counter beliefs related to paralysis. This effort has managed to close previous knowledge gaps and contributed to progress on AFP case reporting. Furthermore, there has been a shift in the households seeking traditional herbal medicine to seeking vaccination and medicines in a health facility.

“Before the (CGPP) project came, people did not know what polio was. They were not aware of vaccination. Whenever children had weakness in their legs or hands, they would take them to traditional healers. The traditional healers would apply herbs on the paralyzed parts (of) the legs or hands; this kind of treatment would relieve the sick children a bit but still paralysis would not disappear. When the project began its activities, people were not fully responding. However, as time went on, the Key Informants and respected leaders such as traditional healers, traditional birth attendants, women leaders, chiefs, and church leaders in the communities were mobilized and educated on polio disease, how the disease was transmitted, and how it could be prevented. The number of children who were referred to the facility increased, many children were vaccinated, (and) the AFP case detection rate increased. The turning point here was that the knowledge gap was closed so that people realized that different kinds of diseases were treated differently.”

—PA in Kapoeta East.

One of the WHO standards is to ensure AFP cases under 15 years of age with paralytic illness where polio is suspected should be reported immediately and investigated. Further analysis of the line list as shown in the graph above indicate the following: in 2017, of the 25 cases reported within 48 hours, 20 were through CBS compared to 5 of those through non-CBS system. The roll-out of CBS reduced the number of silent counties from 15 in 2014 to 3 in 2016 in spite of on-going conflict in the target area. Three areas remained silent due to security-related access issues.

The CBS has been effective in mobilizing the government to conduct mop up campaigns. It has also served to educate families about polio and the importance of vaccine for prevention.

There is some concern about segments of the population not being reached by CBS, particularly where they cannot be reached due to the wet season or distance. The local leaders interviewed among nomadic groups requested that the network of PAs and key informants be established among them or in the cattle camps, thus having a resource person available to them when they are on the move in search of pasture and water. Some of the PAs also voiced this idea.

“We recommend that there should be a separate PA and key informant for cattle camps to report cases because the cattle camps also accommodate people [from other payams].”

—Key informant in Kapoeta East.

During the grant period, CGPP’s CBS has played a strong role in increasing the AFP detection rate from 1.2 to 3.7. Due to insecurity and lack of infrastructure, the stool adequacy rate dropped from 82.7% at baseline to 66.0% at endline. However, strong gains have been recorded in reaching communities. The percentage of silent counties at baseline was 56% and has dropped to 11.8% at endline. The well-trained network of CBS frontline volunteers has allowed for this success.

Objective 4: Support Timely Documentation and Use of Information

CGPP South Sudan’s PCE initiative provides strong monitoring to ensure campaign quality and vital information for the planning of future campaigns and vaccination activities. PCE is done by the CGPP during and following campaigns. Data is collected by trained enumerators, analyzed, and shared with appropriate stakeholders including the MOH and WHO. This information influences the decisions that are made for successive rounds and ensure that pockets of missed children are identified, and can be vaccinated immediately. Data is constantly used to improve successive rounds and ensure that every child is vaccinated.

CGPP South Sudan also utilizes data for decision making through its robust community based surveillance system (operational in 3 counties with funds from the Bill and Melinda Gates Foundation). This intervention relies on strong supervision, reporting, and documentation using checklists, and data collection tools. Suspected cases are effectively identified and communicated for investigation. Supervision checklists ensure that CIs are effectively seeking out cases and monitoring their communities.

Evaluation Findings about Project Implementation & Future Programming

The CGPP in South Sudan was able to quickly shift to the new target areas and set up operations through the new local NGO partners. Staff positions, including hiring 209 *Payam* Assistants, were filled as quickly as the security situation allowed. The following table shows the staffing structure and numbers.

Distribution of field level team

NGO Partners	# of counties	County Supervisors		Key Informants		Payam Assistants	
		Female	Males	Female	Males	Females	Males
SPEDP	10	0	11	576	1208	3	76
BIO AID	16	1	14	296	585	1	81
UNKEA	7	0	7	115	335	0	48
3390	33	33		3115		209	

Source: M&E records

South Sudan CGPP is well-respected by the national level stakeholders including MOH, WHO, and UNICEF. The Secretariat has formal agreements with these partners on roles and participates in the weekly coordination meetings of the EPI Technical Working Group. Data collected is freely shared and the CGPP frequently cost-shares activities and materials. Coordination is also strong at the county level.

The qualitative field work in South Sudan focused on assessing project implementation and did not include collecting perceptions from parents and other community members related to immunizing their children or interacting with the CGPP staff, as was done in the other countries. However, the focus groups and interviews did reveal some findings relative to planning the next phase of CGPP.

The *Payam* Assistants (PA) are motivated by the overall goal of the project of eliminating polio from South Sudan. This is key to their commitment and the effort they are expending in AFP surveillance and promoting vaccination. Often, it is easy for programs to orient field staff and volunteers to carry out a specific role or task without explaining the purpose of that action in terms of achieving a higher goal.

“We are praying hard to eradicate polio out of South Sudan within the year 2018. If we do not report any case [of AFP] within six months, that means we are not working...”

—PA RENK

Having gotten the PAs to buy into the bigger goal is commendable and is something that not only the South Sudan program should continue in training new PAs, but also would be beneficial for motivating volunteers and field staff in the other CGPP countries.

The staffing structure, down to the community key informants, was sufficient to carry out the activities in a timely manner, however, recent changes in political boundaries have necessitated hiring more staff.

Specific Conclusions and Recommendations

The CGPP is filling a major gap in polio eradication in South Sudan by covering the areas inaccessible to other stakeholders. It has introduced the proven CBS, SIA, and PCE strategies from other CGPP countries to advance the eradication efforts in South Sudan. Please see the detailed report of the assessment for the many useful and detailed recommendations. Some over-arching recommendations from that evaluation are:

- Closer coordination is needed with other stakeholders, between the CGPP and partners and across borders, including timely sharing of PCE reports and of WHO line list, harmonization of social mobilization, and resolving SIA issues.
- Improve data sharing with WHO, UNICEF and the MOH for planning purposes, even before final reports are prepared.

Evaluators supplied ICM-specific recommendations. This is a partial list:

- Develop analytical reports to capture methodology, challenges, lessons learned and future plans.
- Deploy independent monitors once an immunization campaign begins to verify households with immunized children.
- Expand the current three-day timeframe to reach additional locations due to vast expanses.
- Ensure house-to-house vaccination as opposed to reliance of vaccinating groups of children outside of the home.
- Strengthen support supervision during implementation of the NIDs.
- Focus special attention on cattle camps during social mobilization, vaccination, and during post evaluation.

Improve advocacy and communication between the CGPP, MOH, UNICEF and WHO to address issues such as insufficient quantities of vaccines and poor coverage and guarantee feedback to field level after ICM.

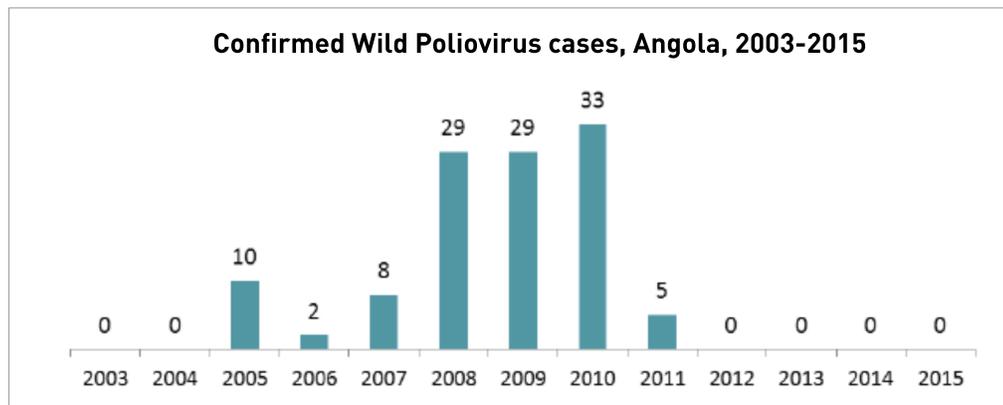


ANGOLA

Main Findings

- Angola received WHO certification in December 2015 after five years without a case of WPV.
- Angola joined the rolls of the CGPP graduating countries in 2016; by then, the project had reached more than nine million children under 15 through a network of about 2,700 community volunteers.
- The country introduced the Community Based Surveillance system that has been adopted by other project countries, including South Sudan.
- Social mobilizers contributed to yellow fever vaccination of more than 25 million Angolans in response to the outbreak and conducted a malaria program in 2016.

This evaluation details significant contributions and the lasting impact of CGPP Angola. Unlike other country sections included in this final global evaluation, the Angola section is a stand-alone report prepared by Domus Custodius - Tchikos Consultoria Empresarial, an Angolan consulting agency, from August 2017 to November 2017. Objectives of this study attempted to capture the program’s effectiveness, sustainability, relevance and governance and coordination.



Overview

Program Overview

Despite significant oil and diamond resources, the government has historically been reluctant to invest in the public health sector. The poor state of the health infrastructure has further been eroded by the departure of most international NGOs and weak oil prices. In 1999, there were approximately 1,000 cases of WPV. The CGPP started operations in Angola in 2000, and by 2001 there were zero new cases of polio reported. The CGPP did not assume sole credit for this success. Instead, this remarkable accomplishment was due to coordination, capacity building, and microplanning with existing systems on the ground in Angola. The CGPP’s involvement in each category and leadership in fighting polio was unmatched, however, and the disappearance of polio was one of the greatest public health achievements in Angola.

Angola celebrated polio free status during the 2016 project year with its graduation from the CGPP. After five years without a case of wild polio virus, Angola received WHO certification in December 2015. While Angola has not reported a case of wild polio virus (WPV) since 2011, other public health challenges including yellow fever and malaria remain. During the close of the program, project resources, lessons learned, and capacity were transitioned to other health systems and programs in Angola.

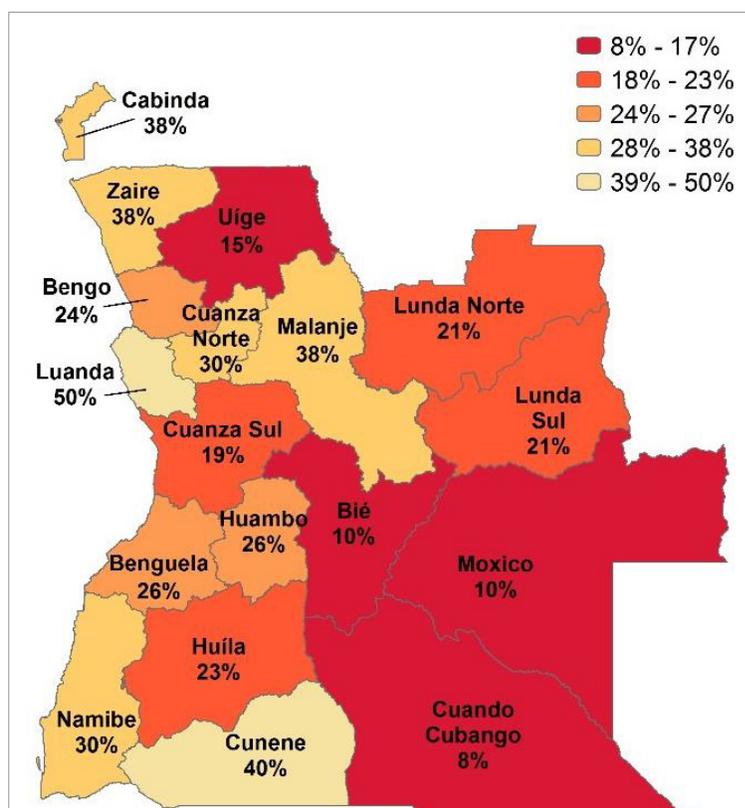
No cases of wild polio virus or circulating vaccine derived polio virus were recorded during the project period. However, during 2016, Angola wrestled with a massive yellow fever outbreak that resulted in 400 deaths. In response, WHO worked with the MOH, UNICEF, CGPP and other partners to conduct emergency vaccination campaigns to cover 25 million Angolans. The CGPP played an important role in supporting the national response to the yellow fever outbreak including planning, implementation and social mobilization by community volunteers who conducted home visits and organized meetings with community leaders to promote vaccination.

Key Activities

In 2016, CGPP Angola worked in 41 high-risk districts in 12 of the 18 provinces reaching 9,422,824 children under the age of fifteen. CGPP Angola mobilized community volunteers, supported the implementation of high-quality vaccination campaigns and identified cases of acute flaccid paralysis (AFP). Across the globe, vaccination is a proven strategy to reduce child mortality. During the implementation of the project, several activities related to polio eradication and prevention of diseases such as diphtheria, pertussis and neonatal tetanus were carried out at the national level through supporting immunization campaigns for children under 5 years and providing prenatal consultations to pregnant women.

The development of the community based surveillance (CBS) methodology in Angola is, perhaps, one of the most important contributions of CGPP Angola. This methodology ensures that all suspected cases are identified and that no AFP cases are missed. This approach has been successfully replicated in the other CGPP country programs, specifically South Sudan.

Social mobilization for Supplemental Immunization Activities (SIAs) using Community Health Workers (CHWs) and Independent Campaign Monitoring (ICM) using Angolan military personnel were also key contributions from Angola. Efforts based on the work of Community Health Workers are now visible in community programs for malaria, deworming, HIV, nutrition and oral health. More specifically, during 2016 the CGPP conducted a separate malaria program modeled after the community mobilization and surveillance techniques the CGPP used in the polio program.



Evaluation Methodology

The study used meta-analytic and qualitative methods through in-depth interviews with project activists, community leaders, MOH representatives at all levels, partner organizations and the former CGPP Angola Secretariat directors.

Data collection

The meta-analysis is based on reports from institutions and the CGPP monitoring reports. Participants for the qualitative study included project beneficiaries, representatives of the implementing organizations, coordinators, funders, and governmental and non-governmental partners. Criteria for study inclusion were project activists who worked with the CGPP for at least two years and had direct contact with the community and community leaders (such as coordinators, sobas or religious authorities) who lived in the project areas for at least four years.

Six interviewers collected data in the three provinces simultaneously. The interviewers were trained to review the fundamental aspects of the project and to review the methodological aspects of the study. Training included Identification of indicators and research variables; map design for selection of respondents; ethics of scientific research; data collection techniques in the field; exercise of interview simulations; and development of quality data collection studies.

Prior to data collection, the study design, data collection instruments and methodology was presented to community leaders. Scripts were pretested through interviews to review the questionnaire and gather information on the following points: easy or difficult statement, comprehension, confidence in the answers, level of discomfort and social character. Sound recorders were also pre-tested.

Target group	Locality	Research Technique	Amount
Project Activists	Negage, Uige, Ganda, Baia farta, Sambizanga e Viana	In-depth interview	12
Community Leaders	Negage, Uige, Ganda, Baia farta, Sambizanga e Viana	In-depth interview	6
Head of health unit	Negage, Uige, Ganda, Baia farta, Sambizanga e Viana	In-depth interview	6
Representative of the municipal health office	Negage, Uige, Ganda, Baia farta, Sambizanga e Viana	In-depth interview	6
Provincial Health Directorate	Uige, Benguela e Luanda	In-depth interview	6
Ministry of Health	NDPH	In-depth interview	1
Partner organizations and founder	USAID and MENTOR	In-depth interview	2
Directorate of the CGPP	Luanda	In-depth interview	3

Data Collation, Analysis and Report Writing

Information for this study was collected through transcriptions and sound capture device. All recordings of the focus groups were processed in MS Word.

Data transcriptions were synthesized by the Papyrus technique, which consists of grouping the information into papers by topic; all moderators were included in the analysis session. The reassembled information was input to the MS-Excel program. The MS-Excel files provided material for the summary table and is the basis for this report.

Effective Partnerships

CGPP Angola activities were implemented with Africare, CARE International, Catholic Relief Services (two local NGOs Caritas and Assoder), Salvation Army, World Services Office, Save the Children and World Vision. CGPP Angola was funded by USAID and the Bill and Melinda Gates Foundation. CGPP worked in 41 high-risk districts in 12 of 18 provinces in close partnership with the municipal and provincial directorates of the Ministry of Health. The CGPP assisted the MOH to develop the vaccination strategy, the annual PAV Plus plan, and measles and tetanus plans. The CGPP leadership participated in ICC meetings at the national level and bi-monthly provincial and municipal planning meetings with partners, including WHO, UNICEF, CDC and Rotary.

The project was designed to reflect the needs of the community, according to sobas (traditional community officials) who reported high community participation during project implementation. The heads of the health units stated that before the implementation of the project, the community depended on traditional healers instead of taking children to the health units.

“But after we had this meeting with this team that came to us, together we worked to raise awareness in the community in general, only in this way there was a good adhesion and thank God, until the date I left everyone took the children to vaccination. Soon there were no children without being vaccinated.”

—Head of the Health Office of Luquembo, Belas



Community health workers gather at the meeting location in Sambizanga neighborhood of Luanda, Angola in 2015

“... the people come directly from the bush, the person was not interested in going to the hospital. When we had a disease situation, they were linked to the home treatment, kimbandarismo ... then with the CORE Group, I was encouraged to talk to the family that disease is not what we think (and) the hospital is not an impediment ... ”

—Local Authority from Belas

“So after we received the CORE group, we started to have more contact with the community and we are closer to the community with meetings with community leaders and through these meetings we managed to meet the people.”

—Head of the Luquembo-Belas Health Post

Community Mobilization

A network of reported 2,710 community volunteers, 43 supervisors and 4 project coordinators was tasked with increasing routine immunization through the use of vaccination registries. The CHWs conducted home visits, clean-up campaigns and community outreach activities, and mobilized civil society involvement in community-based vaccination and surveillance activities involving churches, traditional leaders, young people, therapists and traditional midwives.

Volunteers interviewed for this report stated that they monitored about 100 children from existing households in their communities by supporting vaccination and evacuation of urgent cases to health units. The heads of these health units in Uíge, Benguela and Luanda worked directly with the CGPP staff and served as a cold chain for vaccine conservation. The CGPP staff supported the training of technicians at these health facilities, as well as university students and middle health technicians in the province. CGPP Angola contributed to vaccination efforts to improve coverage by reinforcing RMS teams to cover unvaccinated sites and support efforts at health fairs and during the celebration of national and international holidays of the child.

According to the Provincial Supervisor of the Extended Program of Vaccination in Benguela, several civil society organizations contributed to the massive mobilization of vaccination campaigns, including the UTCH, the female arm of political parties such as JMPLA, OMA, LIMA, JURA, and religious denominations at the provincial level.

“We were able to mobilize NGOs, churches and everyone else so that they could participate in all vaccination activities.”

—Ana Pinto, CGPP Angola Secretariat Director

The CGPP provided training and equipment to volunteers. During the initial three-day training, the CGPP instructed volunteers on polio eradication and vaccine preventable diseases and were tested on their abilities to share this information during community talks. Special training seminars were held periodically. Volunteers were equipped with vests, family registration notebooks, thermometers, patient referral leaflets, support manuals, pencils, and other materials. The CGPP supported the transportation of vaccines to health units as well.

The Angola Secretariat provided training to volunteers in interpersonal communication. Volunteers would gather groups of residents to discuss a community health related topic or provide a lecture in public places (churches, informal markets and health units), or theaters. Meetings with household heads were often held at the soba's house.

“(...) we had a database book that each volunteer had the family number followed, the number of lectures because they had to give lectures, they had the manuals to give lectures from house to house or else in churches, schools, in health posts, especially where there was a group of consultations, giving the lectures, illustrating the images, this is practically what we did.”

—CGPP Coordinator at Uíge

The community was keenly aware and highly appreciative of the volunteer efforts to improve the health of children. Community leaders served as loyal spokespersons for the project and worked in conjunction with municipal administrators. Municipal health directors attributed the project’s success to the strategy of recruiting volunteers from within their communities (as opposed to mobile vaccinators who move from one municipality to the next.)

AFP Surveillance

Angola last recorded a case of WPV in the province of Uíge in 2011. The largest polio outbreak in Angola occurred in 1999, when 1,119 cases were reported mostly in the provinces of Luanda and Benguela. In the same year, the Polio Surveillance Program was initiated at national level and in 2004 the immunization system was reinforced with the installation of 460 fixed vaccination posts and the creation of mobile teams in priority municipalities.

Surveillance Supervisors in the provinces of Uíge and Benguela credited the organized efforts of well-trained volunteers to detect numerous cases of polio and malaria. During IEC activities, volunteers made use of illustrated materials provided in the local language to educate communities on the signs and symptoms of AFP. The IEC and BCC campaigns contributed to communities’ overall use of services in health units and awareness of polio.

“They did not just support us in terms of matters, (but) in moral terms as well. An above average team had formed that knew how to act with all sensitivities, especially since in these teams many of them are health technicians. So it was a great value for us that we work in this very sensitive area that is working with children.”

—Provincial Supervisor of EIP, Benguela.

The KAP polio study carried out by the CORE group in 2012 reports that 37.8% of the respondents stated that they participated in some of the activities carried out by the volunteers in the community. The respondents from Cunene and Namibe reported highest participation; Benguela reported the least participation.

Impact of the project at international and national level

The work of CGPP Angola was highlighted in several international and national news publications, including the July 2017 Journal of Infectious Disease supplement. High-level officials were often quoted about the polio eradication work in Angola:

“These investments demonstrate the importance of building strong primary health care for every child in the country,” said Koenrad Vanormelingen, the UNICEF Representative for Angola in August 2012. “We have a duty to protect and ensure that all children are born and grow up in a healthy, polio-free environment, which means we cannot stop until all children are completely vaccinated.”

UNICEF published “A year without polio: Angola celebrates victory with a vision to eradicate” in August 2012. “This achievement reflects the leadership and commitment of the government, which contributes about 89 percent of the operational costs of polio campaigns, and this also means the impact of our investment in strengthening access to primary health care services,” said Evelize Fresta, deputy minister of health.

Transition and Sustainability

While the CGPP program officially ended in 2016, certain actions have demonstrated the project’s sustainability. One example includes the use of volunteers from malaria programs in the province of Benguela who continue to search for AFP cases and advocate for ongoing vaccination of children under five years. According to the head of the epidemiological surveillance department of Uíge, several community agents of the CGPP project are currently part of the ADECOS (Economic and Health Development Agents), a government-funded project through the Social Support Fund (FAAS). In Luanda, some volunteers provide services to the PSI in the mosquito net distribution program in the community, others with the Pastoral of Children.

It also appeared that the program failed to ensure sustainability of the project in other provinces of the country. The project did not create conditions for closure, for example, in the provinces of Benguela, Uíge and Luanda, with the number of volunteers continuing to decline.

It was during the interview that the CORE group’s leadership feels overwhelming to respond to complaints and requests from the community.

“Look, I’m going to be very sincere, I’m very sad because I did not finish this project the way we idealized it because we had the perspective that we still had at least another 5 or 6 months with the project to make the transfer of the agents effectively for the ministry. But we had to finish the project so much running, so we did not have guarantee that in all the municipalities in which we work these volunteers are effectively working with the ministry of health.

—CGPP National Coordinator.

He continued to express his dissatisfaction with the representatives of the partners at national and international level.

“No, I think it was not relationship problems, we always got along very well, but I think it was a strategy problem, it was strategy problems and the project itself, I’m going to be honest that discontent is not just mine, it’s the Ministry of Health and the WHO, because we started to make a transition process of the polio assets. We had with WHO a listing of everything from people with training, volunteers, supervisors, coordinators, all of us who had started a stage with the ministry of health and WHO that had a process of transfer of polio assets to the Ministry of Health and this is what WHO is doing. The WHO has recently dismissed some of the activities it has done with polio money, plus this is gradually being phased in by the health workers who are being transferred to the ministry.”

The Municipal Director of Health of Benguela tried to organize a project sustainability plan, but it was not successful.

“We asked them to make us available, because they informed us that the contract was already at the end, and we asked them to give us one of the vehicles so we could continue. And who even at the time suggested, under the pass, that it would be of more value if we keep the CRS, but they are orientations already at the level of the own, of their directions that not at the level of Benguela, nor is even at the local level or national. So we did not succeed, so there were these orientations of our expert so that we can dialogue and continue with the experience they have of the staff, but this did not work. There was no will from above. At that moment we do not have, we are not working with any of the NGOs, taking away the IHO, which also does not tell us much. ”

—Director of the Benguela Municipal Health Bureau

Conclusion

From 2001 to 2016, CGPP Angola made notable and far-reaching contributions to polio eradication. The CGPP was central to the exit of polio from Angola. The strong networks of community mobilizers and surveillance served as the backbone. Cooperation and partnership with key polio eradication players, including the MOH and WHO, were essential to the success of the CGPP. In 2016, CGPP Angola worked in 41 high-risk districts in 12 of the 18 provinces reaching 9,422,824 children under the age of fifteen. CGPP-Angola mobilized community volunteers, supported the implementation of high-quality vaccination campaigns and identified cases of acute flaccid paralysis (AFP).

The development of the community based surveillance (CBS) methodology in Angola is, perhaps, one of the most important contributions of CGPP Angola. This methodology ensures that all suspected cases are identified and that no AFP cases are missed and has been successfully applied to other CGPP country programs, specifically South Sudan.

The importance of a well-planned ramp down and program closeout were evident from the interviews in Angola. Although CGPP Angola developed a transition plan, the transition did not go as smoothly as hoped. The lessons learned from Angola should be applied to the transition plans in the other CGPP countries. Future program closeouts should focus on detailed planning, partnership, and execution to avoid the difficulties experienced in Angola.

“The project was useful because we went from problem to problem. Our children were targets of AFP, but through this program that worked here with CORE Group, we are free and we can sing the victory hymn as long as no other diseases arise.”

—Epidemiological Surveillance-Uíge

“When polio existed, that was really demanding because grazing cattle is still easier, but grazing the people is still very difficult. He knows the good is for him, but still sometimes the vaccinator, volunteer is coming, he is turning his back.”

—António Cambele, Local Authority -Benguela.

OVERALL PROJECT CONCLUSIONS AND RECOMMENDATIONS

With the last case of WPV reported in India in early 2011, the CGPP entered the 2012-2017 phase of funding thinking that the world might be free of polio by 2018. Subsequent outbreaks in the Horn of Africa and Ni-geria reinforced the need to continue intensive efforts. During this phase in India, Ethiopia, South Sudan, Kenya, Somalia and Nigeria, the CGPP has worked closely with the national governments and interagency co-ordinating or technical bodies to address the leading barriers to eradication of polio. These include porous borders where mobile under-vaccinated populations such as nomads and IDPs cross between countries, civil unrest limiting access to vaccinations and AFP surveillance, and some lingering fear or resistance about polio vaccination.

According to the project surveys and monitoring data, triangulated by qualitative research with the target population and stakeholders, the most successful interventions have been the social mobilization for both SIAs and routine immunization, and the community-based AFP case detection. Stakeholders express appreciation that, through the INGO and NGO partners, the CGPP has been able to successfully carry out these efforts in the most challenging areas of each country. Due to the fact that national governments have few staff in insecure or remote border areas and high staff turnover, and that UN agency personnel are not allowed to travel there, only the CGPP has been able to reach into these areas and increase immunization coverage and AFP case detection.

As a whole, the CGPP has achieved the expected results for Objectives 1, 5, and 6 (effective partnerships, timely documentation and certification activities) through active participation in ICC, other national and regional forums, and by sharing data through multiple channels to improve immunization coverage and AFP surveillance. The CGPP is participating in transition planning in all target countries. The data source for the indicators for these three objectives all comes from self-reports of the Secretariats.

For efforts to strengthen immunization systems under Objective 2, comparison of baseline survey data and final survey results show routine immunization coverage has increased significantly since the baseline and is now equal to or better than the national averages. The fact that both polio and routine immunization in the CGPP target areas exceeds national estimates or averages is evidence for the CGPP's positive contribution. The CGPP is given credit for this by national polio eradication partners.

The indicators for Objective 3 on SIAs cannot be measured by the survey and, in some of the countries, this data is only available to the government. It seems baseline values were not collected in several of the countries, making it impossible to judge achievements. More than 90% of children in 4 of the 5 countries have been reached by polio campaigns, with 89% reached in the fifth country but this is not a project indicator.

Objective 4 on AFP surveillance is measured by project monitoring data, or data from other leading agencies such as WHO. Five of the countries achieved the indicator on stool adequacy according to WHO criteria, with an average of 90%; South Sudan was able to achieve this level or above in 2 of the 4 states.

The social mobilization component has demonstrated the most influence on the high coverage rates, particularly, the direct contact mobilizers have had with households, including tracking of all pregnant women and newborns. The engagement of local leaders and religious leaders has also been helpful in some contexts. This pertinent finding comes from the qualitative component of the evaluation.

Likewise, a key finding from the qualitative research showed that involving other community members including traditional birth attendants and traditional healers in reporting suspected AFP has increased case detection, particularly in Nigeria and South Sudan.

The programs that were initiated during this phase have successfully adapted the overall strategy and have launched quickly for rapid impact. The South Sudan program is especially notable for its flexibility, accomplishments, and the commitment of all staff down to the grassroots level. Nigeria CGPP similarly has achieved a great deal in a very complex environment, earning credibility with other stakeholders in the Global Polio Eradication Initiative.

The cross-border collaboration between Ethiopia, Somalia, Kenya and South Sudan which links district level health officials across borders for planning and problem-solving has been more effective than previous WHO efforts at national level. The concrete outputs of these meetings and follow-up on plans is commendable. The special vaccination posts at borders have been very useful for reaching nomadic populations and displaced populations, including refugees who are fleeing conflict zones.

Measuring impact of the project outcomes and outputs at the project-wide level is impeded by lack of indicators on which every country consistently reports and/or includes in the survey reports. Compilation of many survey results across countries is not possible due to different sampling methods, different analysis and varying report content. While monitoring systems in all counties seem to be capturing similar data, it is not all reported or not reported in the same format.

In summary, the project strategy and activities are effective in achieving the results for which indicator data is available. Anecdotal evidence and the qualitative data indicate that the project is most likely achieving increased OPV coverage and AFP surveillance, however quantitative data is not available across all countries to assess the level of achievement.



A frontline worker in India marks the door after vaccinating children inside the house during a polio immunization campaign

ANNEX A. INDICATOR TRACKING TABLE

CGPP Indicators	Data	Ethiopia	India	Kenya	Nigeria	Somalia	South Sudan
Obj 1. Build effective partnerships between PVOs, NGOs and international, national and regional agencies involved in polio							
IR. 1.1 Enhanced collaboration between CORE PVO members, MOH, spearheading partners, and other actors in polio eradication							
# of CORE PVO members participating in CGPP	5 Yr. Total	5 PVO, 5 NGOs	3 PVO, 10 NGOs	5 PVO	3 PVO, 7 NGOs	1 PVO, 1 NGO	5 PVOs, 6 NGOs
# of ICC and ICC committee meetings attended by CGPP	5 Yr. Total	19	N/A	X	X	4	15
# of Regional and International forums attended by CGPP	5 Yr. Total	20	15	5	11	4	17
Obj 2. Support PVO/NGO efforts to strengthen national and regional immunization systems to achieve polio eradication							
IR 2.1: Increased Number of Children, under-five years of age fully protected by Routine Child Immunizations							
% of children 12 to 23 months with OPV3	Baseline	85.5%	82.6%	57.0%	47.2%	X	37.0%
	Final	73.5%	90.2%	94.0%	62.3%	21.2%	X
% of zero dose children (never vaccinated)	Baseline	17.4%	1.5%	5%	45.1%	X	9% MTE
	Final	6.1%	0%	3%	1.4%	3.4%	X
% of children 1 year and older with 7 or more doses of OPV	Baseline	37.7%MTE	90%	X	66.3%	X	85%*
	Final	17.7%	85%	58.0%	92.6%	X	X
% of children under one with OPV birth dose	Baseline	52.0%	64.2%	64.0%	54.9%	X	62%
	Final	54.2%	78.9%	97.4%	98.6%	95.3%	X
% of children 12 to 23 months fully immunized	Baseline	24.7%	73.4%	57.0%	33.0%	X	29%
	Final	43.6%	77.5%	61.3%	57.0%	0.82%	X
Obj 3. Support PVO/NGO involvement in national and regional planning and implementation of supplemental polio immunizations							
1R3.1: Increased OPV coverage among children less than one year of age							
% of children under 5 missed in each SIA	Baseline	X	X	5%	4.5%	X	9.8%
	Final	X	7.8%	19.2%	1.5%	5.2%	13.6%
% of children with no doses of OPV	Baseline	17.4%	X	5%	4.1%	X	5.8%
	Final	6.1%	0%	3.5%	1.6%	3.5%	10.2%
% of houses missed in each SIA	Baseline	X	5.9%	5%	4.5%	X	7.7%
	Final	X	4.4%	24.8%	1.5%	8.7%	8.3%

CGPP Indicators	Data	Ethiopia	India	Kenya	Nigeria	Somalia	South Sudan
Obj 4. Support PVO/NGO efforts to strengthen AFP case detection and reporting							
IR4.1: Increased number of AFP cases identified within 14 days of onset with 2 stool samples 24 hours apart							
Non-Polio AFP rate of at least 2 per 100,000 in children under 15	Baseline	2.2	23.7	3	13.6	>2	1.2
	Final	2.8	12.3	2.5	19.6	4	3.7
% NPAFP cases with 2 stool samples within 14 days of onset of AFP	Baseline	87%	X	83%	98%	81%	82.7%
	Final	92%	86.8%	87%	98%	92%	66.0%
# of silent areas in project target areas	Baseline	x	X	X	7	X	56%
	Final	2 zones	0	6 sub-counties	2	1 district	11.8%
Obj 5. Support timely documentation and use of information to continuously improve the quality of polio eradication							
IR 5.1: Increased use of data to enhance immunization coverage and surveillance							
Percentage of annual SIAs in which CGPP conducts Independent M&E		X	N/A	0	0	0	100%
# of Journal Articles published by CGPP	5 Yr. Total	9 published 6 pending	3	2	8	0	1 under review, 1 published
# of presentations CGPP members make at conferences and regional and international forums	5 Yr. Total	24	x	12	11	4	5
Obj6. Support PVO/NGO participation in either a national and/or regional certification activities							
IR 6.1: Formal engagement of CGPP secretariats and senior staff in support of certification							
# of Independent Surveillance Reviews with CGPP participation	5 Yr. Total	2	X	4	2	4	2
CGPP involvement in development of end game and legacy strategy		Yes	Yes	Yes	Yes	Yes	Yes
# of CGPP meetings with Independent Monitoring Board	5 Yr. Total	X	X	x	4	0	X

*South Sudan: Question reads, received 4 or more does of OPV (not 7)

** Somalia did not collect baseline data when the project expanded to the border regions of Somalia from Kenya. This survey data is the first available.

** Kenya baseline was collected at the project midterm, as the project was initiated late.

** Ethiopia does not collected data on SIAs. Discussions are proceeding about how they will need to make linkages with the government in order to have access to this data going forward in the new grant.

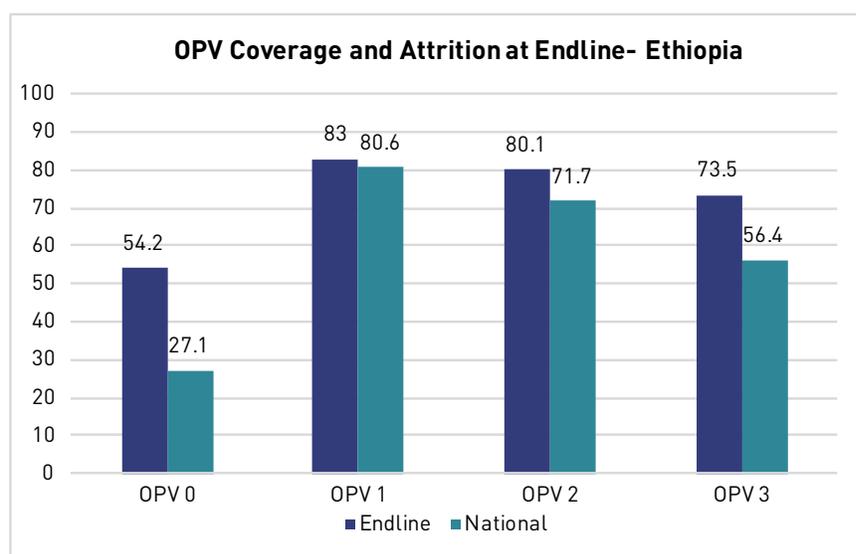
** South Sudan does not do RI work and therefore did not submit those indicators. A new baseline will be done in the new grant.

**Baseline data (2012) was collected for India and Ethiopia. For the other countries, "baseline" data was collected at the project midterm (2015)

** Ethiopia baseline data collated from 2012 baseline report

ANNEX B. ETHIOPIA COUNTRY SECTION

Routine Immunization Coverage in Ethiopia from Baseline to Endline Surveys (Immunization Card)		
Vaccine	Baseline 2012	Endline 2017
OPV0	17.8%	23.8%
OPV1	41.1%	49.6%
OPV2	-	47.8%
OPV3	35.2%	45.8%
Penta1	39.8%	49.7%
Penta2	-	48.2%
Penta3	37.2%	46.1%
BCG	39.5%	44.5%
Measles	30.3%	40.8%
Fully Immunized	24.7%	36.2%

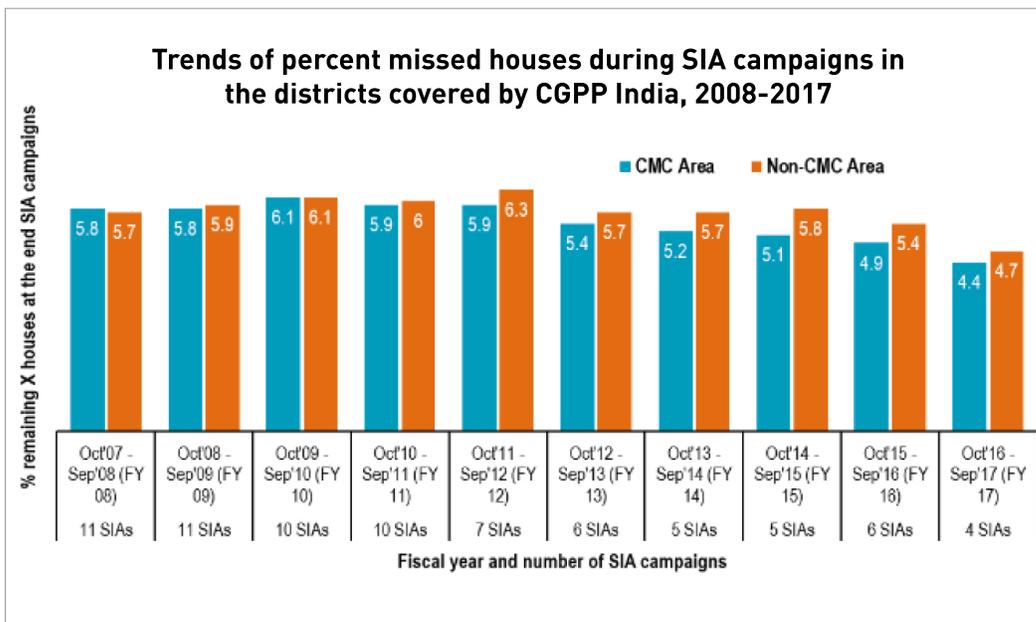
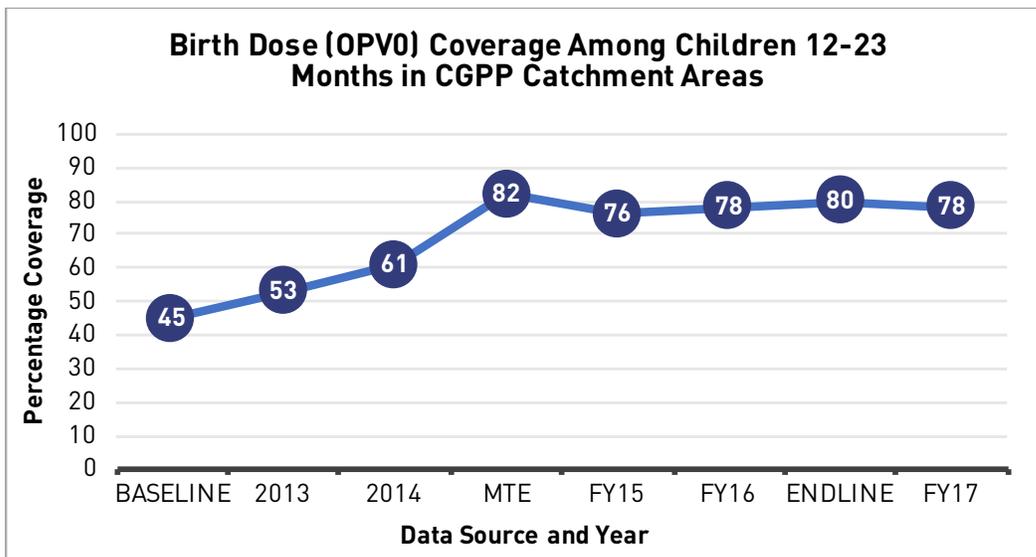


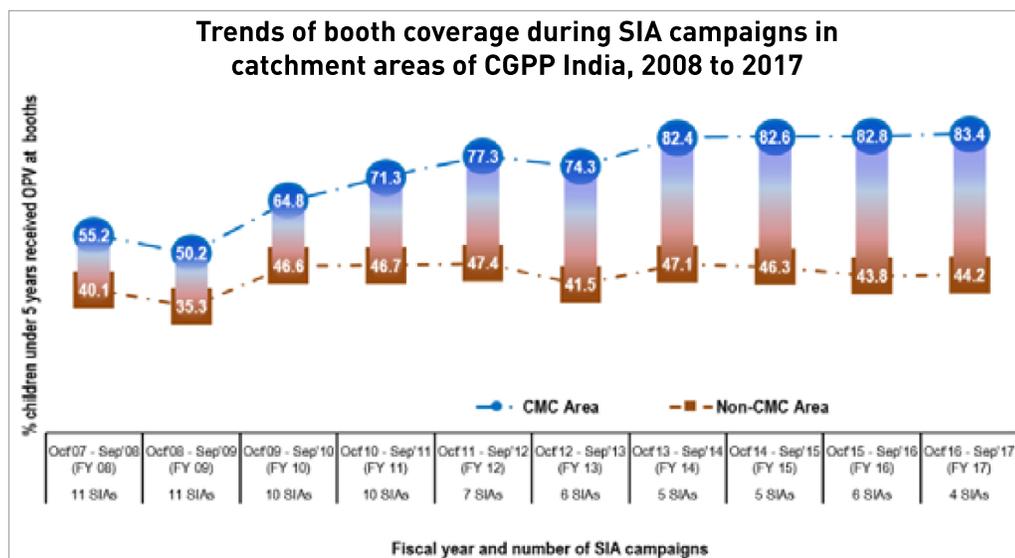
Baseline Vaccination coverage by data source and vaccine, CORE Group Polio Project Areas, Ethiopia

Vaccine	Not vaccinated		Card		History		Card + History		EDHS 2013
	n	%	n	%	n	%	n	%	
BCG	44	14.5	120	39.5	140	46.0	260	85.5	N/A
OPV0	146	48	54	17.8	104	34.2	158	52.0	20
OPV1	23	7.6	125	41.1	156	51.3	281	92.4	82
OPV3	44	14.5	107	35.2	153	50.3	260	61.1	44
Penta 1	30	9.9	121	39.8	153	50.3	274	90.1	64
Penta 3	53	17.4	113	37.2	138	45.4	251	82.6	37
Measles	67	22.0	92	30.3	145	47.7	237	78.0	56

** The baseline survey does not include and Penta2 and OPV2

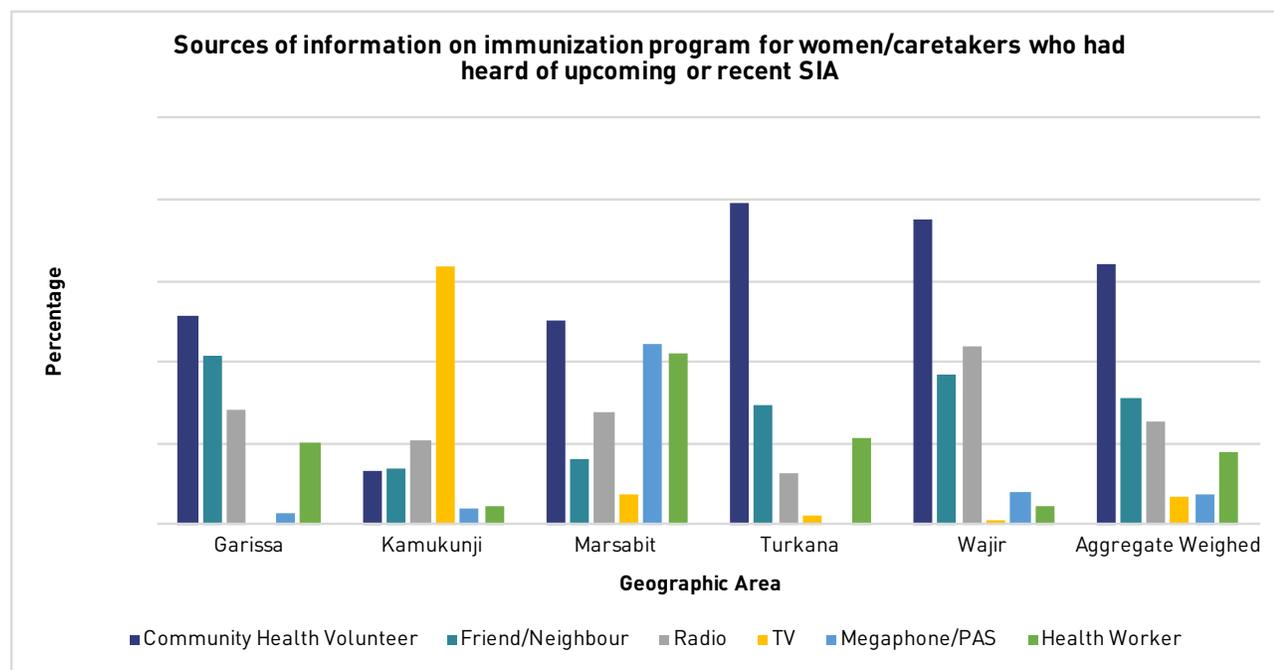
ANNEX C. INDIA COUNTRY SECTION





Type of interaction	Sitapur	Shahajahanpur	Moradabad	Shamli	Baghpat	Total
Community Focus Groups						10
Mothers	1	1	1	1	1	
Fathers	1	1	1	1	1	
CGPP frontline functionaries- In Depth Interviews						10
CMCs	1	1	1	1	1	
BMCs	1	1	1	1	1	
Stakeholder discussions						14
<i>Institutional</i>						
Government – district level		1	1			2
Health workers- ASHA, AWW, ANM	1	2	1	1	1	6
<i>Community</i>						
Religious Leaders		1	1		1	3
PRI functionaries (local leaders)	1			1	1	3
Total	6	8	7	6	7	34

ANNEX D. HOA



Kenya RI Coverage

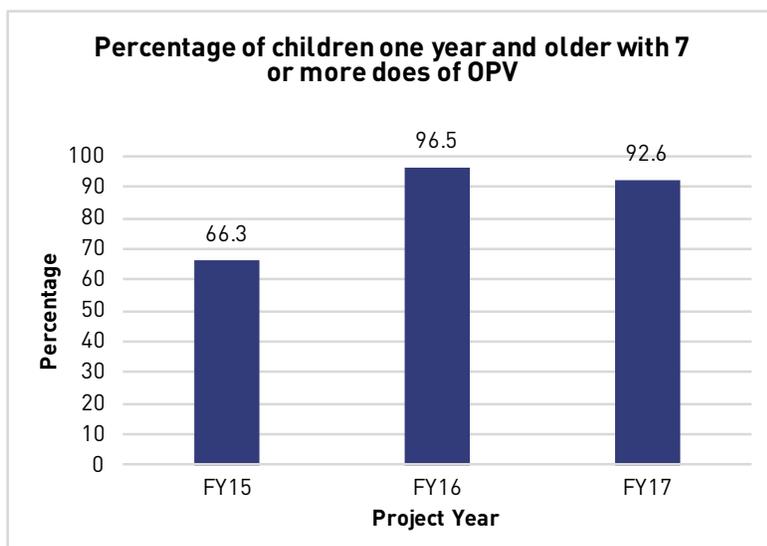
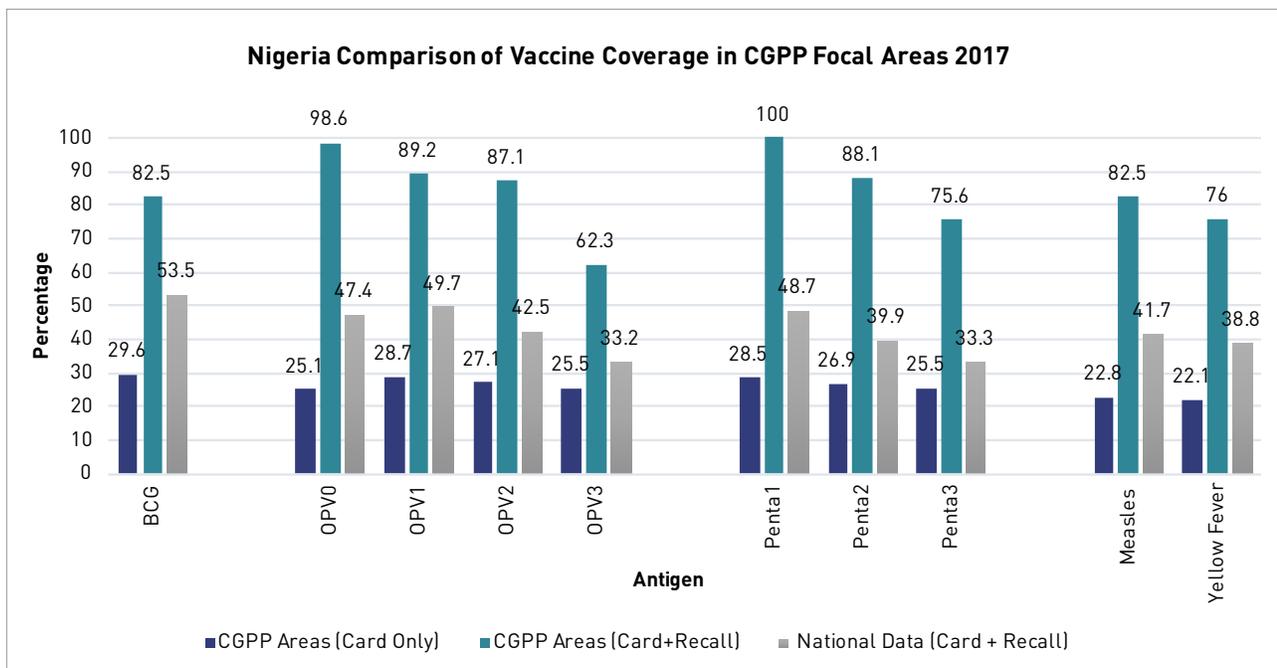
**Vaccination coverage by vaccine and verification source,
CORE Group Polio Project Areas, Kenya**

Vaccine	Not vaccinated		Card		History		Card + History	
	n	%	n	%	n	%	n	%
BCG	17	1.2%	654	45.4%	770	53%	1424	98.8%
OPV 0	38	2.6%	425	29.5%	978	68%	1403	97.4%
OPV 1	43	3.0%	644	44.7%	754	52%	1398	97.0%
OPV 2	62	4.3%	618	42.9%	761	53%	1379	95.7%
OPV 3	86	6.0%	579	40.2%	776	54%	1355	94.0%
Penta 1	19	1.3%	639	44.3%	783	54%	1422	98.7%
Penta 2	33	2.3%	612	42.5%	796	55%	1408	97.7%
Penta 3	19	1.3%	581	40.3%	841	58%	1422	98.7%
Measles	56	3.9%	523	36.3%	862	60%	1385	96.1%

Baseline Vaccination Coverage by vaccination verification source

Vaccine	Not Vaccinated %	Card %	History %	Card + History %
BCG	36%	44%	20%	64%
OPV0	36%	24%	40%	64%
OPV3	43%	44%	13%	57%
PENTA 3	24%	45%	31%	76%
Measles	23%	37%	40%	77%

ANNEX E. NIGERIA



ANNEX F. KEY SOCIAL MOBILIZATION ACTIVITIES IN CGPP INDIA: OCTOBER 2016 TO SEPTEMBER 2017

Project area districts	# IPC visits		Number of group meetings								Number of coordination meetings*		Participation in number of VHSNC meetings**		Number of special activities (in selected areas)			
			Mothers/ Adolescent girls meetings		Fathers/ Adolescent boys meetings		Interface/ Influencers/ Religious leaders meetings		Total						Community meetings		Barbers' meeting	
	Planned	Done	Planned	Done	Planned	Done	Planned	Done	Planned	Done	Planned	Done	Planned	Done	Planned	Done	Planned	Done
Baghpat	26687	25196	2316	2084	16	16	765	693	3097	2793	30	31	11	12	24	24	2	2
Bareilly	27263	26180	1709	1634	32	32	594	574	2335	2240	23	20	19	19	24	20	2	2
Rampur	34701	33789	1733	1683	160	153	176	166	2069	2002	24	19	37	33	21	17	2	1
Mau	13515	13246	1292	1282	536	535	0	0	1828	1817	17	16	174	173	7	8	6	4
Saharanpur	15994	15262	588	578	63	63	0	0	651	641	16	16	124	120	8	8	6	8
Shahjahanpur	22509	22093	888	888	15	16	2	0	905	904	20	20	375	371	10	10	5	5
Sitapur	28448	25524	2827	2735	0	0	0	0	2827	2735	23	24	246	164	12	12	6	6
Meerut	26236	24874	2850	2731	32	30	35	35	2917	2796	24	24	32	32	68	64	2	2
Moradabad	43534	41468	3520	3485	0	0	7	7	3527	3492	24	22	88	69	22	20	2	2
Muzaffarnagar	45160	40316	4115	3580	11	9	199	182	4325	3771	62	56	91	72	29	24	4	2
Sambhal	50990	42847	3392	3231	55	55	35	35	3482	3321	23	21	120	109	19	19	3	3
Shamli	13327	12922	958	946	0	0	342	337	1300	1283	27	27	13	12	9	9	1	1
CGPP India (12 districts)	348364	323717	26188	24857	920	909	2155	2029	29263	27795	313	296	1330	1186	253	235	41	38

* Number of coordination meetings with frontline govt. workers of health and ICDS department (ASHAs & ANMs)

** Village Health Sanitation and Nutrition Committee (VHSNC) meetings are organized at the community level

