

# GLOBAL POLIO ERADICATION INITIATIVE (GPEI) STATUS REPORT

20 APRIL 2015

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## EXECUTIVE SUMMARY

No wild poliovirus (WPV) cases have been detected on the African continent since 11 August 2014, and the end of all WPV transmission in Africa is a cautious possibility. In addition, almost 30 months have passed without detection of wild poliovirus type 3 anywhere in the world. Persistent circulating vaccine-derived poliovirus type 2 (cVDPV2) circulation has been detected only in Nigeria and Pakistan during 2014. Nigeria has had no WPV type 1 (WPV1) cases since 24 July 2014; 9 months have passed since the most recent evidence of transmission from the outbreak in Central Africa. The WPV1 outbreak in the Horn of Africa also has apparently been controlled with the latest case reported in August 2014. The WPV1 outbreaks in Syria and Iraq appear to have been fully controlled based on current surveillance data. However, the continued spread of WPV1 from Pakistan to Afghanistan at the end of 2014 led the International Health Regulation Emergency Committee to conclude in February 2015 that the international spread of poliovirus continues to be a Public Health Emergency of International Concern. Although national level surveillance indicators generally remain above accepted standards, lapses in achieving stool specimen adequacy targets at subnational levels and genomic sequence analysis demonstrating the presence of orphan viruses indicate that pockets of suboptimal surveillance have persisted in endemic and outbreak countries and some neighboring countries.

**Afghanistan:** Twenty-eight WPV1 cases were reported in 2014 compared with 14 in 2013. For the past year, polio cases occurred primarily in the Southern Region linked mostly to importation from Pakistan but with local transmission. Orphan viruses were detected representing both indigenous and Pakistan-imported viruses. Environmental surveillance began in 2014 at selected sites in several cities. Six environmental sentinel sites in Nangarhar, Kandahar, and Helmand Provinces detected WPV1 during the second half of 2014 until February 2015. Helmand Province, where supplemental immunization activities (SIAs) were banned during March–July 2014 and again during December 2014–January 2015, once again is conducting SIAs. Inaccessibility is a relatively small problem (0.55% of targeted population of 8.9 million). Although relatively small in number, the proportion of targeted children missed because of refusals in the Southern Region (up to 2% of target) continues to be the highest globally. Lot quality assurance sampling (LQAS) surveys have not accepted any district at the 90% threshold in the Southern Provinces, and half of the districts are not accepted at the 80% threshold. The majority of missed children in the Southern and Eastern Regions are reported to be missed because they are unavailable, or because teams have not visited. Afghanistan is the only endemic country with such relatively high rates of missed children due to operational reasons and refusals and low community perceptions about polio and the vaccine. Insecurity will continue to affect programme delivery in all priority districts, especially in the Southern region, due to the upcoming “fighting season”, the withdrawal of NATO forces, and posturing by all parties in advance of any talks between the Government and anti-government elements.

**Pakistan:** The WPV1 outbreak in the Federally Administered Tribal Areas (FATA) continued to expand after the last report, and 306 cases were reported in Pakistan in 2014, compared with 93 cases in 2013; the genetic diversity of WPV1 isolates in Pakistan substantially increased. WPV importations to areas outside of key reservoirs of FATA, adjoining KP, and Karachi have not resulted in major polio outbreaks, although environmental surveillance has indicated local transmission recently in Islamabad. The number of reported cVDPV2 cases decreased to 21 in 2014 compared with 48 in 2013; the most recent cVDPV2 case was reported in December 2014, although environmental samples were positive in January 2015. The government has established a national polio eradication Emergency Operations Centre (EOC) and EOCs in all provinces. The EOCs are still evolving to become full-time centers for joint data analysis and planning at all levels. Despite the major setbacks in Pakistan, some successes have occurred. Following the military operation in North Waziristan in June, 2014, inaccessibility is substantially improving, but insecurity remains an important barrier to programme success in Khyber, Greater Peshawar, and Karachi. The proportion of children missed due to teams not showing up is highest in FATA and Balochistan. The polio programme continues to face deadly violence in Pakistan and violence against polio vaccination teams and security personnel have continued to be attacked in parts of Karachi, Balochistan, and greater Peshawar.

**Nigeria:** Only six WPV1 cases were reported in Nigeria in 2014, with no cases since 24 July. However, cVDPV2 transmission continued following a strategic decision to focus on WPV elimination early in 2014; use of trivalent oral

poliovirus vaccine (tOPV) subnational immunization days (SNIDs) was delayed to August and November of 2014 and in national immunization days (NIDs) in March and April of this year in northern states. Thirty cVDPV2 cases were reported in 2014, and environmental surveillance has shown transmission across the north, with isolation of cVDPV in persistent circulation occurring most recently from a sample taken in March 2015. Intensified polio eradication activities have continued, including during the recent elections. Inactivated poliovirus vaccine (IPV) was included SIAs in 2015 in selected areas to accelerate interruption of WPV transmission. IPV was also introduced in routine immunization schedules in some states starting in February 2015. The intensity and frequency of ongoing violence/conflict in Borno and Yobe states and the expanding conflict that now includes military personnel from neighbouring countries continue to affect the scope/quality of SIAs; access to children worsened particularly in Borno. It is unclear how many children are still living in security-compromised areas, and whether children being immunized through special initiatives are coming from these areas.

**Horn of Africa:** The primary focus of the outbreak in the South/Central Zone of Somalia was apparently brought under control during 2013. WPV1 has not been reported in Kenya since July 2013 or in Ethiopia since January 2014. However, the detection of cases among pastoralists in the Mudug Region of Puntland in May, June and August indicated ongoing undetected transmission in rural Somalia; SIAs were subsequently implemented to reach pastoralist children. The security situation has not improved in large sections of South Central Somalia and it continues to be extremely dangerous for delivering all humanitarian services, and in particular for all United Nations staff — local or international. Two cVDPV type 2 cases were reported in South Sudan in August 2014.

**Central Africa:** Since mid-November 2013, the Cameroon programme has been responding to a WPV1 outbreak after imported WPV1 circulated undetected for more than two years. The occurrence of cases in Cameroon up to July 2014 and the geographic spread to Equatorial Guinea show that SIA quality had been weak, although there are indications of recent improvements in SIA and surveillance quality. The Equatorial Guinea programme was slow to respond to the outbreak and surveillance quality limited; the onset of the most recent reported case was in May 2014. Security in northern Cameroon has deteriorated because of spill-over of violence from Borno state, Nigeria.

**Middle East:** Although WPV1 cases have only been reported in Syria and Iraq, surveillance improvements and several SIA rounds were implemented in neighboring countries; countries at risk have continued risk mitigation activities. The most recent reported case in Syria had onset in January 2014 and the most recent in Iraq in April 2014. Surveillance in both countries has improved.

**Countries at Risk:** Countries at highest risk for transmission, according to current risk assessments, are in West/Central Africa (particularly Central Africa), the Horn of Africa and the Middle East. The SIA calendar for 2015 and projected SIAs for early 2016 have been targeted to address these risks. SIA plans for the three West African countries affected by Ebola virus disease have been deferred. OPV SIAs are planned in Sierra Leone and Liberia in May 2015. The quality and timing of SIAs in the Central African Republic will be affected by significant instability and violence in large parts of the country.

**Vaccine supply:** Supplies of both bivalent OPV (bOPV) and tOPV have continued to be tight but well-managed through 2014 and early 2015; no priority SIAs were deferred because of short supply and vaccine buffer stock is sufficient to meet planned demand throughout 2015. IPV supply also remains tight in 2015; priority was given to limited IPV use in SIAs in the three endemic countries rather than introduction into routine immunization schedules in some "Tier 3" and "Tier 4" countries as early as planned.

**Financing:** Against the US\$ 5.5 billion budget for 2013–2018, the best-case funding gap for the entire period is US\$ 451 million. As of February 2015, the GPEI has cash on hand of US\$ 561 million against the total budget of US\$ 1.1 billion for 2015.

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## ACRONYMS AND ABBREVIATIONS

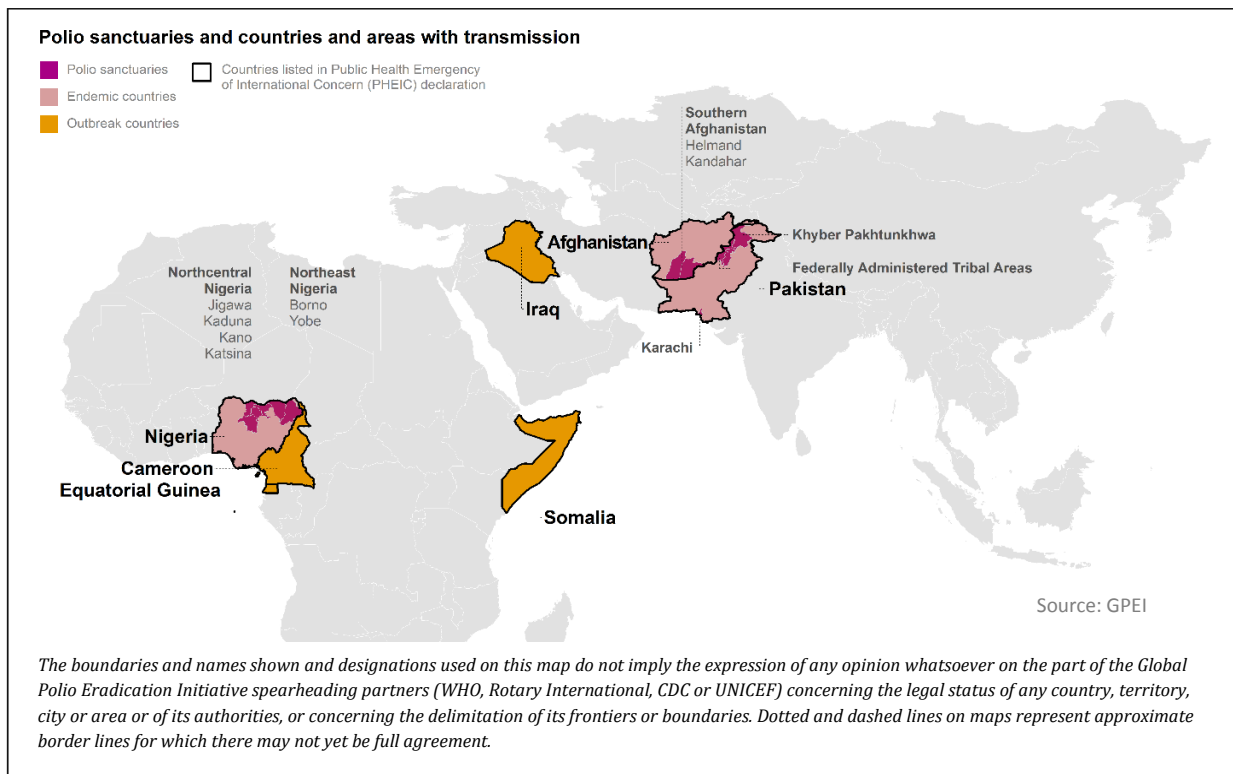
AFP	acute flaccid paralysis	LGA	local government area (Nigeria)
AGEs	anti-government elements	LPD	low performing districts
AIC	Areas in Charge	LQAS	lot quality assurance sampling
aVDPV	ambiguous vaccine-derived poliovirus	mOPV	monovalent oral poliovirus vaccine
BMGF	Bill and Melinda Gates Foundation	NGO	non-governmental organization
bOPV	bivalent (types 1 and 3) oral poliovirus vaccine	NID	national immunization day
CAR	Central African Republic	NPAFP	non-polio acute flaccid paralysis
CDC	U.S. Centers for Disease Control and Prevention	OPV	oral poliovirus vaccine
CMAM	community-based management of acute malnutrition	PCA	post-campaign assessment
COMNet	Community Mobilizer Network (Pakistan)	PHEIC	Public Health Emergency of International Concern
cVDPV	circulating vaccine-derived poliovirus	POB	Polio Oversight Board
DDM	Direct disbursement mechanism	POLIS	Polio Information System
DOPV	directly observed polio vaccination	PTPs	permanent transit posts
DRC	Democratic Republic of the Congo	SIA	supplementary immunization activity
EOC	Emergency Operations Centre	SIAD	short-interval additional dose
FATA	Federally Administered Tribal Areas (Pakistan)	SMS	short message service
FCM	female community mobilizer	SNID	subnational immunization days
FCV	female community volunteer	SOPs	standard operating procedures
GPEI	Global Polio Eradication Initiative	STOP	Stop Transmission of Polio
HoA	Horn of Africa	TAG	Technical Advisory Group
HRDUCs	High-Risk District Union Councils	TDP	temporarily displaced person
ICN	Immunization Communication Network (Afghanistan)	tOPV	trivalent oral poliovirus vaccine
IDPs	internally displaced persons	TP	transit point
IM	Independent Monitoring	UC	Union Council (Pakistan)
IMB	Independent Monitoring Board	UN	United Nations
IPC	inter-personal communication	UNICEF	United Nations Children's Fund
IPV	inactivated poliovirus vaccine	UPEC	Union Council Polio Eradication Committee (Pakistan)
IVR	interactive voice response	VCM	volunteer community mobilizer
KAP	Knowledge, Attitudes, Practice	VDPV	vaccine-derived poliovirus
KP	Khyber Pakhtunkhwa (Pakistan)	VTS	vaccination tracking system (Nigeria)
		WHO	World Health Organization
		WPV	wild poliovirus

# GPEI Partner Status Report: 20 APRIL 2015

## INTRODUCTION

This sixth GPEI Partner Report on progress towards polio eradication brings together input, analysis, and interpretation from the World Health Organization (WHO), Rotary International, the U.S. Centers for Disease Control and Prevention (CDC), and the United Nations Children's Fund (UNICEF). The report examines both wild poliovirus (WPV) and circulating vaccine-derived poliovirus (cVDPV), with a focus on the key poliovirus 'sanctuaries' and risk areas in the three remaining polio-endemic countries (Afghanistan, Pakistan, and Nigeria) and indicators of progress towards the goals of the GPEI Polio Eradication and Endgame Strategic Plan, 2013–2018. The report includes data about ongoing WPV outbreaks in countries of the Horn of Africa (HoA), Central Africa and the Middle East that remain at risk of continued WPV transmission according to the current list under the Public Health Emergency of International Concern (PHEIC); the detection of WPV and cVDPV in environmental samples; and an evaluation of countries at risk for importation. The WPV and cVDPV data represent cases with onset through 24 February as of 3 March 2015 (with noted exceptions) and with genomic sequence analysis through 3 March 2015. Analyses of WPV sanctuaries include data from acute flaccid paralysis (AFP) surveillance over the prior 12 months. For the analysis of standard surveillance and immunization indicators\* by province/state for endemic countries, analyses include non-polio AFP (NPAFP) cases within the following onset intervals: 1) 25 August 2013–24 February 2014, 2) 25 February 2014–24 August 2014, and 3) 25 August 2014–24 February 2015. For countries at risk, analysis includes AFP cases with onset of 25 February 2014–24 February 2015. Human resource, financing and key programme information are reported as of 20 March 2015, vaccine supply as of 30 March.

**Figure 1. WPV sanctuaries in polio-endemic countries, and countries and areas with wild poliovirus transmission within the prior 12 months, as of 20 April 2015 (Israel removed as of 29 April)**



\* Standard AFP surveillance performance indicators by province/state for this report include the following: 1) detection of at least two non-polio AFP (NPAFP) cases per 100,000 population aged <15 years annually and 2) adequate stool specimen collection from ≥80% of AFP cases (two specimens collected ≥24 hours apart within 14 days of paralysis onset, shipped on ice or in frozen packs to a WHO-accredited laboratory, and arriving in good condition). Standard immunization performance indicators by province/state for this report are 1) <10% of children aged 6-35 months with NPAFP with an OPV dose recall history of 0 doses, and 2) ≥80% of children aged 6-35 months with NPAFP with an OPV dose recall history of 4 or more doses.

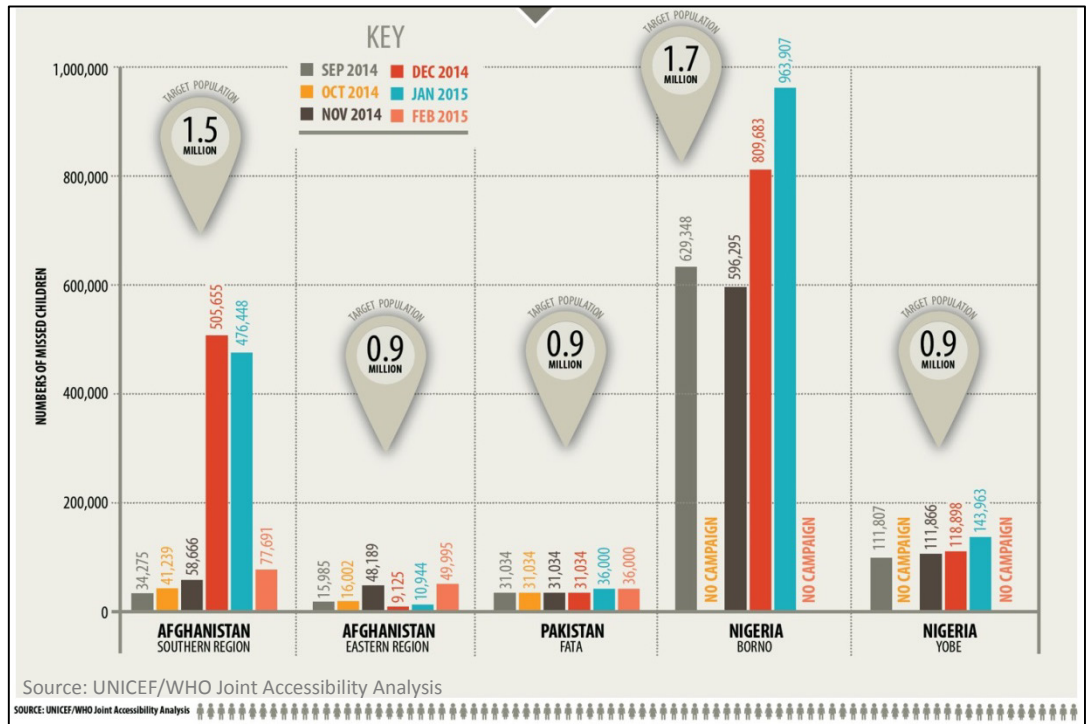
## REACHING MISSED CHILDREN

Data demonstrate where the most children are being missed and why. The right operational and communication strategies can effectively close the gap on missed children in the endemic countries. High quality campaigns, rapid collection and use of data for corrective action, and bundling of health services with oral polio vaccine (OPV) have emerged even more clearly as critical strategies that have led to Nigeria’s success, and as areas that need strengthening in Pakistan and Afghanistan this year.

Aside from Borno and Yobe States in

**Figure 2. Number of missed children due to inaccessibility in selected areas of polio-endemic countries, September 2014–February 2015**

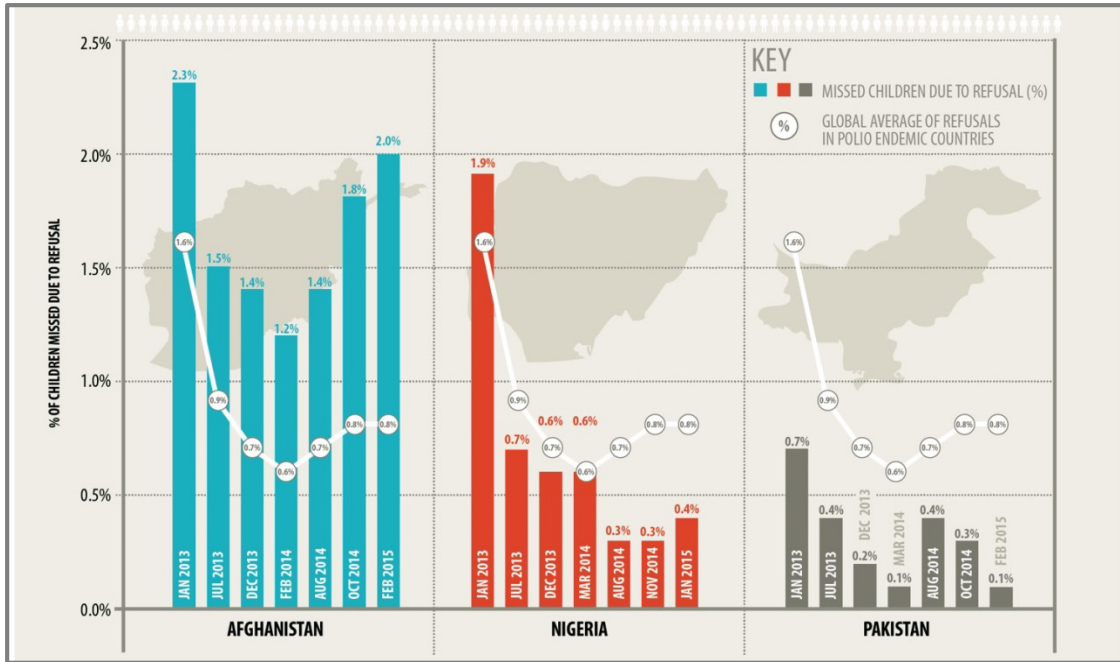
Nigeria, the scale and geographical scope of inaccessibility is low or continues to decline in all polio-affected countries (see Figure 2 regarding endemic countries). In Pakistan, only about 36,000 children remain inaccessible in North and South Waziristan following the military operation in June 2014. The underlying assumption of



Pakistan’s low-season plan is that “all children everywhere are reachable.” This sentiment was reiterated by the Technical Advisory Group (TAG) in February 2015.

The main access priority in most places is to align security plans and resources appropriately to operational campaign plans. In Afghanistan, the number of inaccessible children has declined from 514,780 in December 2014 to 127,646 in February 2015. Although the bulk of Afghanistan’s inaccessibility has been caused by a vaccination ban in Helmand, Afghanistan’s inaccessibility elsewhere is unpredictable and volatile, emerging in a different place nearly each month. In Borno, the proportion of inaccessible settlements has risen from 38% in September 2014 to 67% in January 2015; in Yobe from 12.5% to 16% for the same period (see Figure 2); however, the Nigeria programme needs to investigate further what numbers of children are actually still living in security compromised areas, and identify whether children being immunized through special initiatives are coming from these areas. In Somalia, the number of inaccessible children in southern and central areas has declined by 40%, with more than 200,000 previously inaccessible children being reached in recent months. In Iraq by the end of 2014, less than 3% of the population lived in partly or completely inaccessible districts. In Syria, the population in permanently inaccessible areas is approximately 1%, but in both Syria and Iraq, shifting patterns of fighting and insecurity can alter the situation round by round.

**Figure 3. Percentage of missed children due to refusal as share of all target children in polio-endemic countries, January 2013–February 2015**

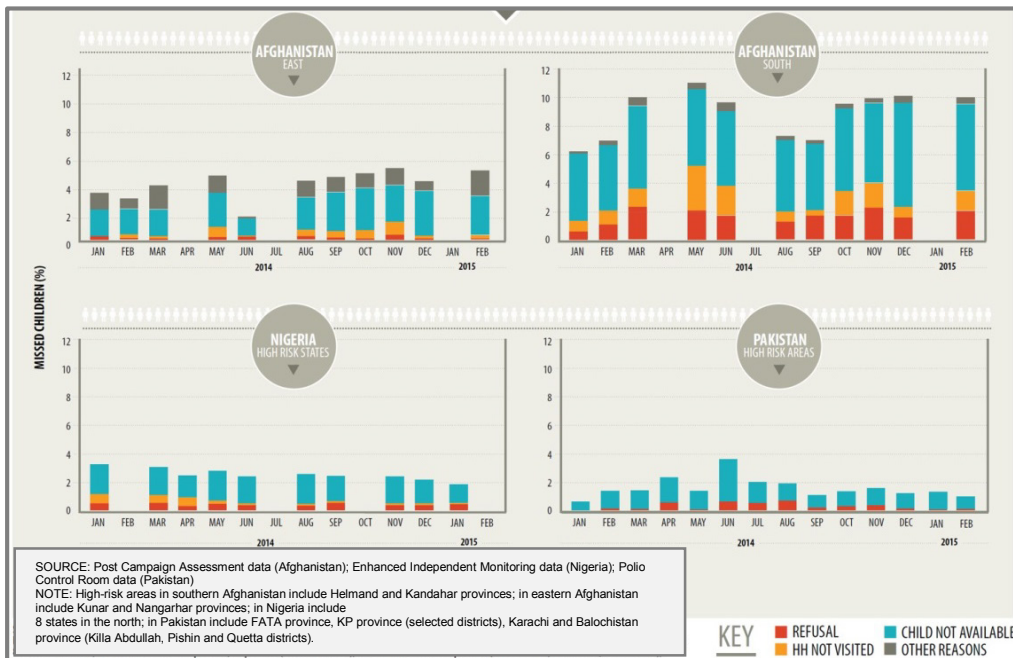


Trends in Nigeria reflect campaign coverage in 8 High Risk States in the north. SOURCE: Independent Monitoring.  
 Trends in Pakistan reflect campaign coverage in High Risk areas: Balochistan (Quetta block), FATA, KP (south and central districts) and Sindh (Karachi). SOURCE: Control Room.  
 Trends in Afghanistan reflect campaign coverage in Low Performing Districts in Kandahar and Helmand provinces. SOURCE: Independent Monitoring.

Where vaccination teams are able to access households, acceptance for OPV remains at the highest levels ever seen in the programme: only 0.8% of parents across all high-risk areas in the endemics refuse OPV (see Figure 3). Qualitative and quantitative data demonstrate that, despite this high acceptance,

vaccination fatigue is beginning to have an impact in localized areas of Pakistan, particularly in Khyber Pakhtunkhwa (KP). Still, nowhere is the rate of refusal higher than in Afghanistan’s low-performing districts of the Southern Region. Afghanistan’s refusal rate, although still less than 2% in all high-risk areas, is more than

**Figure 4. Trends in missed children in accessible high-risk areas of endemic countries, January 2014–February 2015**



four times the rate of refusal in Nigeria and Pakistan’s high-risk areas. In some districts like Sangin and Kajaki in Helmand, refusal rates go up to 10% of all targeted children under 5 years of age in these areas.

Afghanistan’s Southern Region also has the highest proportion of consistently missed children among all the endemic countries (see Figure 4). Several districts across Helmand and Kandahar have missed well over 20% of the targeted children for

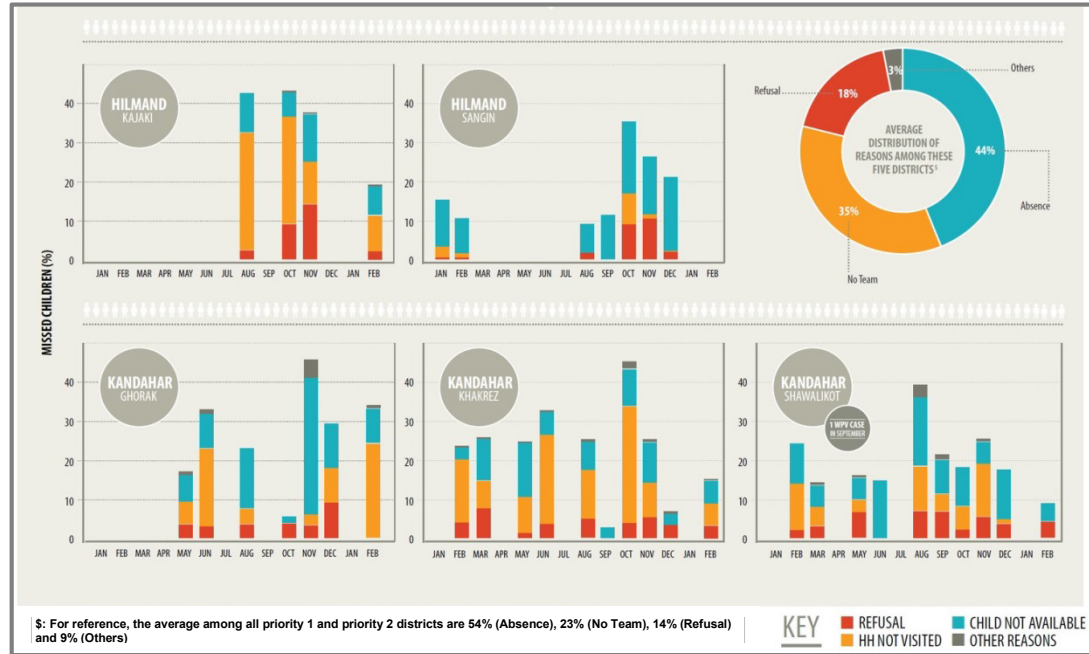
SOURCE: Post Campaign Assessment data (Afghanistan); Enhanced Independent Monitoring data (Nigeria); Polio Control Room data (Pakistan)  
 NOTE: High-risk areas in southern Afghanistan include Helmand and Kandahar provinces; in eastern Afghanistan include Kunar and Nangarhar provinces; in Nigeria include 8 states in the north; in Pakistan include FATA province, KP province (selected districts), Karachi and Balochistan province (Killa Abdullah, Pishin and Quetta districts).

KEY  
 ■ REFUSAL ■ CHILD NOT AVAILABLE  
 ■ HH NOT VISITED ■ OTHER REASONS



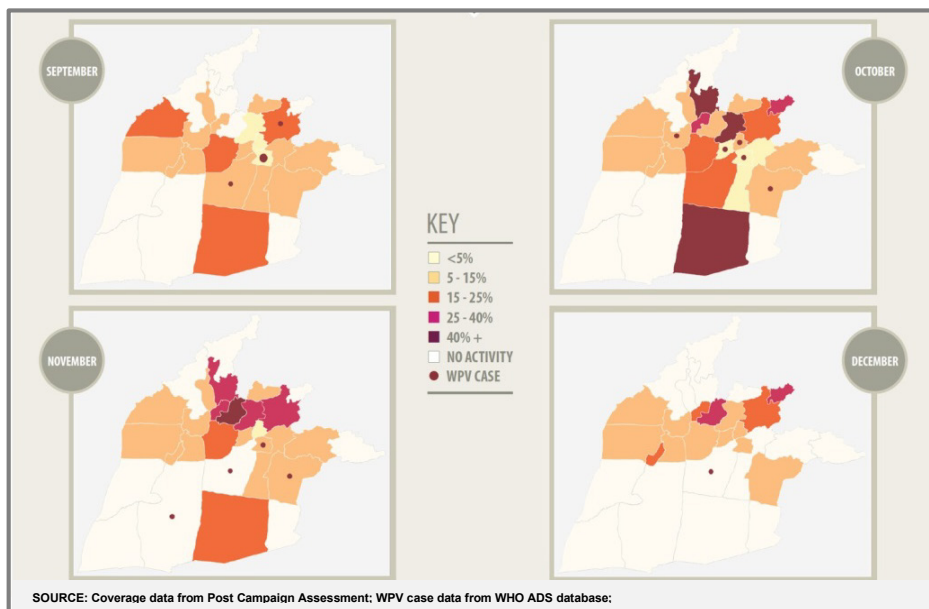
three or more rounds in the last year. In Khakrez, Ghorak, Panjwai and Shawalikot in Kandahar and other districts of Helmand, the proportion of missed children in accessible areas has reached 40% for some rounds (see Figure 5), and up to 87% in other accessible areas like Mianshin, Kandahar. All of these districts have had issues of intermittent partial or complete inaccessibility .

Of the total missed children in the five lowest performing districts (LPDs) of the Southern Region, the percentage of children missed because “no team” visited their household is 35%, compared with an average of 23% in the rest of the LPDs (see Figure 5). Children missed because of “absence” is, on average, 56% of all missed children in the Southern Region. Although these operational problems are the major issue, refusals make up to nearly 20% of missed children — 1.6% of all targeted children under 5 years of age in the high-risk areas. This rate has remained the highest in the



missed because of “absence” is, on average, 56% of all missed children in the Southern Region. Although these operational problems are the major issue, refusals make up to nearly 20% of missed children — 1.6% of all targeted children under 5 years of age in the high-risk areas. This rate has remained the highest in the

**Figure 6. Campaign Coverage and WPV cases in Helmand and Kandahar Provinces, September–December 2014**



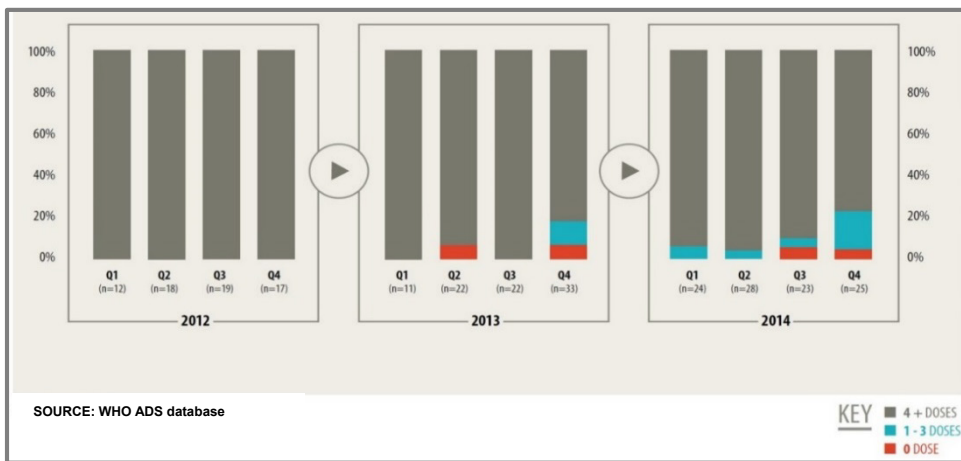
world for more than 2 years. While operational challenges, including team performance, pose the biggest challenge in Afghanistan, the ability to reduce and address refusals is a key performance indicator of any communication network globally. Afghanistan’s continued high rate of refusals should be considered in terms of potential impact on coverage and immunity, as well as a performance management issue of a dedicated, frontline workforce that is over 4,000 in number in the Southern and Eastern Regions. According to

December 2014 NPAFP data, approximately 17% of children under 5 years of age in Helmand and Kandahar are under-immunized, having received less than 3 doses of OPV (see Figure 21).

Operational gaps in accessible areas, coupled with Helmand and Kunar’s intermittent accessibility, indicate a vulnerability for Afghanistan that is more significant than simply its proximity to Pakistan. The persistence of indigenous WPV1 in southern Afghanistan in 2014 demonstrates this.

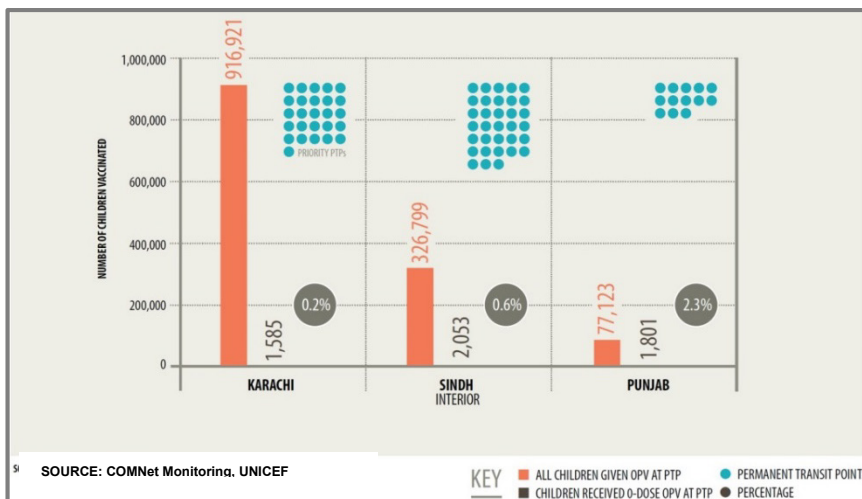
In both Pakistan and Afghanistan, cases over the past year have emerged in high-risk provinces, but in districts or sub-districts where monitoring data suggest high coverage, indicating a need to strengthen post-campaign monitoring efforts. In Pakistan, the introduction of enhanced independent monitoring (IM) is planned, but until then, the programme relies on a mix of market surveys (convenience samples of 50 to 100 children), lot quality assurance sampling (LQAS) surveys, AFP and Community Mobilizer Network (COMNet) data to piece together an analysis of missed children. In February 2015, market survey data showed 89% coverage in both Balochistan and Federally Administered Tribal Areas (FATA), 93% in KP and 96% in Sindh. LQAS data for the same month showed only 70% of lots passed in Balochistan, 60% in KP, and 79% in Sindh [using local threshold criteria].

**Figure 7. Immunity gap (OPV status) among NPAFP cases (6-59 months old), Peshawar, KP Province, Pakistan 2014**



In addition to different data sources and methods, these data sets measure different geographical areas: market survey covering districts and tehsils, and LQAS covering Union Councils (UCs). This small example demonstrates the different assessments provided by each of the data sources, and the complexity of piecing together a cohesive and common analysis at all levels of the programme.

**Figure 8. Number of children vaccinated at permanent transit points (PTPs), November 2014–February 2015**



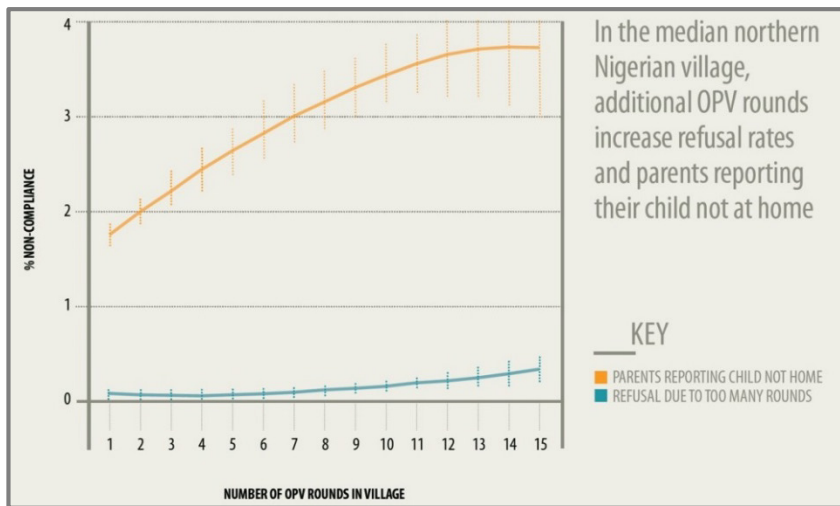
AFP data tell another side of the story. In January 2014, 100% of the NPAFP cases < 5 years of age in Peshawar received 4 or more doses of OPV (data not shown). By December 2014, this declined to 90%, with zero-dose cases rising to 2% over the same period (see Figure 7; NOTE: NPAFP dose history data also are seen in each sanctuary section of report). Unimmunized, internally displaced children coming from North and South Waziristan likely contributed to the immunity gap in the third and fourth quarter. However, despite 21 supplementary immunization



activities (SIAs) rounds in Peshawar last year through Sehat Ka Insaf, including short-interval additional dose campaigns (SIADs), campaigns consistently missed the most vulnerable children. Pockets of chronically missed children in Peshawar — caused by poor quality campaigns, increased refusals, displaced children, and insecurity — have resulted in declining immunity indicators.

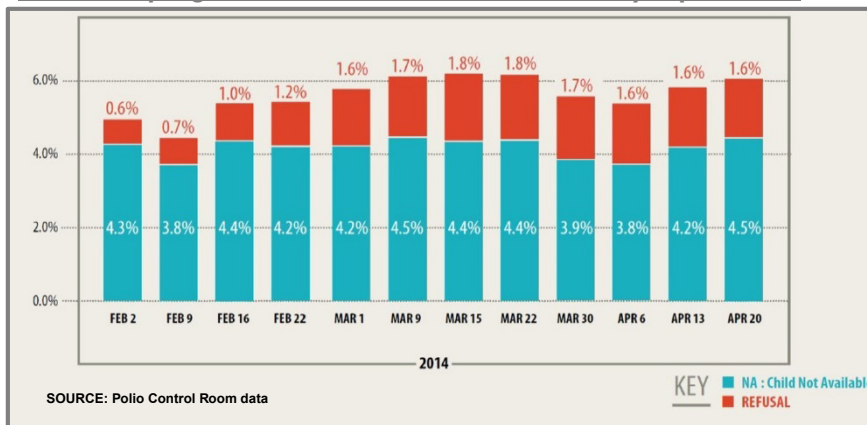
In Pakistan, 56% of all polio cases in 2014 were zero-dose for both routine immunization and SIAs. Despite the vaccination of 19 million children at transit points in 2014, only a small proportion of them are the unvaccinated children the programme needs to reach. A small sample from transit points with social mobilization staff, for example, showed less than 0.2% of children vaccinated in Karachi’s transit points at any given month had no prior OPV dose history (noted as “children received 0-dose OPV at PTP” in Figure 8).

**Figure 9. Impacts of campaign frequency on absences and refusals due to repeated rounds in northern Nigeria, June 2013-September 2014**



SOURCE: Adapted from Harvard/MIT working paper “Immunized Against the State: Non-Compliance with Polio Vaccination in Northern Nigeria”  
 NOTE: The x axis is estimated based on data from a 16 month period, June 2013-Sept 2014, VTS system. If any coverage is conceptualized as “one round”, the median period between rounds is 55 days.

**Figure 10. Trends in missed children during Sehat Ka Insaf (SKI) SIAD campaigns, Peshawar HRDUCS, February-April 2014**



SOURCE: Polio Control Room data

Consistently missing children, despite such a high frequency of vaccination campaigns should be considered in

light of efficacy and community demands. In the working paper “Immunized Against the State: Non-Compliance with Polio Vaccination in Northern Nigeria”, researchers from Harvard University and MIT<sup>1</sup> analyzed 15 campaigns implemented in Northern Nigerian villages during June 2013–September 2014. Results of the study show that refusal rates remained unchanged for the first eight rounds with a slight but significant rise after 9-10 rounds, parents citing “too many rounds”. A

higher proportion of parents increasingly reported their children as “absent” (see Figure 9).

In Peshawar, parts of this phenomenon may also be at play. While child absence did not increase substantially between February and April 2014, the proportion of children missed because of refusal during this period of 13 campaigns nearly tripled, from 0.6% to 1.6% (see Figure 10). The overall proportion

remains small, but it is eight times the high-risk average of refusals, occurring within larger pockets of unimmunized children. The impact of this on virus transmission is unclear. Investigations of polio cases in 2013

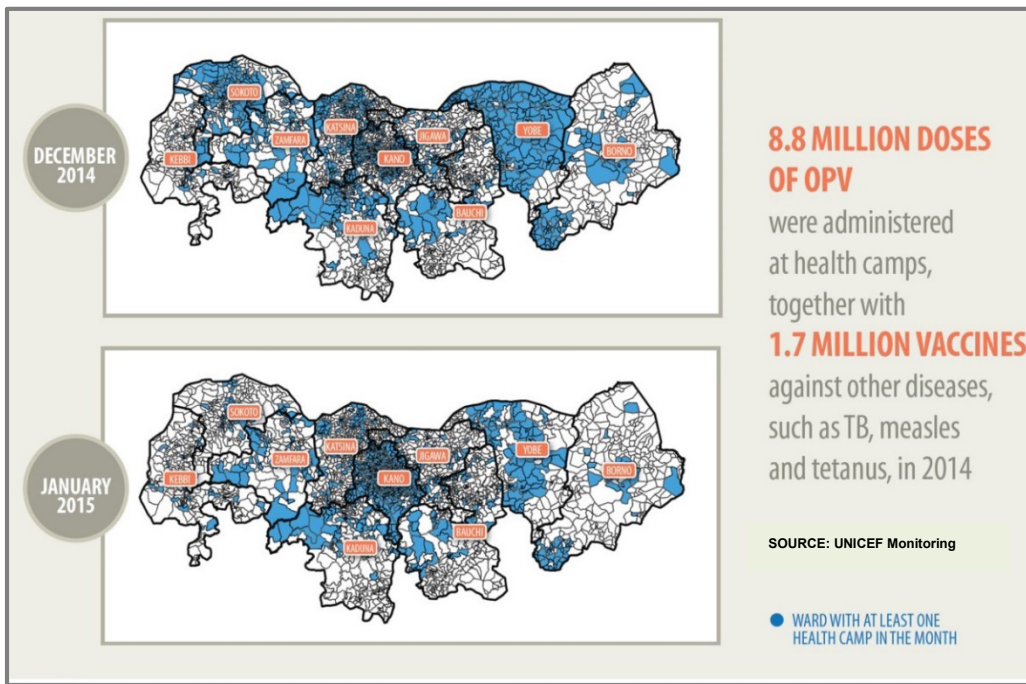
<sup>1</sup> Shelby Grossman, Jonathan Phillips and Leah R. Rosenzweig

and 2014 were not conducted jointly among the partners, and the data on drivers of transmission varies according to different sources. Using official data, more than 40% of the 116 WPV cases from 2014 were from refusal families. All future polio cases occurring in Pakistan will be jointly investigated to ensure an accurate and common understanding of factors driving transmission.

Campaigns must be raised to a level of quality that will enable vaccination of the most vulnerable children. Being mindful of community perceptions while doing so is equally critical. Campaigns planned for the future should be led by a schedule that allows the frontline workforce to execute them with quality, while assuming reasonable expectations of the parents' threshold for repeated vaccination.

Nigeria has demonstrated how strengthening trust in health and other public services can help improve the quality of campaigns and reach chronically missed children. In the same working paper authored by Harvard and MIT, data show that better public services in northern Nigerian villages are associated with lower rates of OPV non-compliance. Last year in Nigeria, 8.8 million doses of OPV were administered through “health camps” alone. These health camps (which provide multiple health services) shifted location from one round to another, in an attempt to respond to community demands and use the health camp strategy to compensate for poor trust and known operational gaps in campaigns (see Figure 11). Volunteer Community Mobilizers (VCMs) filled remaining gaps between campaigns, registering newborns and giving the first dose OPV to nearly 90% of (previously zero-dose) newborns registered, along with other immunizations. In 2014, more than 140,000 newborns were given dose 0 (birth dose) OPV and linked to a routine immunization facility.

**Figure 11. Health camp wards covered in Nigeria, December 2014-January 2015**



Recent polls conducted in Afghanistan and Pakistan found low levels of trust in vaccination services in specific areas. Only 54% of people in Nangarhar, Afghanistan, 34% in Bannu, KP, and 26% in FATA said they trust their vaccinator ‘a great deal’. Building trust in the frontline workforce that delivers OPV — as well as the broader health system that polio represents — must

become the cornerstone of high-risk campaign efforts in 2015.

### Campaign Quality on the Frontline

The ability of campaigns to reach the most vulnerable children relies on a number of important factors: updated microplanning, accurate and reliable monitoring, supportive supervision, engagement with communities, quality communication, effective security, and a skilled, motivated frontline workforce.

In its May 2014 report, the IMB challenged the GPEI to better equip frontline workers for their difficult task at the doorstep, and to demonstrate how this performance is measured.

Several studies and assessments have been conducted in Pakistan over the past 6 months on the performance, perception and motivation of vaccinators.<sup>2</sup> These assessments have all come back with consistent results: the frontline workforce is largely under-trained, unsupported by their direct supervisor, in some cases not paid for up to one year, and overwhelmed by the number of campaigns that take place in direct succession of one another.

In Pakistan, only 25 out of 56 UC microplans validated in the field in March 2015, were found to have been updated before the campaign. The planning gaps ranged from non-identification of boundaries to non-inclusion of high-risk groups to non-inclusion of key facilities such as schools and housing.

It is difficult to distinguish poor performance caused by inadequate training and management from poor performance caused by insufficient time to plan and supervise between campaigns. Regardless of the underlying reasons, a rushed, unskilled or uninformed worker has the same detrimental impact on coverage and perception at the doorstep.

In a UNICEF-supported qualitative knowledge, attitudes and practices (KAP) study undertaken in KP and FATA in December 2014, pro- and anti-vaccination respondents were asked about their perception of the people who came to their houses to administer polio drops to their children. On the whole, the vaccination staff's efforts were appreciated. They were looked upon as responsible, honest and dutiful. However, the maturity and skill base of the staff was a matter of concern mentioned by both pro- and anti-vaccination respondents. Vaccinators were seen as unqualified, unskilled, and without any knowledge of vaccination. "Generally, they are very less educated and unaware village girls in the team who come for vaccination." (Female group, Mardan District, KP Province, Anti-vaccination). "The polio team is ordinary labor-type people from the community. Not educated, they do not even know how many drops are to be given. Sometimes they have the Khaasdar (influencer) so people can't refuse because of his influence" (Male Focus Group Discussion, Khyber agency, Anti-vaccination)."

This sentiment is also supported by Harvard polling results. In Bannu, Pakistan, a December 2014 poll found that only 35% of parents from the internally displaced person (IDP) community said vaccinators they had experienced were "very knowledgeable"; only 36% said vaccinators were "very respectful". In Afghanistan, these results were substantially higher, with 80% of people in Kandahar stating vaccinators were "very respectful", and 72% saying vaccinators were "very knowledgeable."

Nonetheless, in Bannu, vaccination rates among IDPs are high when reported by caregivers themselves: in the same December 2014 poll, 100% of caregivers from the IDP community said they received OPV in the last round, and 97% said they intended to give their child OPV at every round.

The quality of the frontline workforce can affect high coverage among this critical group of children. Bannu as a whole has had the highest rates of refusal and child absence in Pakistan for more than one year, indicating poor performance or negative community perception among host communities who have been exposed to 22 campaigns in 2014. In addition, although universal coverage was self-reported among IDPs, 60% of parents in the same poll said they remembered a vaccinator visiting their household only twice. Only 11% said

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<sup>2</sup> A qualitative KAP study on Health and vaccination in KPK and FATA (Nielsen group); a poll covering the Internally Displaced People from North Waziristan living in Bannu District (Harvard Opinion Research Program), a survey among vaccinators in Peshawar, Karachi, and Quetta (ComNet), and a training assessment of vaccinators conducted by a UNICEF-supported company, Innovation Labs.

vaccinators arrived six or more times. From June to December 2014, seven campaigns were conducted in Bannu.

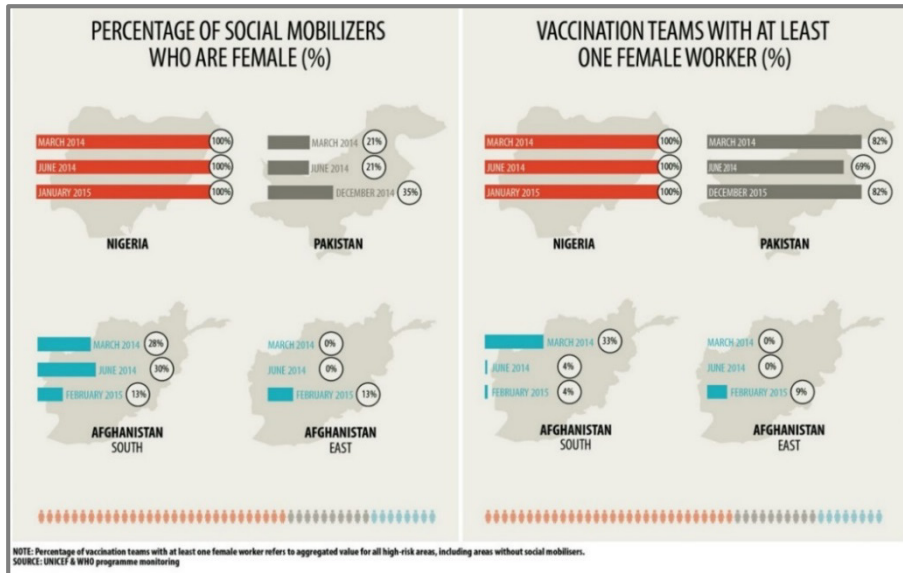
## Before the Knock

### Payment

Delayed payments to frontline workers have significantly lowered morale in Pakistan. The complexity of payments coming from different sources and at different times has made it difficult to pinpoint where and why the payment system is breaking down. The programme is currently reviewing the payment system of three different sources (WHO Direct Disbursement Mechanism [DDM], United Arab Emirates Polio Assistance Programme and payments by provincial governments) and engaging Emergency Operations Centres (EOCs) to monitor payments weekly to take remedial actions.

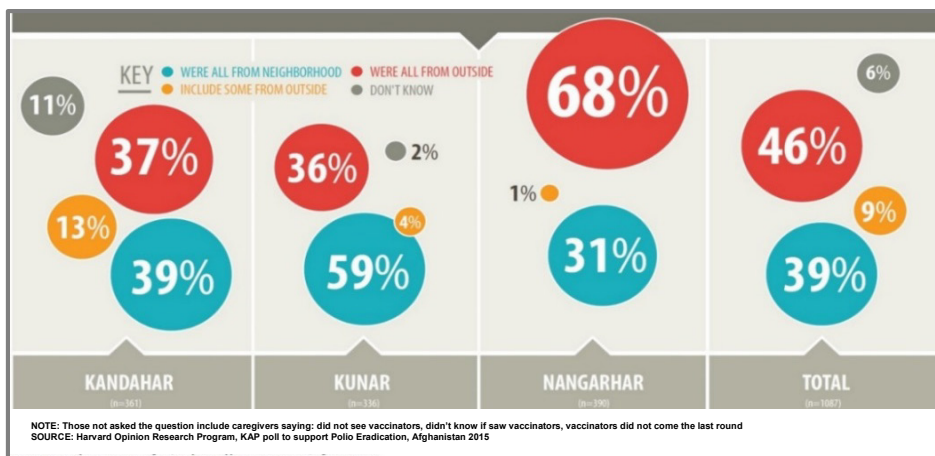
### Team composition

**Figure 12. Gender profile of frontline workers in endemic countries, March 2014 - February 2015**



The rise in female, local community volunteers and social mobilizers has been impressive in Pakistan, with female social mobilizers increasing from 21% to 35% in the last 6 months, and vaccination teams with at least one female vaccinator rising from 69% to 82% during the same period (see Figure 12). This has been part of a coordinated effort by both WHO and UNICEF to increase local, Pashtun participation in campaigns, particularly in Karachi. Although correlating this intervention with greater coverage is difficult, anecdotal information from the field suggests that this localized effort improves security and has significantly increased trust and

**Figure 13. Perceived origin of vaccinator among Afghan caregivers—percent saying vaccinators were local residents or outsiders, Afghanistan, 2015**



access to high-risk areas.

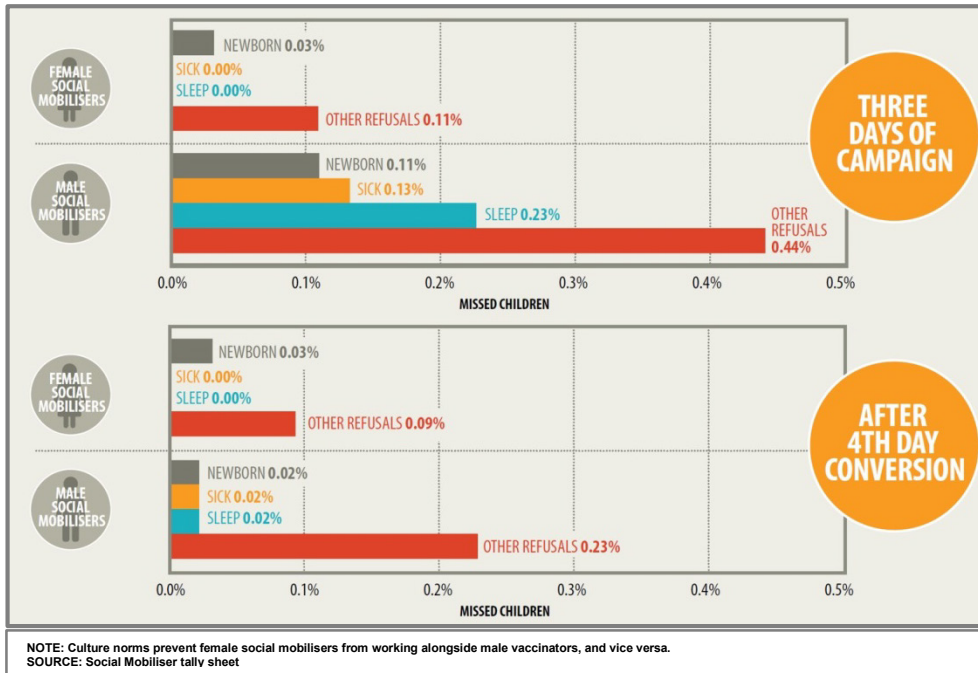
Nigeria and Pakistan have made substantial gains in the localization and gender balance of tea

ms, whereas Afghanistan's involvement of women has declined or remained at very low rates. From June 2014 to February 2015, the number of female social mobilizers in



Afghanistan’s Southern Region remained the same, while new male mobilizers were recruited. This was partially a result of the security situation. The proportion of female social mobilizers has therefore declined from 30% to 13%, and female vaccinators remained at 4%. Harvard Polling data shows that teams were perceived by caregivers to be ‘fully local’ by only 39% of people in Kandahar, 59% in Kunar and 31% in Nangarhar (see Figure 13). Country teams report that hiring female vaccination teams could be beneficial in many areas of Afghanistan. While this may be true, results from the recent Harvard poll show that nearly 50% of polled respondents said they would prefer a man and woman team at their doorstep.

**Figure 14. Proportion of refusals and social mobilizer gender Kandahar City, October 2014**



A comparison of missed children in areas covered

by male and female social mobilizers in nearly identical areas of Kandahar showed that areas covered by female social mobilizers before the campaign resulted in fewer missed children caused by newborn, sick, or sickness and refusal than households covered by their male counterparts (see Figure 14). This initial pairing would reduce the need for resource-intensive “conversion” whereby a follow-up visitor/mobilizer attempts

to persuade families to accept vaccination, where security will allow.

### Training and Supervision

The vaccination experience is both the heart of the programme, and its brand. The vaccinator then, becomes its ambassador and the interactions at the front door its critical touch-point. As the programme shifts further to the essential interaction between vaccinator and caregiver, training and supportive supervision has never been more critical.

An independent assessment of frontline worker training and supervision was undertaken in Somalia and Pakistan. Based on this assessment, a revised 2-day Master Training for Areas in Charge (AIC) was piloted in Peshawar and Karachi in March, with support from WHO, UNICEF and the Government of Pakistan. The training blended practical concerns of frontline staff (payment, security), motivation and leadership skills (teaching techniques, coaching tips, motivation) with the essential hard skills of vaccination (supervision, microplanning, door-marking etc). The curriculum focused heavily on interpersonal communication and supportive supervision techniques, using visual aids such as comic books, flashcards, and participatory learning techniques to impart skills — and in particular to prepare them for difficult interactions at the doorstep to reduce missed children. Real-time monitoring using Interactive Voice Response (IVR) was used to quickly receive feedback from the participants: 89% of the master trainers said they were more confident in their skills, and 78% said this training was better than others they attended.

As the closest supervisory level to the vaccinators, by the end of 2015, all AICs in the High-Risk Union Councils of Pakistan will be trained in this methodology. The core curriculum will form the foundation for a global standard curriculum, ready in particular for outbreak countries to use the same model to rapidly train frontline workers effectively.

**Communication**

To support the operational shifts that have begun to put the frontline worker at the center of quality campaign efforts, UNICEF has developed a global communications strategy and associated campaign. The campaign aims to change the discourse in polio-affected countries from a conversation about polio to a conversation about health. As a general principle, communication will move away from simple information about polio and attempt to influence social perceptions

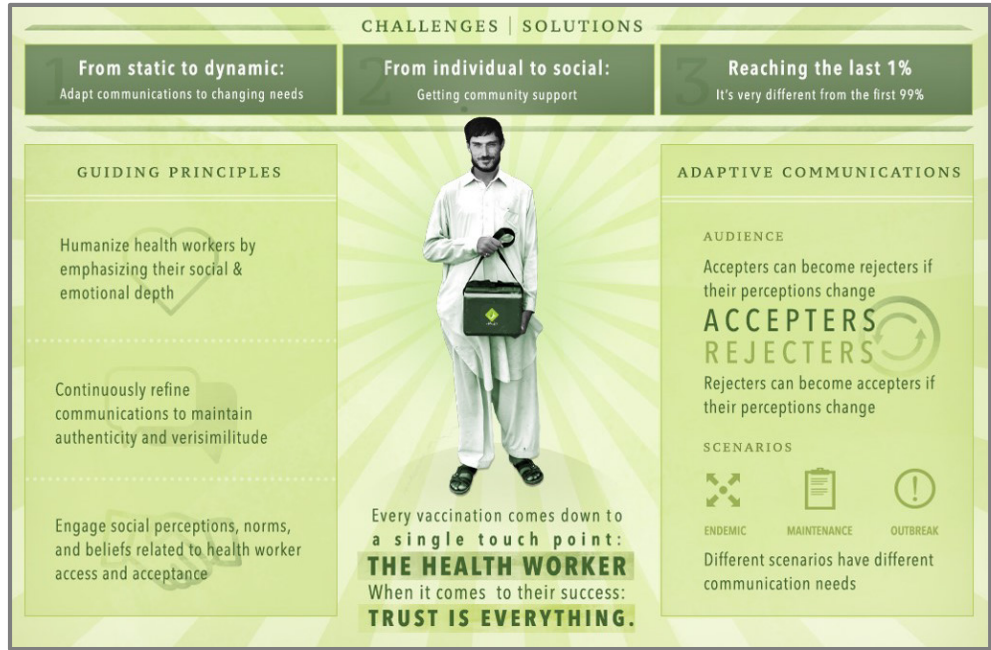
and acceptance for health workers. Vaccination will be presented as a social norm that protects communities, families and tribes rather than a response to oft-used fear stimuli (see figure 15).

Mass media will build an emotional connection between the health workers and their communities, supporting the idea that they are local, trusted community members, “not strangers”, and that their work is noble and difficult. Building empathy for the heroism of health workers aims to create a more receptive interaction at the doorstep.

The strategy will be translated into a new set of messages and tools for mass media, inter-personal communication (IPC) engagement, and engagement at health camps, where applicable. It is designed to be adaptive, applicable to outbreak, endemic and maintenance contexts, and is already being introduced in Pakistan. Here, the campaign focuses on the frontline worker as well as a rebranding of the effort to the highest-risk communities.

Perhaps more than any other effort to date, this campaign demands synergy between communications and operations. Promoting a local, qualified and heroic workforce requires a comparable reality on the ground. Building trust relies on fulfilling our promise, monitoring to know when we are not, and being dynamic enough to respond to feedback. These are the elements that will test the new campaign — and the GPEI — most rigorously.

**Figure 15. Polio Eradication the last 1%**



## ROTARY'S EFFORTS TO RAISE POLIO AWARENESS

### Update on Communications Strategy

Rotary continues its integrated communications program to raise awareness of polio, including traditional media relations, with a focus on news outlets in international, donor and polio-affected countries; digital and social media efforts, celebrity engagement and special events.

### Rotary's Online Museum

Rotary communications staff are working on a digital storytelling platform to expand on the efforts already underway at [www.endpolio.org/stories](http://www.endpolio.org/stories) to gather stories of those whose lives have been affected by the fight to end polio, including volunteers, health workers, Rotarians, polio survivors, and other supporters. The final product will be an online "museum" of sorts telling the story of the global engagement around the issue.

### World Polio Day

For the second year, Rotary hosted its annual World Polio Day Livestream event on 24 October, 2014, featuring a range of inspiring and prestigious speakers and performers, with the aim to raise awareness and funds for the global effort to eradicate polio. The event resulted in more than 100,000 visits to the World Polio Day section of the End Polio Now website, and more than 12,000 downloads of related content; Rotary reached more than 3.5 million people through its Facebook channels; and the Livestream event attracted more than 26,000 views. As a result of the event, online donation to the PolioPlus program increased by 80% in October 2014 over October 2013.

Further, traditional media wrote more than 80 news articles about World Polio Day, in top-tier international outlets like Forbes, TIME, and the Associated Press, along with leading national news outlets like Vanguard (Nigeria), SABC Radio (South Africa), NDTV (India), Der Tagesspiegel (Germany), and El Argentino (Argentina).

### Traditional Media Relations

Rotary continues to communicate news about its grants to WHO and UNICEF, as an opportunity to secure media coverage about polio in the polio-affected or high-risk countries that receive the grants. In January, Rotary announced US\$34.8 million in grants, which went to ten countries, including eight in Africa. Rotary secured significant media coverage of these grants in international and African news outlets.

Rotary also stressed the importance of vaccines in the wake of the measles outbreak in the United States in a series of op-eds. Minda Dentler, polio survivor, new mother and triathlete, discussed the importance of vaccinating against preventable diseases in an op-ed for TIME Magazine. Rotary's General Secretary John Hewko has also published opinion pieces in the San Diego Union-Tribune and Huffington Post.

## ACCESSIBILITY AND SECURITY

Insecurity, lack of access and attacks on humanitarian workers continue to negatively impact the delivery of humanitarian activities, including polio vaccination efforts in all polio priority countries. The 2014 *Global Terrorism Index*<sup>3</sup> highlights that while more than 9,800 terrorist incidents were recorded in 87 countries, 82% of all those killed in terrorist attacks were from just 5 countries, ranked from 1 to 5 as follows: Iraq, Afghanistan, Pakistan, Nigeria and Syria. All these countries are either polio-endemic, or a country that has reported a recent polio outbreak. This immediately highlights the environment within which the polio programme is trying to reach and vaccinate children.

<sup>3</sup> Global Terrorism Index, 2014 – Institute for Economics & Peace. <https://www.visionofhumanity.org>



A few key shifts in the terrorism and militancy landscape need to be highlighted. The 2014 Global Terrorism Index notes that although the primary targets of the violence have consistently been private citizens and property since 2000, in the past 5 years, a very steep increase has occurred in the targeting of the police. During 2012-2013, the percentage of police killed reached parity with private citizens (approximately 25% in each category). The 2014 data are expected to show a similar trend, particularly in Pakistan and Afghanistan. Moreover, the 2014 *Aid Worker Security Report* notes, this intense violence directly impacts aid workers; in 2013, 155 aid workers were killed, 171 seriously wounded, and 134 kidnapped globally<sup>4</sup>. High levels of violence against humanitarian actors continued in 2014, when at least 93 were killed, 53 wounded, and 98 kidnapped<sup>5</sup>.

In some of the most violent areas — Syria, Iraq, and Northeast Nigeria — a significant change has occurred in the paradigm of “terrorism”. From either single or coordinated attacks on symbols of State, or civilian populations, or international forces or organizations, there has been a shift to a full-fledged insurgency with the ability and sophistication to seize and hold territory. These new approaches have resulted in large areas of Nigeria, Syria and Iraq becoming inaccessible for “normal” delivery of polio vaccination strategies as they have deeply affected existing local governance structures in these countries through which polio vaccination efforts were being carried out. The seizing and holding of territory have also resulted in changes in the response to containing terrorism — from policing operations to large scale and multi-national military interventions; these military operations and outcomes also impact humanitarian interventions.

Thus for the polio programme, the withdrawal of State structures, personnel, and machinery in the most violent parts of a few countries has necessitated programme innovations, including remote planning, implementation and monitoring; third-party engagement of Non-State Armed Groups; and opportunistic approaches to reach children, as is being conducted in Nigeria.

In some other countries like Pakistan, Afghanistan and Somalia, the confluence of a more robust military intervention, disintegration of various militant groups into smaller sub-groups with weakened leadership, and both local and international political negotiations involving Anti-Government Elements (AGEs) continues to have an impact on access to children in many areas.

### ***The way forward to gain better access***

The GPEI continues to meet the demands of this challenging environment that faces the endemic and outbreak countries as well as those high-risk geographical areas that could suffer from poliovirus importations. While both endemic and outbreak countries continue to be the epidemiological focus, the Partnership continues to monitor and support these high-risk countries particularly in West Africa, Central Africa, Horn of Africa, and Ukraine. The systems that the GPEI have put in place — both for security assessments and mitigation, and for access analysis, planning and support, and that was reported in the September 2014 Status Report for the IMB, remain extant and has allowed the GPEI to respond to the issues raised in individual countries and regionally. This includes the agreed coordinated approach from initial analysis, methods to facilitate access, and the development of appropriate delivery approaches.

Furthermore, both UNICEF and WHO continue to build on the network of field security advisors and security analysts to enable programme delivery in high-threat environments. While security assessment missions have been conducted in various high-risk areas of polio priority countries and mitigation measures have been recommended to protect staff and property, there continues to be a critical need for rapid implementation and monitoring of these security recommendations, and necessary financing. The improved security capacity

<sup>4</sup> Abby Stoddard, Adele Harmer, and Kathleen Ryou, *Aid Worker Security Report 2014: Unsafe Passage: Road Attacks and Their Impact on Humanitarian Operations* (Humanitarian Outcomes, August 2014), <https://aidworkersecurity.org/sites/default/files/Aid%20Worker%20Security%20Report%202014.pdf>.

<sup>5</sup> “The Aid Worker Security Database (AWSDB),” *Humanitarian Outcomes*, n.d., <https://aidworkersecurity.org/>.

can also address increasing regional-level issues that might have both direct and indirect consequences to the polio programme. The benefits of the security and analytical support to the programme have been increasingly recognized within the wider humanitarian community with other United Nations (UN) agencies and organizations investing in this area of expertise. The GPEI should engage with all expert resources to ensure the provision of high-quality analysis required by the programme staff, and this will support the local level analysis and information required to address local level causes of inaccessibility, track cross-border issues affecting security, track mobile populations in areas that are hard-to-reach and develop appropriate solutions.

At the global level, the strategic response to securing access, addressing the security situation, improving programme delivery and reducing the number of children in hard-to-reach areas include:

- Providing mainstream security into all aspects of programme planning, implementation, monitoring and reporting;
- Supporting the direct or indirect engagement of all parties in areas of conflict, including the military, law enforcement, and non-state actors to secure access to children;
- Supporting various programme innovations (other than a house-to-house campaign approach) to access children, including remote programme planning and implementation in some areas;
- Highlighting the critical importance of “Community Acceptance” and beginning to operationalize a fully integrated approach to engaging communities at all levels to address community concerns and demands and thereby reduce security risk;
- Providing proactive analytical and wider research capability to support programme delivery in high-risk and inaccessible areas; ensuring that relevant data is collected, analyzed and rapidly made available to all decision makers and used for action to address security issues and related programme management, operational planning and quality of activities in the high-risk areas;
- Supporting systematic and ongoing efforts, including through scenario-based analyses, to understand and address specific access issues — closely tracking: emerging threats/ political instability/population movements in Western & Central Africa/HoA/Middle East/Pakistan/Afghanistan/Ukraine.

## ENDEMIC COUNTRIES

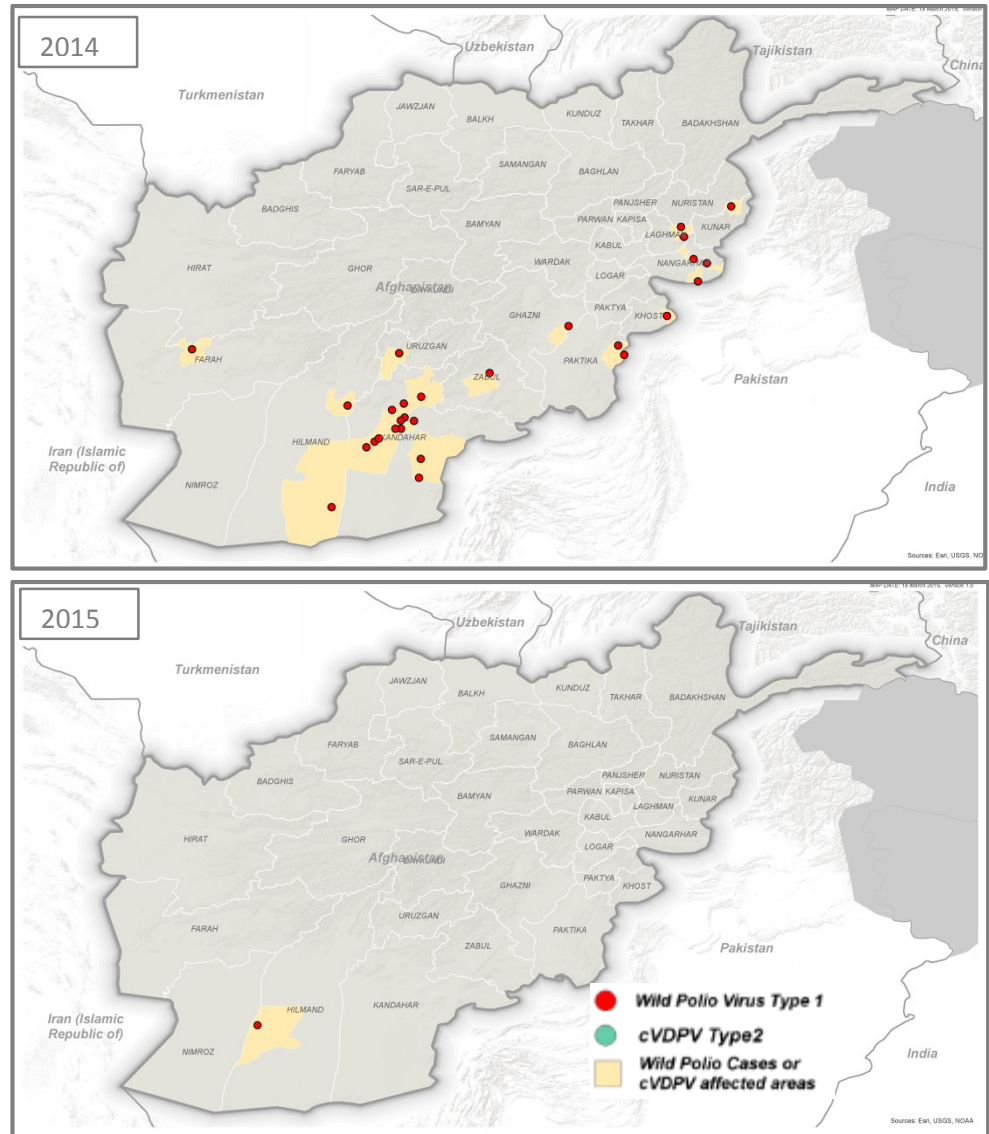
### AFGHANISTAN

#### NATIONAL POLIO OVERVIEW

The number of WPV1 cases in Afghanistan increased from 14 in 2013 to 28 in 2014; one case has been reported in 2015 (to date) compared with 3 cases during the same period in 2014. Since the last IMB report, the majority of cases have been in Kandahar, and to a lesser extent, the Eastern Region and Helmand.

SIAs have primarily used bivalent (types 1 and 3) oral poliovirus vaccine (bOPV) during 2014; 21 SIADs, four subnational immunization days (SNIDs), two national immunization days (NIDs). Trivalent oral poliovirus vaccine (tOPV) was used for 2 NIDs in 2014. Monovalent OPV type 1 (mOPV1) was used for one SIAD. An IPV campaign was completed in 11 of the low performing districts during Nov-Dec 2014. As of February 25, 2015, two SIADs and one SNID have occurred using bOPV.

Figure 16. WPV and cVDPV cases, Afghanistan, 2014 and 2015 to date\*



Source: WHO

\*Data as of 3 March 2015

After an interruption in access since March 2014, access to Helmand was granted in late August–November 2014 for SIAs. Access was again limited in December 2014–January 2015 and regained in February; subsequently three successive rounds of short interval campaigns were implemented, targeting more than 0.6 million children in the province. LQAS surveys indicated improvements in campaign quality during 2014 compared with 2013. “Permanent polio teams” that provide OPV to more than 400,000 children in 11 of the low performing districts, on a continual basis started to use tOPV in March 2013. The main challenge, having gained the access, is to improve campaign quality to interrupt local transmission and prevent establishment of circulation following importation from Pakistan. Additional challenges include maintaining programme neutrality, gaining access in Kunar in the East (one previously inaccessible district had breakthrough

negotiations and full access beginning in June), and strengthening programme management and accountability in accessible areas. The programme responded to the exodus of displaced persons from North Waziristan into Afghanistan during June–July 2014, by establishing 9 mobile teams, increased vaccination teams from four to eight at the border crossing points and special vaccination campaigns for children <10 years of age in the displaced person camps. More than 40,000 children were vaccinated with tOPV when entering Afghanistan; most had never previously received OPV (i.e., were zero-dose). No polio case has been reported from the Eastern region since September 2014.

An AFP surveillance review conducted in the last week of March 2015 concluded that the overall surveillance system is sensitive enough to detect poliovirus transmission in the majority of the areas. However, there are instances of compromised quality of the structure and functions, particularly in Helmand where the probability of missing transmission cannot be ruled out.

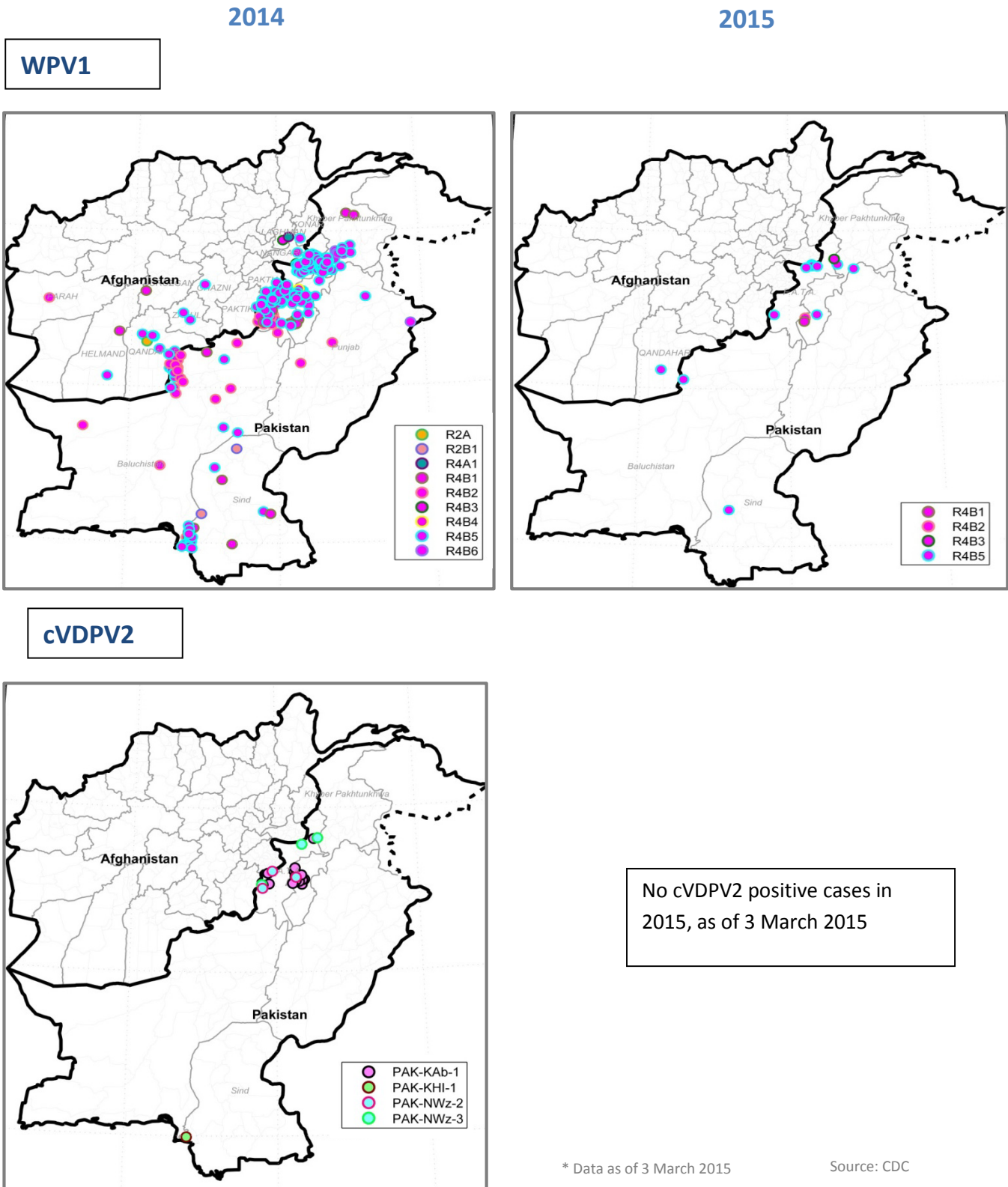
## VIROLOGY

During January 2014–February 2015, WPV1 viruses were isolated from 29 AFP cases genetically related to six genetic clusters (R2A, R4A1, R4B1, R4B2, R4B3, and R4B5). Most (23) of the viruses were related to cluster R4B5, the majority of which were linked to cases in Helmand and Kandahar where there was local circulation with frequent cross-border transmission with Pakistan (Baluchistan province). Genetic clusters detected in Afghanistan represent distinct importations from Pakistan, particularly KP and FATA (clusters R4A1 and R4B2) and also indicate local transmission (clusters R2A, R4B1, and R4B3). During the first half of 2014, three (33%) of the 9 WPV1 had less-than-expected genetic linkage to other viruses from Afghanistan or Pakistan, indicating surveillance gaps in either Afghanistan or Pakistan. Orphan viruses were detected in Laghman and Uruzgan provinces representing both indigenous and Pakistan-imported viruses that circulated undetected for >20 months. From the second half of 2014 until February 2015, no orphan viruses have been detected. Environmental surveillance in Afghanistan began in September 2013. During the second half of 2014 until February 2015, six environmental sentinel sites distributed in Nangarhar, Kandahar, and Helmand provinces detected WPV1. Viruses isolated from the environmental samples were genetically related to clusters R4B1, R4B2, R4B3, and R4B5. To date, no sites have had orphan viruses or VDPV detected.

No cVDPVs were detected during the February 2014 to February 2015 period. The last known detection of cVDPV2 in Afghanistan was in March 2013 with three cases detected, genetically related to Pakistan cVDPV2 emergence KAb-1

1. 29 WPV1 cases distributed in 10 provinces were detected in the past 13 months, including both local and cross-border transmission.
2. Although the numbers of cases increased, the proportion of orphan viruses has decreased, particularly during the second half of the reporting period.
3. No cVDPVs were detected during this period.

**Figure 17. Wild poliovirus type 1 (WPV1) by genetic cluster and circulating vaccine-derived poliovirus type 2 (cVDPV2) by emergence, Afghanistan & Pakistan, 2014 and 2015 to date\***

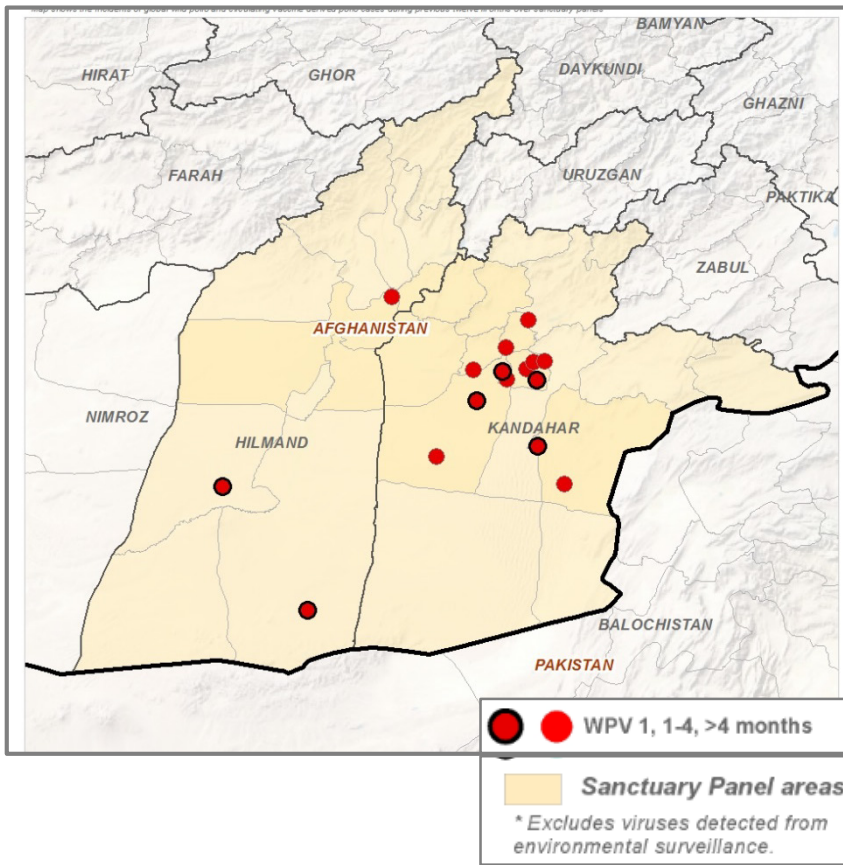




**POLIOVIRUS SANCTUARIES AND RISK AREAS**

**SOUTHERN SANCTUARY**

**Figure 18. WPV and cVDPV cases, Southern Sanctuary, 25 February 2014 to 24 February 2015\***



Source: WHO

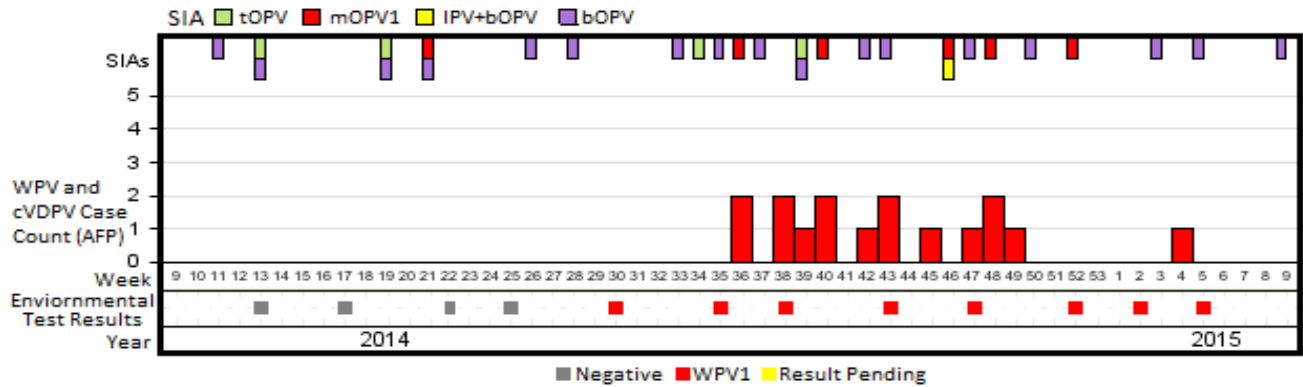
\*Data as of 3 March 2015

**NOTE:** this map does not display cases outside the sanctuary provinces

Afghanistan has one WPV sanctuary, Helmand and Kandahar Provinces, which historically were the main reservoir of endemic WPV transmission. Within that area, the country designated 16 LPDs because of inaccessibility, confirmation of endemic circulation in the previous 2 years, weak or declining SIA quality, low level of awareness of SIAs, and/or a disproportionately high percentage of young children with NPAFP who have never received OPV. In March 2015, the number of LPDs for this sanctuary increased from 16 to 20.

Notes regarding Afghanistan’s lot quality assurance sampling (LQAS) survey results (see next page): Decision rules of 0–3, 4–8, 9–19 and 20–60 for sample sizes of 60 provide a reasonable assessment of SIA quality at 90% (**High Pass**), 80% (**Pass**) and 60% (**Low**) thresholds (or **Fail** if below) for programmatic purposes under the assumption of moderate variability in cluster-level results.

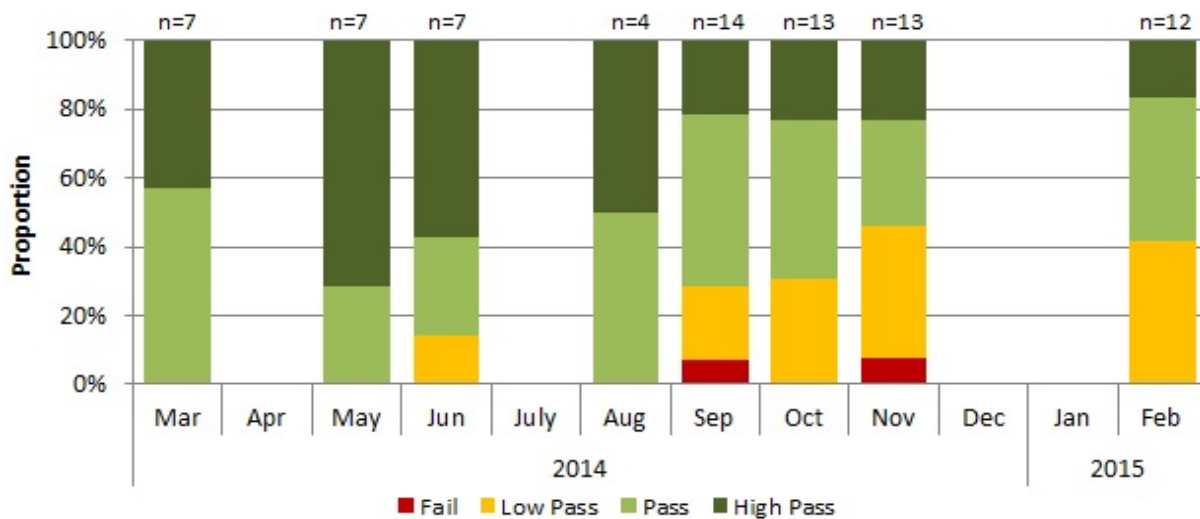
**Figure 19. WPV and cVDPV cases by week of onset, Southern Sanctuary (Helmand and Kandahar Provinces), Afghanistan, 25 February 2014 to 24 February 2015\***



Source: CDC

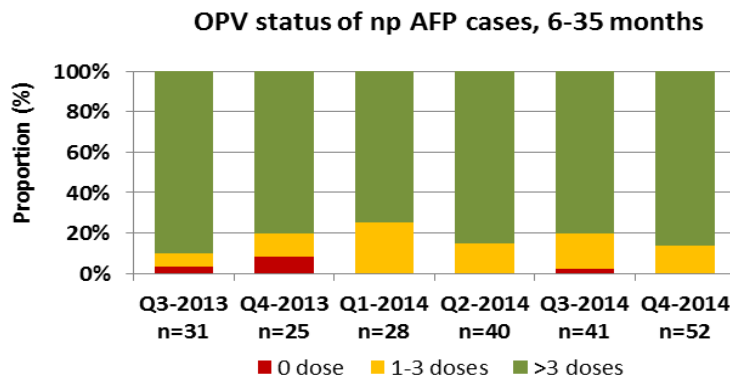
\*Data as of 3 March 2015

**Figure 20. LQAS survey results by SIA, Southern Sanctuary, Afghanistan, February 2014 to February 2015**



Note: The “n=” numbers shown above each month represent the number of districts for which data are available.

**Figure 21. Proportion of NPAFP cases 6–35 months, by OPV status, Southern Sanctuary, Afghanistan\***



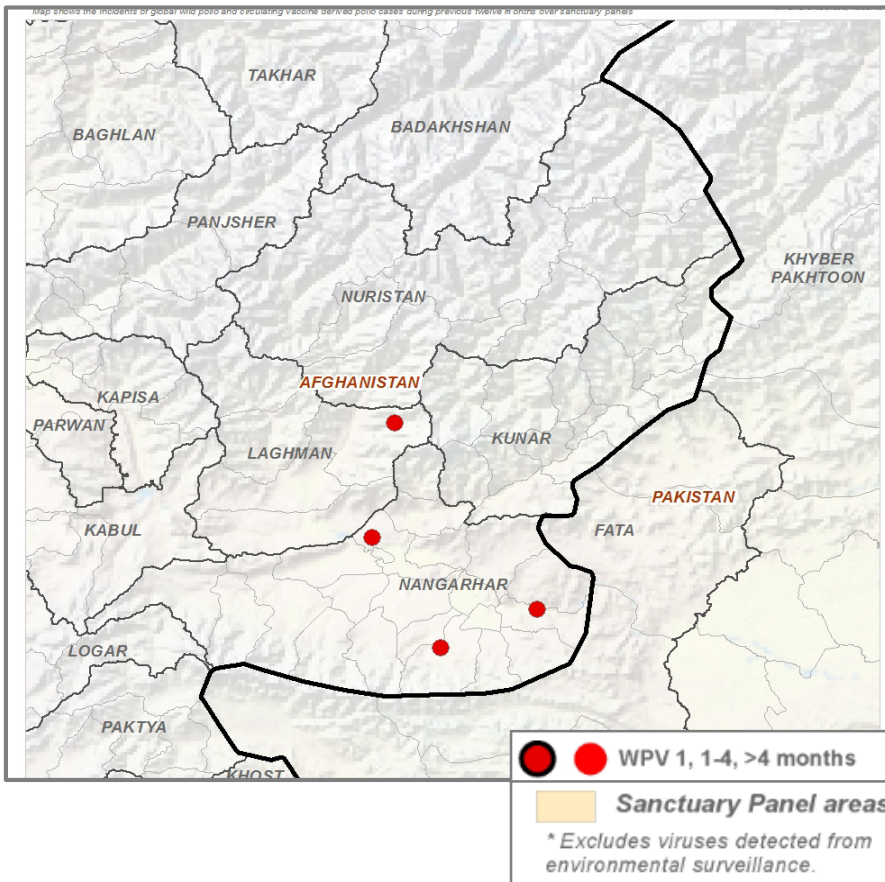
Source: WHO

\*Data as of 3 March 2015



**EASTERN RISK AREA**

**Figure 22. WPV and cVDPV cases, Eastern Risk Area, 25 February 2014 to 24 February 2015\***



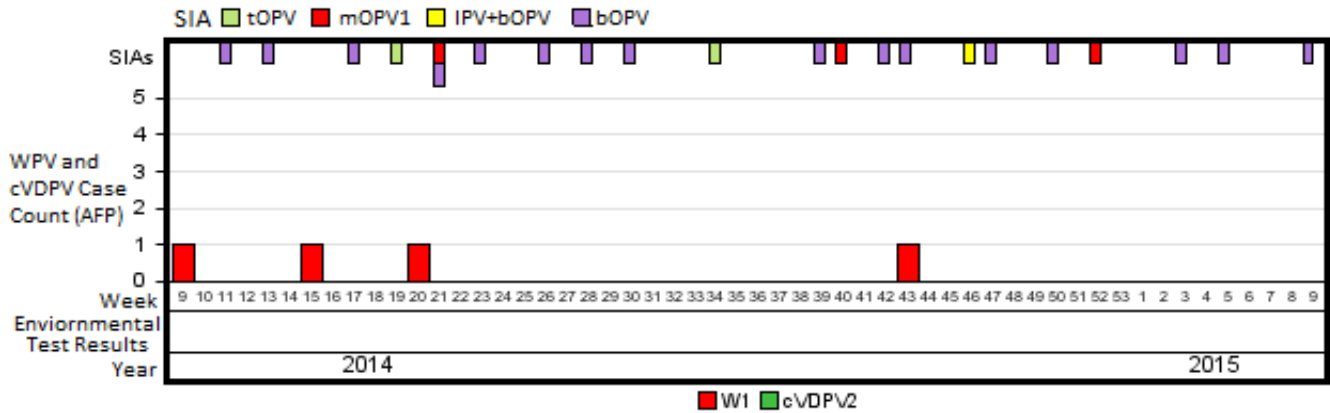
WPV from Pakistan has been imported into the east of Afghanistan during 2012–2014. In turn, the four provinces Nangarhar, Kunar, Laghman and Nuristan have been designated as the “Eastern Risk Area.” Five districts in the area were designated as LPDs in March 2015.

Source: WHO

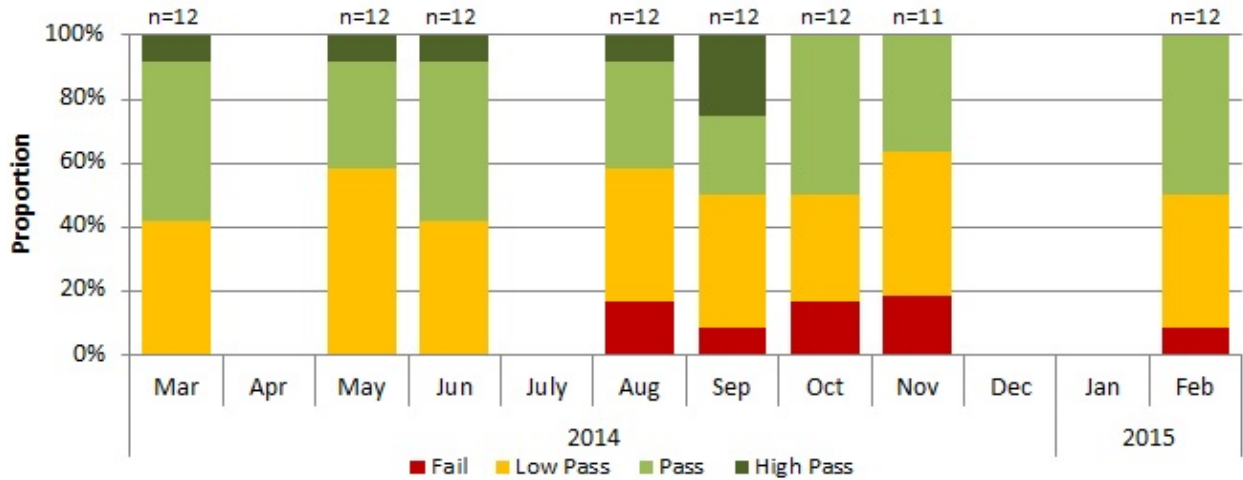
\*Data as of 3 March 2015

**NOTE:** this map does not display cases outside the risk area provinces

**Figure 23. WPV and cVDPV cases by week of onset in the Eastern Risk Area (Kunar, Nangarhar, Laghman, and Nuristan Provinces), Afghanistan, 25 February 2014 to 24 February 2015\***

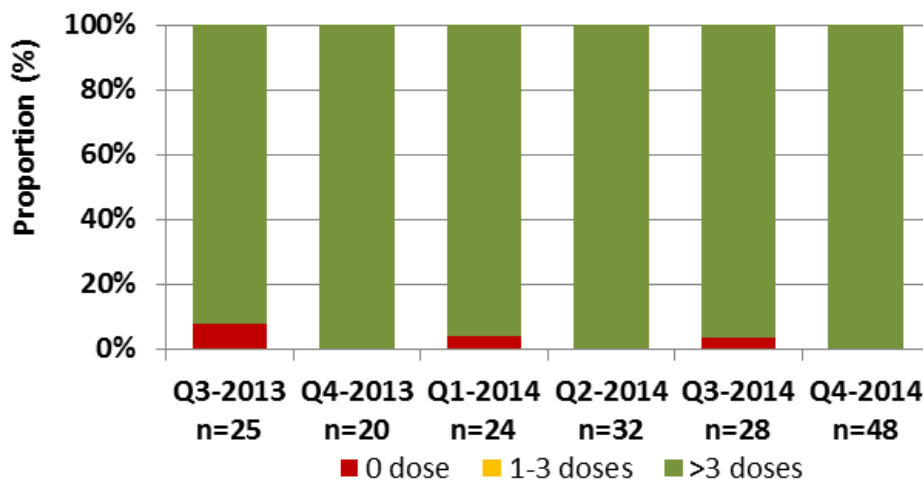


**Figure 24. LQAS survey results by SIA in the Eastern Risk Area Afghanistan, Mar 2014 to Feb 2015**



Note: The “n=” numbers shown above each bar month represent the number of districts for which data are available.

**Figure 25. Proportion of NPAFP cases 6–35 months, by OPV status, Eastern Risk Area, Afghanistan\***



Source: WHO

\*Data as of 3 March 2015

## REACHING MISSED CHILDREN

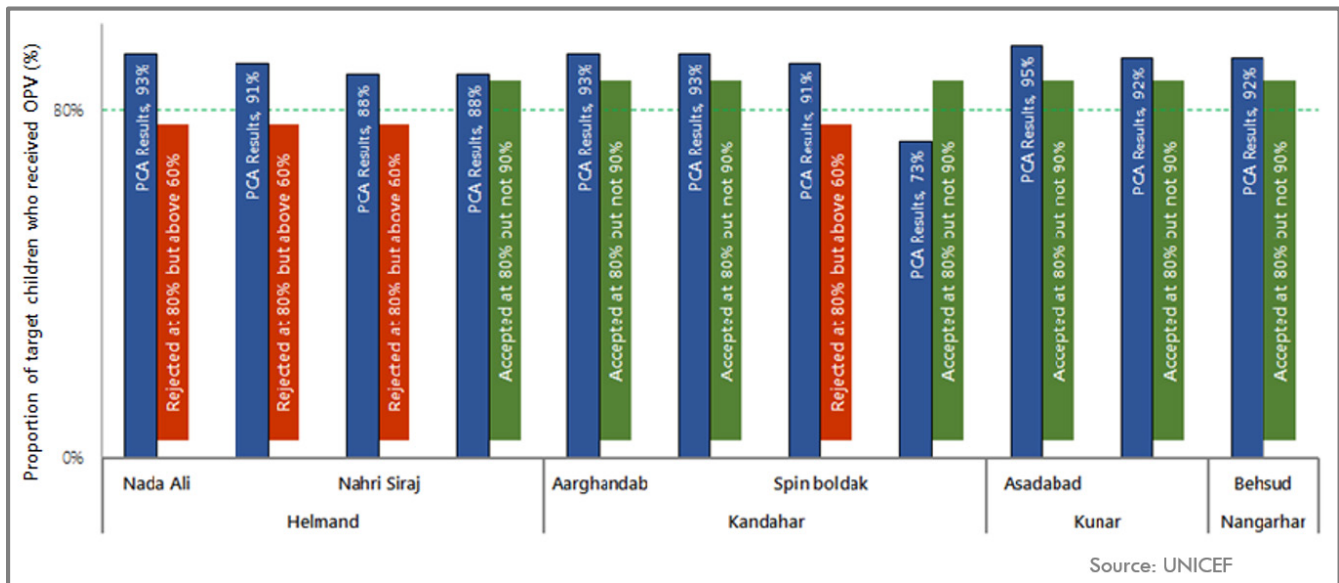
Afghanistan, particularly in the Southern and Eastern parts of the country, has been in political flux throughout 2014. The protracted electoral process and delay in formation of a new cabinet, particularly in identifying a new Minister of Health, as well as appointment of provincial health leads had implications on programme delivery at different administrative levels. December was the last official month of the International Security Assistance Force mission which morphed into the formation of Operation Resolute Support. AGEs are capitalizing on the withdrawal of significant numbers of international troops, the formation of the new coalition Government, and positioning ahead of high-level political negotiations to launch a greater number of attacks at the end of the year. The “fighting season” is expected to start earlier in spring 2015 than in years past, and this could have further implications on the efforts to stop transmission in southern Afghanistan.

Nearly 52,000 Afghans living in Pakistan have, within the past 10 weeks, returned to Afghanistan — more than twice as many as in the whole 12 months of 2014<sup>6</sup>.

### MISSED CHILDREN IN ACCESSIBLE AREAS

According to post-campaign assessment (PCA) and LQAS data, campaigns in Helmand and Kandahar frequently miss more than 10% of children on average (see Figure 4). Five accessible districts clustered in northern Kandahar and Helmand consistently miss more than 20% of children, and have occasionally missed up to 50% of children (see Figure 5). Although PCA data show coverage to be higher in February 2015 than in other months, no district in the Southern Provinces has reached the 90% threshold based on LQAS data, and half of the districts are not accepted at 80% (see Figure 26).

Figure 26. PCA and LQAS results of February 2015 campaign Priority 1 districts, Afghanistan



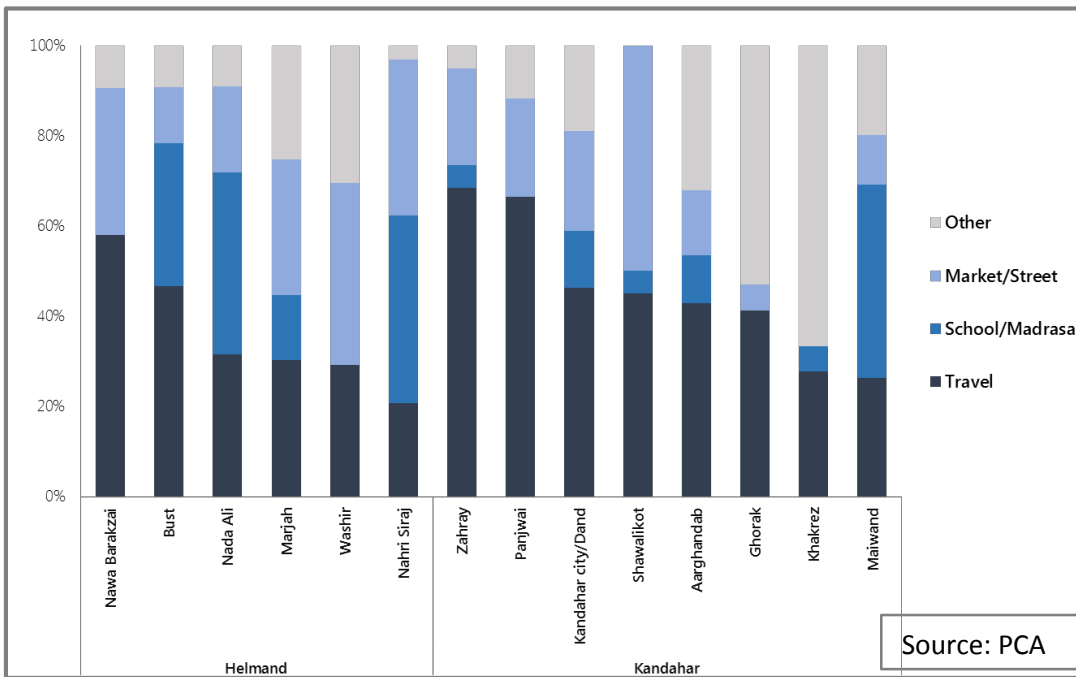
On average, the majority of missed children in the Southern and Eastern Regions are reported to be missed because they are unavailable, or because teams have not visited households in their area. However, the disaggregation of missed children differs significantly by area, indicating the importance of updated microplans using local and recent campaign data. In Helmand and Kandahar, for example, ‘child not available’ is the dominant reason for missed children, but refusals there are also significant, at approximately 2% of all children < 5 year of age (see Figures 3, 4 and 5). In the East, PCA data do not show refusals to be

<sup>6</sup> <https://www.afghanistan-analysts.org/the-refugee-dilemma-afghans-in-pakistan-between-expulsion-and-failing-aid-schemes/>

a problem, though recent Harvard polling data indicate significant challenges with community demand in Nangarhar Province. Whether through PCA data in the South or through Harvard polling data, Afghanistan is the only endemic country with such high rates of refusals and low community perceptions about polio and the vaccine.

A Harvard poll was conducted among more than 2,000 caregivers in high-risk districts of Kandahar, Kunar and Nangarhar in December 2014. According to preliminary data, 91% of parents (split evenly between men and women) across high-risk districts of the three provinces said they gave their children polio drops in the last round. Among the remainder, 5% said vaccinators did not visit their homes —10% in Kunar; 2% said the vaccinators came, but the child did not receive the drops, indicating a refusal or absence; and 2% could not answer the question because they had never heard of polio or a disease causing paralysis. These reported coverage data from parents reflect nearly the same analysis as PCA coverage data, which is not consistent with LQAS results.

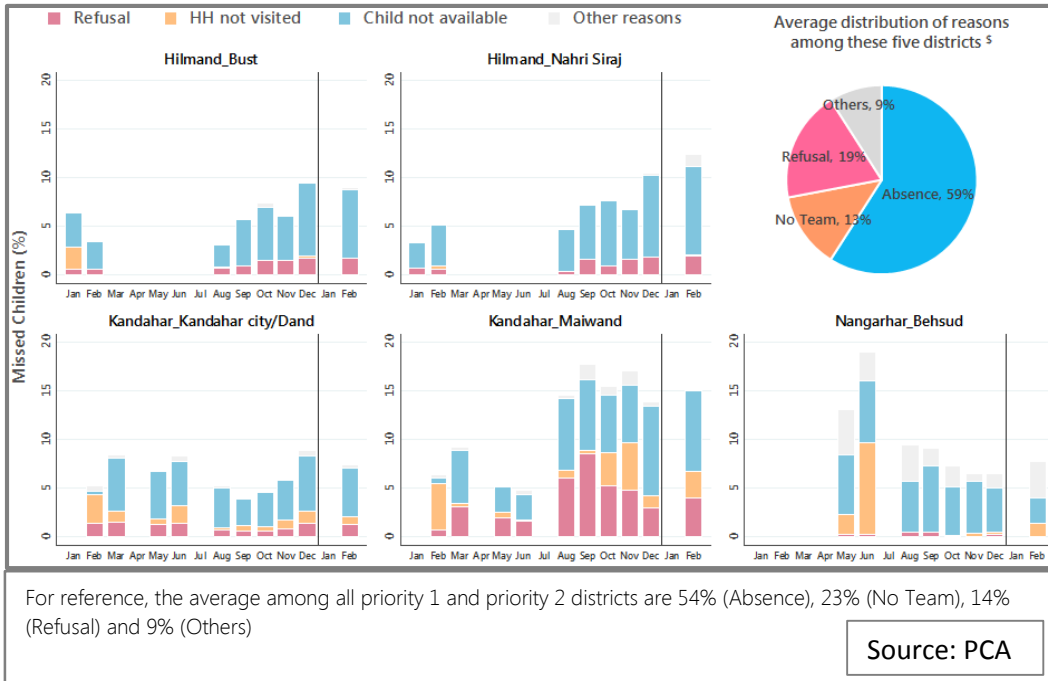
**Figure 27. Where were the absent children during February 2015 campaign Priority 1 districts, Southern Afghanistan**



Children are often unavailable when vaccinators arrive: Among missed children who were not available, 40% of households in the South and 60% in the East consistently reported their children to be ‘traveling’ between September 2014 and February 2015. But these data, too, vary

substantially by area. In Nahri Siraj, for example, 42% of children unavailable in the February campaign were at the market when teams visited. In Khakrez, Khandahar, nearly 30% of children who were unavailable were traveling. Where the more than 40% of the remaining children were is unknown — another indication of quality concerns in a district that frequently misses more than 20% of children, and missed 40% of children in December (see Figures 27, 28 by PCA).

**Figure 28. Trends in missed children in southern and eastern Afghanistan, selected districts**



Afghanistan has had a very intense campaign schedule in 2014: 20 rounds took place in the Southern Region alone during 2014. In the consistently low-performing districts, between 13 and 17 campaigns took place during the same period. Case response mop-ups were 13% of these activities, on average.

A review of

population immunity has shown a significant gap in some of the most important areas of the country, despite the high frequency of campaigns. Despite improvements from 2012 to 2013, the percentage of under-immunized children<sup>7</sup> in 2014 from Helmand remained approximately 20%. In Kandahar, the population immunity has shown some overall improvement from 2012 to 2014, but progress has varied from quarter to quarter, and immunity generally stagnated in 2014. The minimal improvement on the population immunity and the consistently low campaign coverage, indicate that a closer look at the quality and operational planning of campaigns is needed.

With the timing of campaigns occurring directly after one another — or in some cases, even overlapping — it is nearly impossible for the programme to incorporate data from the previous campaign in the planning of the next one. The joint review of campaign data that used to take place among partners after each campaign has ceased to be feasible with such an intensive schedule. Because staff are busy implementing one campaign after another, the processing and analysis of data after each campaign is also delayed, or in some cases, unused. Unlike Nigeria and Pakistan, which have both moved to electronic and shareable data platforms, Afghanistan’s system remains largely paper-based and housed within discrete systems among each partner agency.

### Community Demand

The Harvard Poll has revealed, for the first time, important insights into community demand and perceptions in some of Afghanistan’s high-risk districts. Generally, acceptance for OPV is high among caregivers who were polled: 97% of those surveyed in high-risk districts in Nangarhar, Kunar and Kandahar categorized OPV vaccination as a “very good” or “good” idea for their children. When researchers examined the caregivers’ reaction to repeated OPV vaccination, however, support waned. Only 78% of caregivers among the three provinces stated their intention to vaccinate “every time”. In Nangarhar, 21% of parents said they intended to

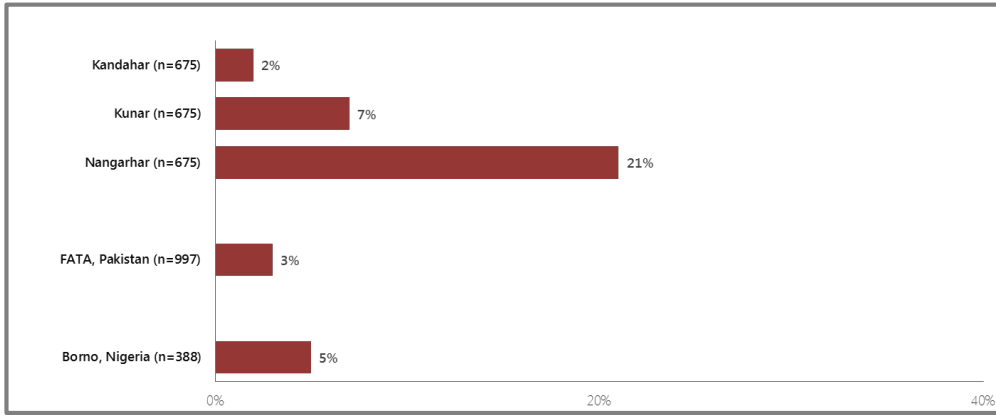
<sup>7</sup> Source WHO POLIS database: the number of OPV doses from the NPAFP cases

vaccinate their children only “just a few times”. In FATA, Pakistan and Borno, Nigeria in comparison — where these figures reach their peak among all high-risk areas of the two countries — less than 5% of caregivers said they intended to vaccinate their children “just a few times” (see Figure 29).

Nangarhar, too, is the only province where 67% of caregivers polled think the polio virus is curable (Figure 30). Caregivers in Nangarhar are two and five times more likely to hold this misconception about the permanence of polio than caregivers in Borno and FATA, respectively. In Kandahar, one third of all parents surveyed still believe paralysis from polio is curable.

With so many competing — and often life-threatening — risks in Afghanistan, unsurprisingly, parents polled did not rank polio very high on their list of concerns. Only 51% of parents in Nangarhar said they were “very concerned” their child would get sick with polio in the year. In Kunar, concern is even lower, at 47%.

**Figure 29. Caregiver Intent to Give Child Polio Drops “Just a few times” in Endemic Countries**



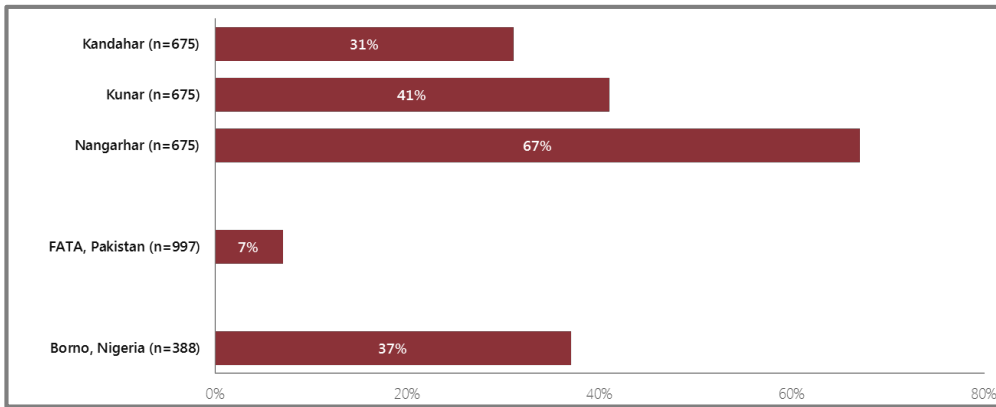
*% of caregivers saying they intend to give child polio drops “Just a few times” ... (other response options include “Every time”, “Most of the time”, “Just once” and “Never”)*

Afghan parents polled do not have a high degree of confidence in polio drops. Only 70% of caregivers on average believe the polio drops are “very effective” in protecting against polio (see Figure 31).

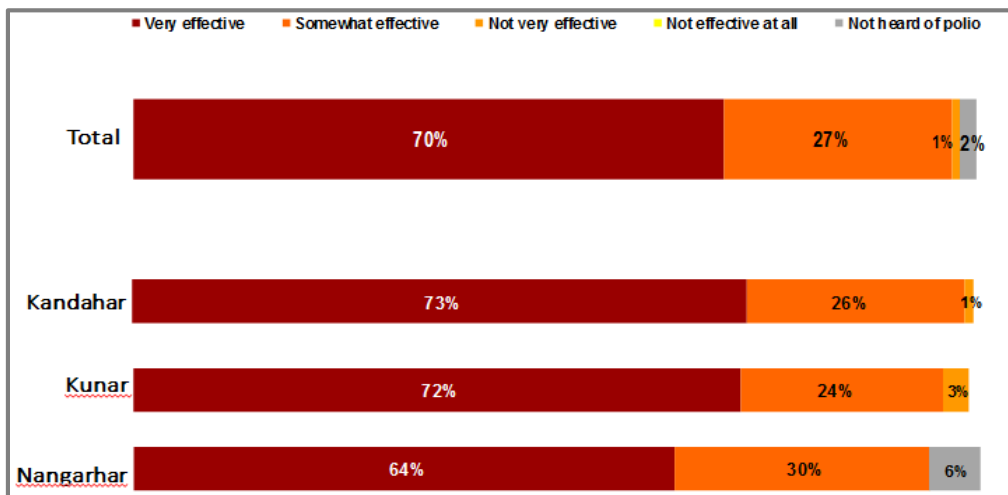
Destructive rumors about OPV in Kandahar and Nangarhar are the highest by far among any other endemic or outbreak country that has conducted polling. In Kandahar, 70% of caregivers said they heard at least one destructive rumor; in Nangarhar, this figure is 67%. Among all caregivers in these two provinces, 42% and 59%, respectively, believe at least one destructive rumor is true.

In FATA, Pakistan 33% of caregivers believed at least one destructive rumor (see Figure 32). In Borno, 11% of caregivers believe a rumor. The most prevalent rumor is that OPV can cause sterility in boys or girls; the

**Figure 30. Caregiver Misperception that Polio is Curable in Endemic Countries**



**Figure 31. Caregiver Belief in Polio Drops’ Effectiveness**



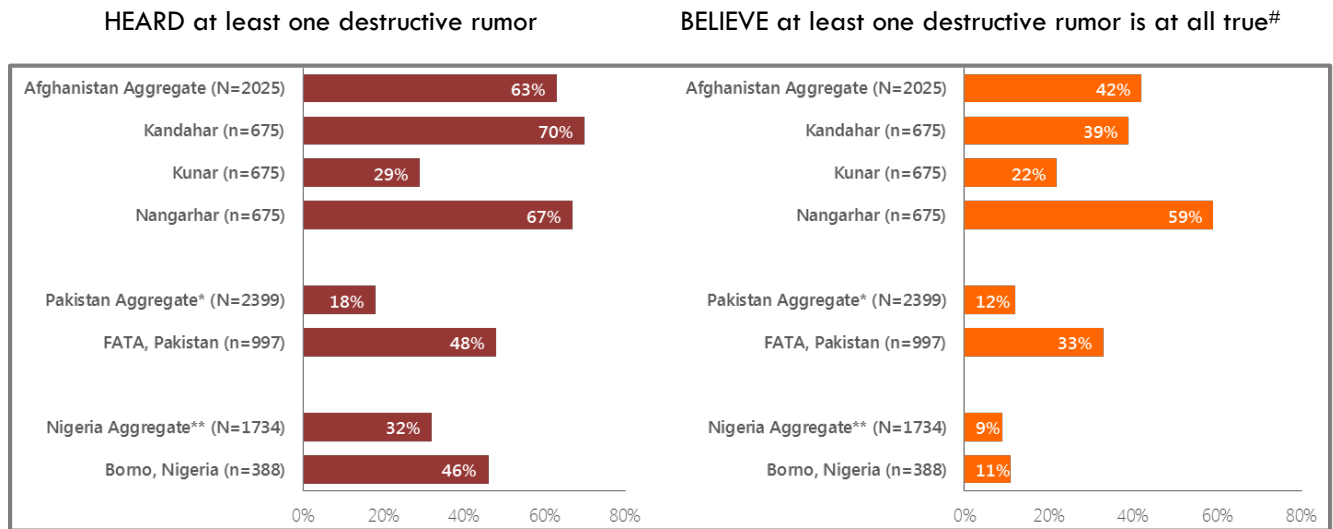
Note: Percentages may not add to 100% because of rounding and don’t know responses  
 Source (figures 30-33): Harvard Opinion Research Program, KAP Poll to support Polio Eradication, Afghanistan, Pakistan and Nigeria, 2014 – 2015



second most prevalent rumor is that OPV causes polio, or HIV/AIDS.

These misperceptions of the disease and the vaccine might explain the high rates of reported refusal in the Afghanistan’s Southern Region, though the very low refusal rates reflected by PCA data in the Eastern Region raise some questions. A closer look at missed children due to “not available” is warranted, as these families in the East and the South could be passively refusing the vaccine.

**Figure 32. Caregiver Awareness of and Belief in Destructive Rumors**



**Destructive rumors include:**

- Can make boys unable to father children later in life
- Can make girls unable to have children later in life
- Frequently can give a child polio
- Can give a child HIV/AIDS
- Are not halal
- Are made with urine or blood

\* Pakistan Aggregate excludes FATA, but includes 9 high-risk districts in three provinces (Balochistan, KP and Sindh);

\*\* Nigeria Aggregate excludes Borno and Kano states, but includes four high-risk states (Bauchi, Katsina, Sokoto and Zamfara);

# Mostly/completely true or mostly false

Source: Harvard Opinion Research Program, KAP Poll to support Polio Eradication, Afghanistan, Pakistan and Nigeria, 2014 – 2015

**Awareness**

Awareness of polio is high in Afghanistan, given that social mobilizers focus almost exclusively on raising awareness. Still, one would expect a near universal awareness of polio in Kandahar, where the Immunization Communication Network (ICN) has been working intensively for more than 5 years. Here, according to polling data, 83% of caregivers had heard of polio, and 17% had heard of a disease that causes paralysis, but could not identify it as polio.

Per PCA data, campaign awareness ranges from 60% in Nangarhar to 85% in Kandahar among caregivers in priority 1 and priority 2 districts in Afghanistan. Afghanistan is the only endemic country without a permanent social mobilization workforce dedicated to identifying missed children. Instead, this workforce is hired afresh each month and works only a few days before and after each campaign. Their key function is to inform families about polio, OPV and campaigns. As such, the role of the ICN worker in tracking and revisiting missed children remains very limited. Only one revisit day is available during the campaign, and the ICN workers — together with vaccinators — work on this day. When they revisit households to recover children, the lack of data records makes it difficult to monitor performance.

However, some preliminary evidence demonstrates the beneficial impact of female social mobilizers, with 11% in the 4149-person network. Data show that in Kandahar City, the clusters where female mobilizers work before and during the campaign show fewer missed children resulting from refusals, newborn, and sick and sleeping (see Figure 14). A potential replacement of social mobilizers with female Community Health Workers is being discussed at the country level. If this goes forward, greater engagement of women — and tracking of missed children — could be expected.

### **Quality on the frontline**

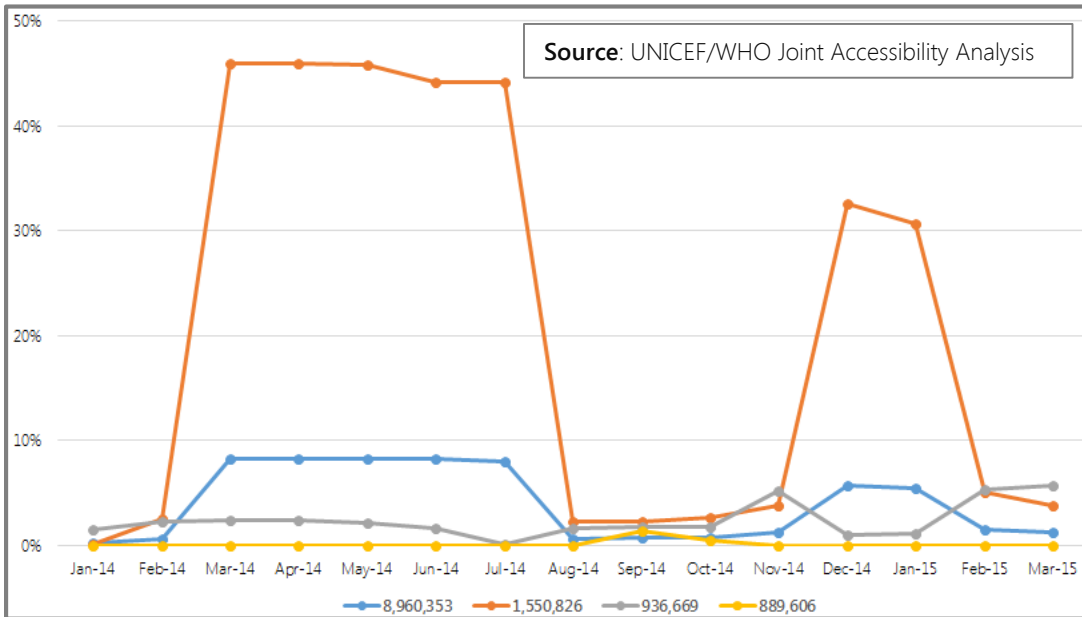
Delayed payment of frontline workers does not seem to be an acute problem in Afghanistan, though data are not available for all parts of the programme. Findings from a telephonic survey of social mobilizers found that 20% of social mobilizers in the Southern Region, and 30% in the Eastern Region received their payment at least 45 days after the campaign. Payments were also not received in full in approximately 40–50% of cases. DDMs are established to ensure transparent and timely payments to vaccinators, and Provincial and District Financial Committees are set up to supervise the financial disbursements. Expanding the telephonic survey to vaccinators could help determine if this model is proving successful. If so, perhaps it should be applied to ICN staff as well.

Although more than 87% of social mobilizers are trained on IPC for one day before each NID or SNID, vaccinators are equipped to speak to caregivers with only a 30–45 minute IPC session incorporated into vaccinator training. The quality of training in Afghanistan needs improvement. Afghanistan may benefit from reviewing and adapting the revamped vaccinator training that Pakistan is rolling out in all high-risk areas beginning in May.

**ACCESSIBILITY AND SECURITY**

Inaccessibility has fluctuated between 0.7% and 5.7% of the national target population in Afghanistan in the past year (see Figure 33.) Beyond the scale of inaccessibility has been the unpredictable nature of it.

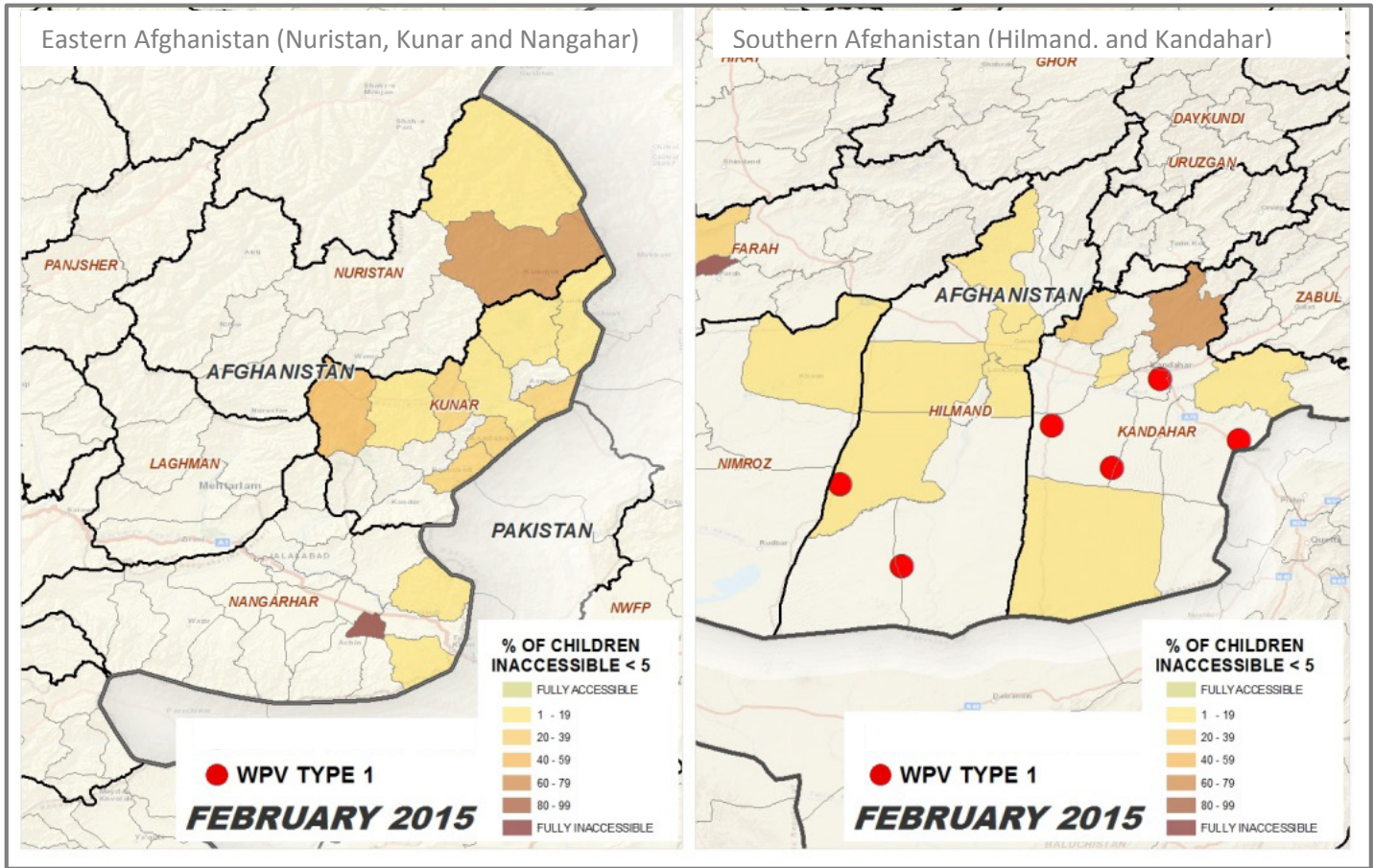
**Figure 33. Proportion of Missed Children due to Inaccessibility among Total Number of Children, Afghanistan, January 2014 to March 2015**



Districts often become suddenly inaccessible in Afghanistan and remain this way for several rounds. In addition to this sporadic inaccessibility, two significant periods of inaccessibility occurred in Helmand province in 2014 with the most recent having taken place in

December, but resolved in February of this year through negotiations at the country and global level. Although the “bans” were lifted in Helmand, many pockets continue to be difficult to access fully for programme implementation and monitoring. The lifting of a ban or support for the campaigns by AGEs leadership doesn’t necessarily translate into immediate access and quality campaign, specifically in Kandahar and Helmand. In a few of the Southern districts, AGEs interfere in the selection of key campaign workers and volunteers and may not allow campaign monitoring. A strong concern is that the polio programme will lose its “neutrality” and be exploited by all parties to the conflict. In the Eastern region, insecurity remains a major challenge in most districts of Kunar. Better information and understanding of the drivers and possible solutions in the consistently inaccessible districts is needed.

**Figure 34. Inaccessible areas, WPV1 cases and cVDPV2 cases in the recent 4 months, and the estimated proportion of children affected during the SIAs conducted in February, 2015 - Eastern Risk Area and Southern Sanctuary, Afghanistan\***



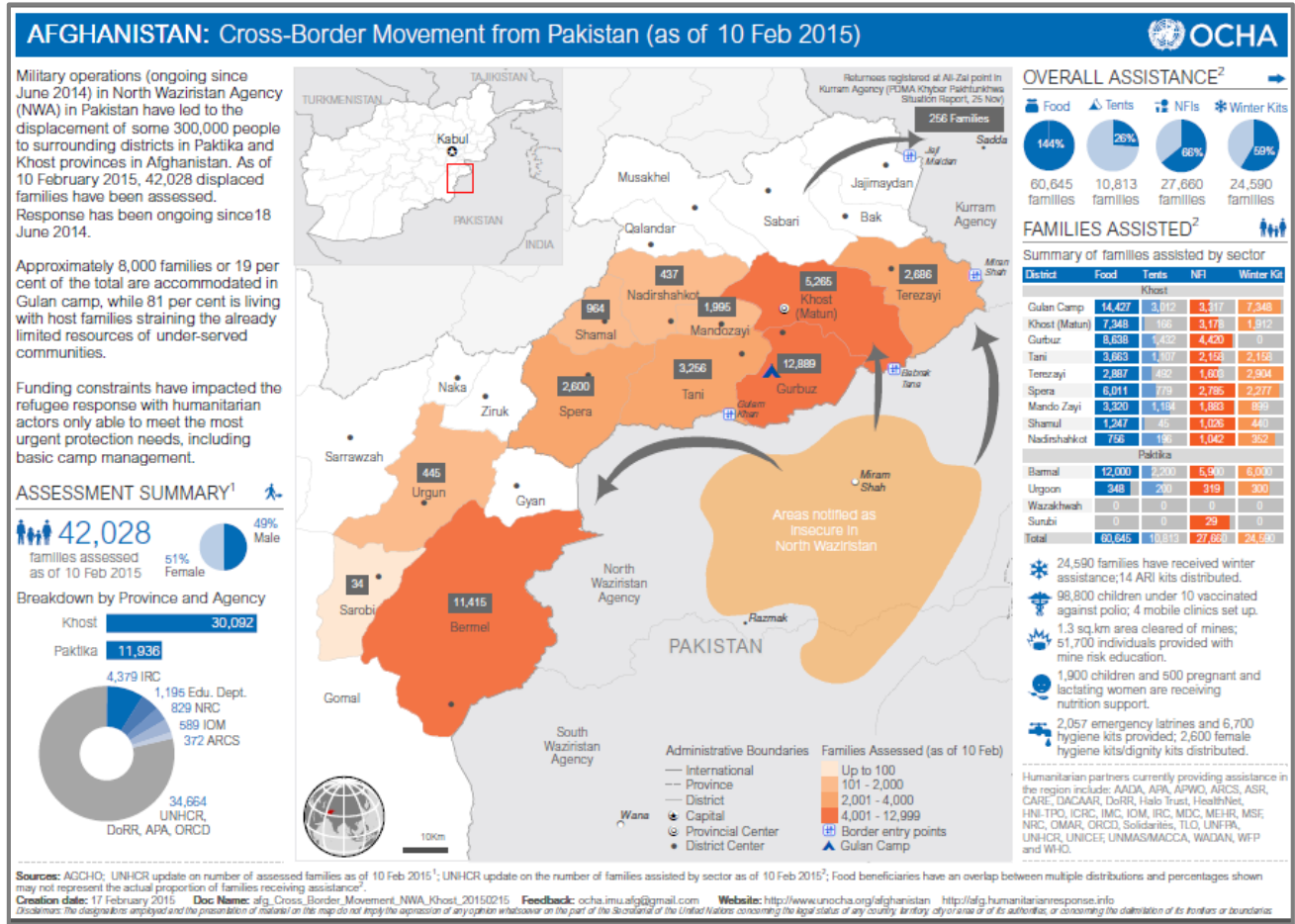
Source: WHO

\*Data as of 3 March 2015

Regional context: In the Afghanistan/Pakistan context, nearly 52,000 Afghans living in Pakistan have, within the past 10 weeks, returned into Afghanistan — more than twice as many as in the whole 12 months of 2014<sup>8</sup>. This started after the attack on a public army school in Peshawar on 16 December, killing 132 children and at least nine adults.

<sup>8</sup> <https://www.afghanistan-analysts.org/the-refugee-dilemma-afghans-in-pakistan-between-expulsion-and-failing-aid-schemes/>

Figure 35. Cross-border Movement from Pakistan



**Sources:** AGCHO; UNHCR update on number of assessed families as of 10 Feb 2015<sup>1</sup>; UNHCR update on the number of families assisted by sector as of 10 Feb 2015<sup>2</sup>; Food beneficiaries have an overlap between multiple distributions and percentages shown may not represent the actual proportion of families receiving assistance.  
**Creation date:** 17 February 2015. **Doc Name:** afg\_Cross\_Border\_Movement\_NWA\_Khost\_20150215. **Feedback:** ocha.imu.afg@gmail.com. **Website:** <http://www.unocha.org/afghanistan> <http://afg.humanitarianresponse.info>  
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## PROGRAMME INFORMATION

## OWNERSHIP

<b>National</b>	<b>Q2 '14</b>	<b>Q3 '14</b>	<b>Q4 '14</b>	<b>Q1 '15</b>
National EPI Committee Weekly Meetings held with minutes available	Yes*	Yes	No**	No
Polio Policy Dialogue Group Quarterly Meetings held with minutes available	Yes	No	No	No
President's Quarterly Meeting with Governors held	No	No	No	No
Inter-Ministerial Task Force Quarterly Meetings held	Yes	Abolished	Abolished	Abolished
<b>Regional</b>				
<b>Regional</b>	<b>Q2 '14</b>	<b>Q3 '14</b>	<b>Q4 '14</b>	<b>Q1 '15</b>
Regional/Provincial EPI Management Teams Monthly Meetings held	Yes	Yes	Yes	Yes

\* Held fortnightly

\*\*Meetings held with minutes during the early part of the quarter

## Percent of Southern Region Low Performing Districts meeting preparedness indicators

## Indicator: District Coordination Committee Meetings Held (yes / no)

<b>Low Performing Southern Region Districts</b>	<b>Aug '14</b>	<b>Sept '14</b>	<b>Oct '14</b>	<b>Nov '14</b>	<b>Dec '14</b>	<b>Jan '15</b>	<b>Feb '15</b>
Districts Participating	12	12	12	12	12	12	12
Preparedness indicator met	33	42	17	17	25	25	25
Shahwalikot	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Maiwand	No	No	No	No	No	No	No
Panjwai	Yes	Yes	No	No	Yes	Yes	Yes
Boldak	Yes	Yes	No	No	No	No	No
Bust (Lashkar Gah)	No	No	No	No	No	No	No
Nahesaraj	No	No	No	No	No	No	No
Nadali	No	No	No	No	No	No	No
Sangin	No	No	No	No	No	No	No
Nawa	No	No	No	No	No	No	No
Washir	No	No	No	No	No	No	No
Zarai	No	Yes	No	No	No	No	No
Kandahar City*	Yes	Yes	Yes	Yes	Yes	Yes	Yes

**Abbreviations:** EPI=Expanded Programme on Immunization**Source:** Afghanistan Campaign Dashboard, WHO-Afghanistan

\* Meeting in Kandahar is not at district level but is the Provincial Coordination Committee Meeting which is held regularly before each campaign.

## Percent of Eastern Risk Area Low Performing Districts meeting preparedness indicators

Indicator: District Coordination Committee Meetings Held (yes / no)

Low Performing Eastern Region Districts	Aug '14	Sept '14	Oct '14	Nov '14	Dec '14	Jan '15	Feb '15
Districts participating	6	6	6	6	6	6	6
Preparedness indicator met	100	83	100	100	100	100	100
Asadabad	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Watapur	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Marawara	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pech	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Chapadara	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lalpur	Yes	No	Yes	Yes	Yes	Yes	Yes

Abbreviations: EPI=Expanded Programme on Immunization

Source: Afghanistan Campaign Dashboard, WHO-Afghanistan

## HUMAN RESOURCES

Location	Total number of vaccination teams	Number (%) of vaccination teams with a female member	Number (%) of vaccination teams with a local member	Salary per vaccinator per day	Number of current GPEI staff			
					PEI Coordinator	Provincial Polio Officer	District Polio Officer	Total
Kandahar and Helmand	3,155	115 (4%)	1,398 (95%)	\$4.33	2	17	19	38
Nangarhar, Kunar, Laghman and Nuristan	2,842	142 (5%)	2,842 (100%)	\$3.47	1	12	12	24

\*UNICEF supports 40 District Communication Officers and five Provincial Polio Communication Officers in Kandahar and Helmand. In the Eastern Region, UNICEF supports 25 District Communication Officers and three Provincial Polio Communication Officers

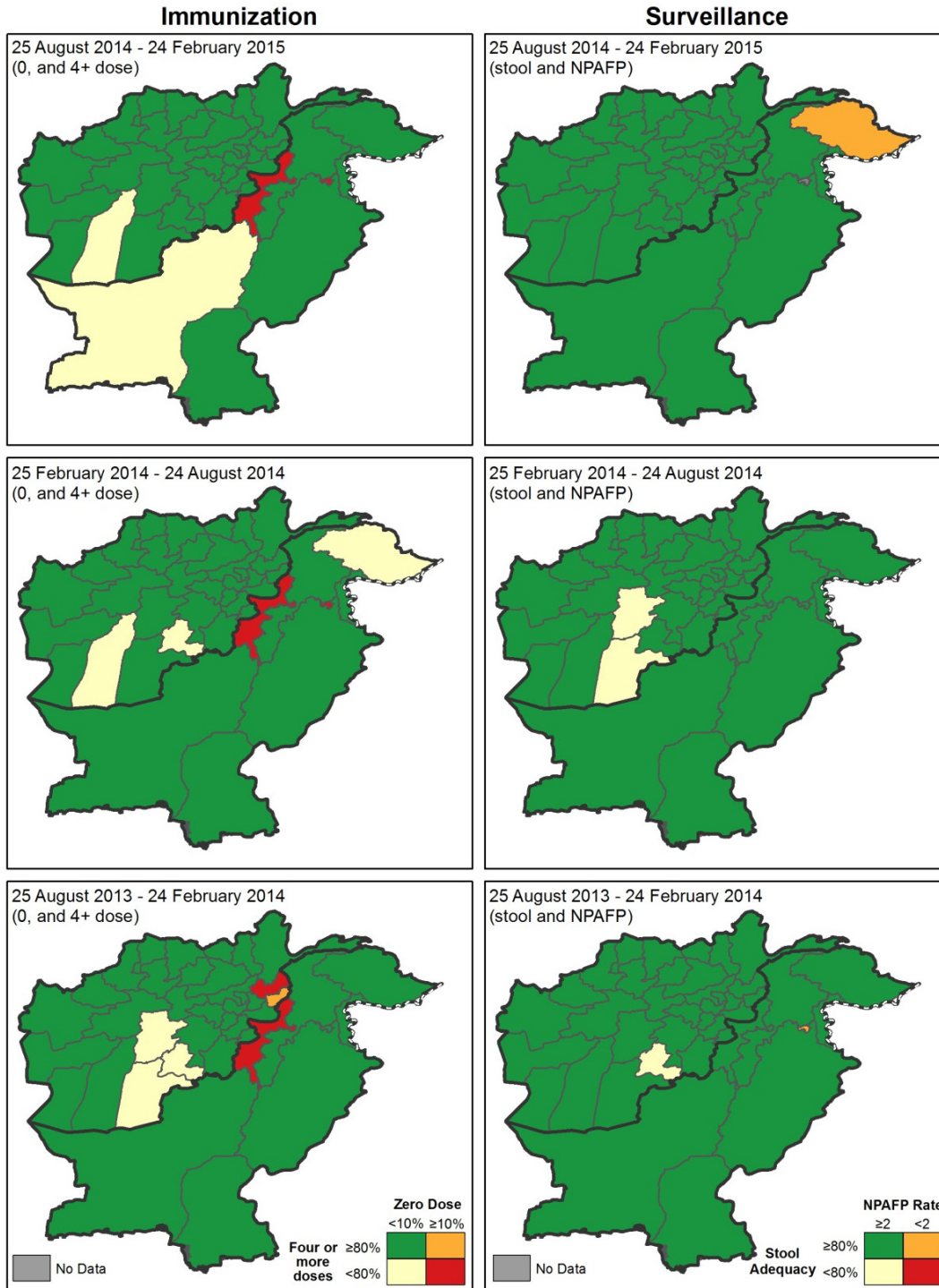
## ROTARY INTERNATIONAL'S WORK IN AFGHANISTAN

Rotary continues to engage in targeted activities intended to help raise awareness for the polio eradication effort in Afghanistan, and has invested a total of \$77 million in funds to support polio eradication efforts there. They have conducted social mobilization activities such as arranging a training event for 60 Mullahs and religious leaders in Behsood district in December 2014. The committee also held a cricket match series in December to raise awareness, and the event was organized jointly with the youth and cricket teams of Afghan Youth Connect (AYC) in Jalalabad, which took place during 12–14 December. Rotary's National PolioPlus Committee Chair is collaborating closely with partners and recently met with representatives from the Bill and Melinda Gates Foundation (BMGF) and UNICEF during visits to the country. Rotary has also participated in inaugural SNIDs, and attended meetings on routine immunization. Since April 2014, Rotary has provided financial support for the Indian Travelers project in all parts of the country — support that was recently extended with funds provided to the National EPI Department of the Ministry of Public Health for vaccination cards and cold chain registration materials through March 2016.

**PERFORMANCE INDICATORS**

**IMMUNIZATION AND SURVEILLANCE**

**Figure 36. Six-month standard immunization indicators among children aged 6–35 months with NPAFP and annualized surveillance indicators by province, Afghanistan and Pakistan August 2013 to February 2015\***



Source: CDC

\*Data as of 3 March 2015

## GPEI POLIO ERADICATION AND ENDGAME STRATEGIC PLAN 2013–2018, AFGHANISTAN

STRATEGIC PLAN OBJECTIVE	OUTCOME INDICATORS (2013)	RESULTS	STATUS	
<b>Poliovirus Detection and Interruption:</b> Complete the interruption of wild poliovirus transmission globally and more rapidly detect and interrupt any new outbreaks due to vaccine-derived polioviruses	All wild poliovirus transmission stopped by the end of 2014		<b>Not Met</b>	
	All new cVDPV outbreaks stopped within 120 days	There were no identified cVDPV cases in 2014 or in 2015 to date.	<b>Not Applicable</b>	
	<b>OUTPUT INDICATORS (2013)</b>			
	Achieve and maintain an NPAFP rate* of $> 2/100,000$ in all states/provinces of high-risk countries and maintain an NPAFP rate of $> 2/100,000$ in all states/provinces	In the last 12 months, the national NPAFP rate was 13.0/100,000, a relative 17% increase from the previous year. All 32 provinces have maintained a NPAFP rate $> 2/100,000$ this last 2 years.		<b>Met</b>
	Achieve and maintain adequate stool sample collection in 80% of cases in all states/provinces	Nationally, 95% of AFP cases had adequate stool specimen. This is a 1.5% relative increase from last year. All 32 provinces have maintained adequate stool collection in $\geq 80\%$ of AFP cases during the previous 12 months, which represents a slight increase from 97% the previous rolling year		<b>Met</b>
	LQAS passed at 80% threshold in all high-risk areas	LQAS assessments continue to be limited. Using available data, of the LQAS assessments conducted in the Southern Sanctuary and Eastern Risk Area, 60% have passed the 80% threshold.		<b>Not Met</b>
	Establish full safety and security framework	A security management plan is in place as part of the overall security framework. Improvement of dialogue with anti-government elements (AGE) in the Southern Region resulted in improved access to children during SIAs in the South. Improvements also occurred in the Eastern Region following improved coordination with AGE, through intermediaries.		<b>Established</b>
	All current cVDPV outbreaks stopped by end-2013			<b>Met</b>

\*NPAFP case rates are based on number of AFP cases observed among 100,000 children  $< 15$  years of age per year of follow-up.



## SYNOPSIS

- Epidemiology:** Case counts decreased 62% in 2013 compared with 2012. However, in 2014, the case counts rose again to 28, a 50% increase from 2013. As of March 9, 2015, one case has been reported compared with three cases for the same period in 2014. WPV1 cases in the Southern Region in 2014 indicated that the endemic spread of WPV1 transmission in this part of Afghanistan continues. The viruses from several cases had circulated undetected for many months, indicating a surveillance gap. Seven of the 29 WPV cases that occurred in Afghanistan during 2014–2015 to date were reported in eastern provinces bordering/near to the KP and FATA Sanctuaries in Pakistan. No cVDPV cases have been detected during 2014 or 2015 to date.
- Immunization:** From February 2014 to February 2015, the proportions of children missed in SIAs as measured by PCA ranged up to 87% at some point in LPDs. NPAFP data from the endemic Southern Region suggest improvements in vaccination coverage during 2012 but worsening during 2013 and remaining relatively low in the previous 12 months overall, particularly in Helmand province where SIA vaccinations were suspended. NPAFP data suggest stabilization in vaccination coverage in the Eastern region.
- Security:** The volatile nature of the security situation continues to intermittently disrupt the ability to operate but is limited; the access situation in the South overall has steadily improved since 2012. Negotiations through the International Committee of the Red Cross and through the ICN in the Southern Region as well as the partnership's own efforts have been successful in reducing the number of children missed because of inaccessibility, including regaining access in Helmand in late August 2014 and again in February 2015. Credible channels of communication have been established to engage the AGE leadership systematically through intermediaries.
- Surveillance:** AFP performance indicators and virologic data had in the past suggested substantial surveillance gaps. In the most recent period, stool specimen adequacy has improved and virologic evidence suggested improved performance. Although the number of cases increased in the current period compared with the prior 12 months, the proportion of orphan viruses has decreased, particularly during the second half of the reporting period when no orphan viruses have been detected.
- Ownership:** At the national level, indicators suggest strong ownership within the Ministry of Public Health but variable ownership elsewhere. There is concern whether the new government will take ownership of the programme. Even now, meetings of the Inter-Ministerial Task Force and of high-level governors with the President have been postponed consistently. Ownership is strong among health leaders at the provincial levels but weak (in the Southern Region) to variable at the district level.
- Community demand:** Among 23 Priority 1 and 2 districts in Helmand and Kandahar provinces, refusal accounted for 19% of all missed children; absence accounted for 57%; and no team accounted for 19%. Polling data indicate a high proportion of parents believe that polio is curable and have a low incentive to allow administration of multiple doses of vaccine.
- Way forward:** With ongoing endemic transmission and the risk of importation, volatile access, a high proportion of chronically missed children due to operational issues, lower immunity in Helmand, and significant fractures in community demand, Afghanistan requires critical attention in 2015. The establishment of an EOC in Nigeria and Pakistan has significantly helped with coordination and quality improvements, and given the amount of time it takes to establish these with full functionality, Afghanistan may consider establishing a coordinated management mechanism like EOC as soon as possible. Although the number of cases in Afghanistan has remained relatively low, the presence of indigenous virus in Helmand and Uruzgan is evidence of the fact that Afghanistan cannot continue to be seen as a casualty of Pakistan's persistent transmission.

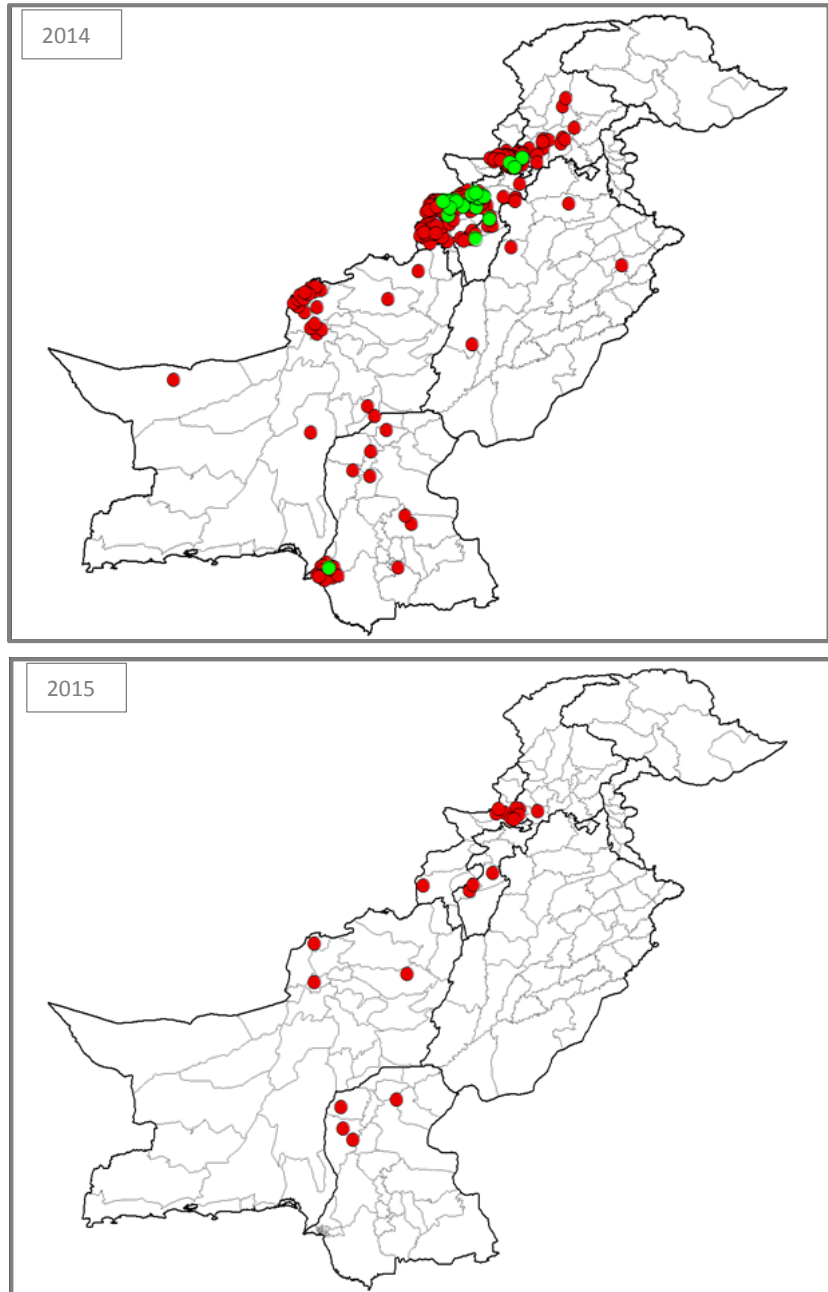
## PAKISTAN

### NATIONAL POLIO OVERVIEW

The number of WPV cases in Pakistan more than tripled in 2014 compared

with 2013; 306 cases from 44 districts were reported in 2014 compared with 93 cases from 23 districts in 2013. This increase was driven by the outbreak in North Waziristan. Cases started decreasing in 2014 after a peak in September 2014 (see Figure A). With the exodus of previously inaccessible children after the launch of military operations in North Waziristan in June, access to children improved in these areas and subsequently a rigorous low season plan was launched. The exodus of the unimmunized population from North Waziristan resulted in cases and positive environmental specimens in previously unaffected areas; however, to date, spread in these areas has been limited. Since November 2014 to date, 78 cases were reported from 25 districts. As of 16 April, 21 cases have occurred from 12 districts in 2015, compared with 58 cases from nine districts for the same period in 2014. During 2014–2015, 57% of cases occurred in FATA (mainly in Khyber and North Waziristan Agency, which had 44% and 38% of the cases reported in FATA respectively); the remaining cases were in KP, Sindh, and Balochistan. Ninety percent of cases in 2015 have been among children aged <36 months, 19% of whom were zero-dose OPV compared with 83% of whom were zero-dose in 2014; 80% of the zero-dose cases were from North Waziristan. No WPV3 has been detected in Pakistan since April 2012. In 2014, 21 cVDPV2 cases were reported from seven provinces; no cVDPV cases have been reported during 2015 to date.

**Figure 37. WPV and cVDPV cases, Pakistan, 2014 and 2015 to date\***



Source: WHO Pakistan \*Data as of 15 April 2015

● WPV1 ● cVDPV2

Nine SIAs have been conducted since November 2014; four NIDs in December 2014, January, February, and March 2015 have been conducted. SIAs have used bOPV and tOPV. In SNIDs, both mOPV1 and bOPV were used and IPV was used in SIAs in Karachi, Quetta, Bannu, and Peshawar. The quality of SIAs as shown by the number of LQAS passing at 80% has improved progressively; 56% of the lots passed in December NIDs, 63% in January NIDs, 74% in February NIDs, and 71% in March NIDs, though below the programmatic target of 90% pass [using local threshold criteria. Two SNIDs are planned between now and the end of May 2015.

Operational problems and challenges caused by insecurity persist in the three poliovirus reservoirs — FATA (Khyber Agency), Peshawar, and surrounding districts of central KP and Karachi — as well as in the Quetta risk area. Military operations in Khyber Agency have affected campaign frequency and quality; Bara has the highest risk in Khyber now and virus from Bara has spread to Jamrud in late 2014 and 2015. This has also affected Peshawar where the majority of cases are genetically linked to cases in Khyber. The successive vaccination rounds in Peshawar during 2014 did raise population immunity levels compared with 2013, but missed some pockets of children (estimated to be at least 15,000), allowing continued low-grade local virus circulation. These issues were further complicated because the low season plan had not been implemented in Bara and parts of Jamrud until February 2015. A round of SIAs was held in Bara and Jamrud in February 2015; the available assessment results indicate better quality compared with 2014. IPV/OPV campaigns were successfully implemented in Peshawar and Bannu in March 2015.

Karachi, a major amplifier of WPV, is another reservoir where insecurity has hampered vaccination efforts. Three SIAs were canceled during December 2014 through March 2015 because of limited security personnel to protect vaccinators across Karachi megacity. The programme adopted staggered SIAs to provide maximum security to the 49 high-risk UCs. Furthermore, the ongoing community-based vaccination initiative through local female community volunteers (FCVs) and female community mobilizers (FCMs) is gearing up in the eight very high-risk UCs of Karachi. Starting from 30 March, the entire area of these UCs will be covered through the FCVs. The FCVs vaccinate once every 10 days in the assigned area in addition to providing other basic healthcare services to the local community. The LQAS results in the areas covered by the FCVs have shown better coverage since late February. Also, for the first time in last 6 months, all three environmental samples collected from Gadap Town Karachi were negative for WPV. Eighty-three percent of environmental samples collected in Karachi were negative for WPV in February and March 2015.

Although Quetta was reaffected with active transmission because of virus coming out of Karachi, the recent environmental samples collected in February and March were all negative for WPV, although it is low season. However, Peshawar continues to have WPV cases and continuous positive environmental samples. One environmental isolate detected in 2015 was an orphan virus, which indicates some remaining gaps in surveillance and immunization. The inability to reach chronically missed children with multiple OPV doses in key reservoirs is the single major obstacle to interruption of WPV transmission in Pakistan.

## ENVIRONMENTAL SURVEILLANCE

Environmental surveillance is ongoing at 34 sites throughout the country, including in two of the three poliovirus sanctuaries (all but FATA) and the Quetta Risk Area. The frequency of detection of WPV from several environmental sites increased in 2014 and continues in 2015. In 2014, 131 of 372 samples (35%) were positive. In 2015 to date, as of 16 April, 41% were positive. No WPV3 has been detected in environmental specimens since October 2010. cVDPV was detected in environmental specimens from Sindh throughout 2014 and in January 2015.

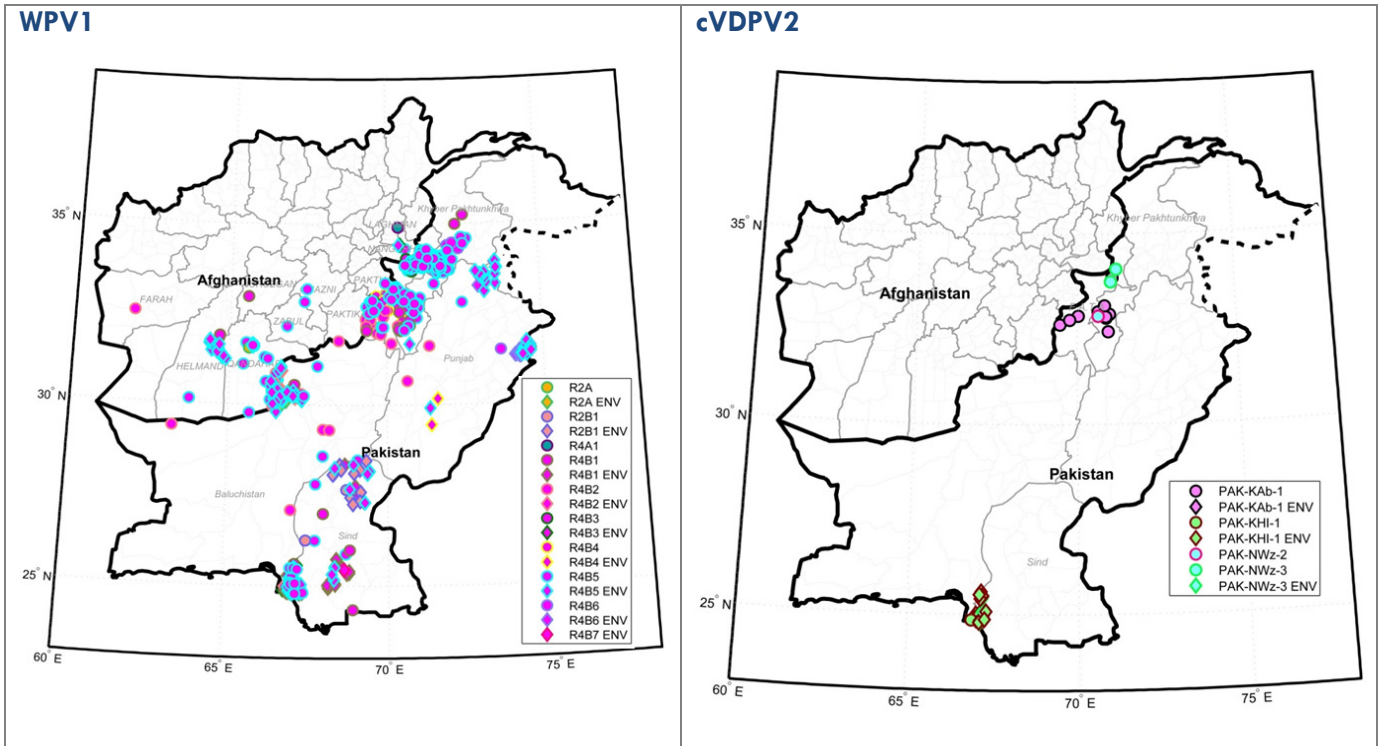
## VIROLOGY

See also Figure 17. During February 2014–February 2015, both virus circulation and genetic diversity increased substantially compared with the last report. WPV1 was detected from 329 cases, primarily during the second half of 2014 (64%). Genetic diversity increased from five genetic clusters described in the last report to seven genetic clusters detected during the past 12 months. Most (68%) cases were genetically related to cluster R4B5, which sustained high levels of virus circulation in FATA and KP. High levels of local virus circulation were detected in the core reservoirs in FATA (N Waziristan, S Waziristan, and Khyber) and KP (Peshawar and Bannu) and in reservoirs in Baluchistan (Quetta) and Sindh (Karachi). Transmission outside the core reservoirs was also detected. As of 16 April, the most recent WPV1 was detected in an AFP case with onset date 17 March 2015 in Peshawar, KP, not indicated in maps here. The number of WPV1 detected from environmental samples increased during the reporting period. WPV1 were distributed in seven genetic clusters and were detected from sentinel environmental sampling sites located in four provinces (Baluchistan, KP, Punjab, and Sindh). One WPV1 was detected from an environmental sample collected from Islamabad in January 2015. During 2014, 11 orphan viruses (4% of AFP cases) were detected, mostly localized in FATA and KP provinces. Orphan viruses were also detected in environmental samples collected in KP, Baluchistan, Sindh, and Punjab provinces. The latest orphan virus was detected in an environmental sample collected in Lahore (Punjab) in January 2015.

During February 2014 to February 2015, four VDPV emergences remained active (KAb-1, KHI-1, NWz-2, and NWz-3) resulting in 16 cVDPV2 cases in FATA, KP, and Sindh. The onset of the most recent case was 13 December 2014. Twenty-two cVDPV2 isolated from Pakistan environmental specimens collected in Sindh were genetically related to Kab-1, KHI-1, and NWz-3 emergences. Six independent ambiguous VDPV2 (aVDPV2s) were detected in FATA in the past 12 months and one aVDPV2 was detected in Punjab. One VDPV2 from a case with onset on 23 June 2014 had less genetic linkage than expected from sensitive surveillance.

1. Both WPV1 and cVDPV2 circulation increased during the reporting period in 2014 compared with 2013, due principally to sustained endemic transmission in FATA.
2. Viral genetic diversity and levels of virus circulation were highest in FATA in 2014.
3. The proportion of WPV1 isolates with less genetic linkage than expected has slightly decreased compared with the previous 12 months. In addition, continued detection of long-standing WPV circulation only by environmental surveillance provides virologic evidence of gaps in AFP surveillance.

**Figure 38. WPV1 and cVDPV2 cases and environmental isolates by genetic cluster (WPV1) and emergence (cVDPV2), Pakistan, Onset: 25 February 2014 to 24 February 2015\***



Source: CDC

\* Data as of 3 March 2015



## POLIOVIRUS SANCTUARIES AND RISK AREAS

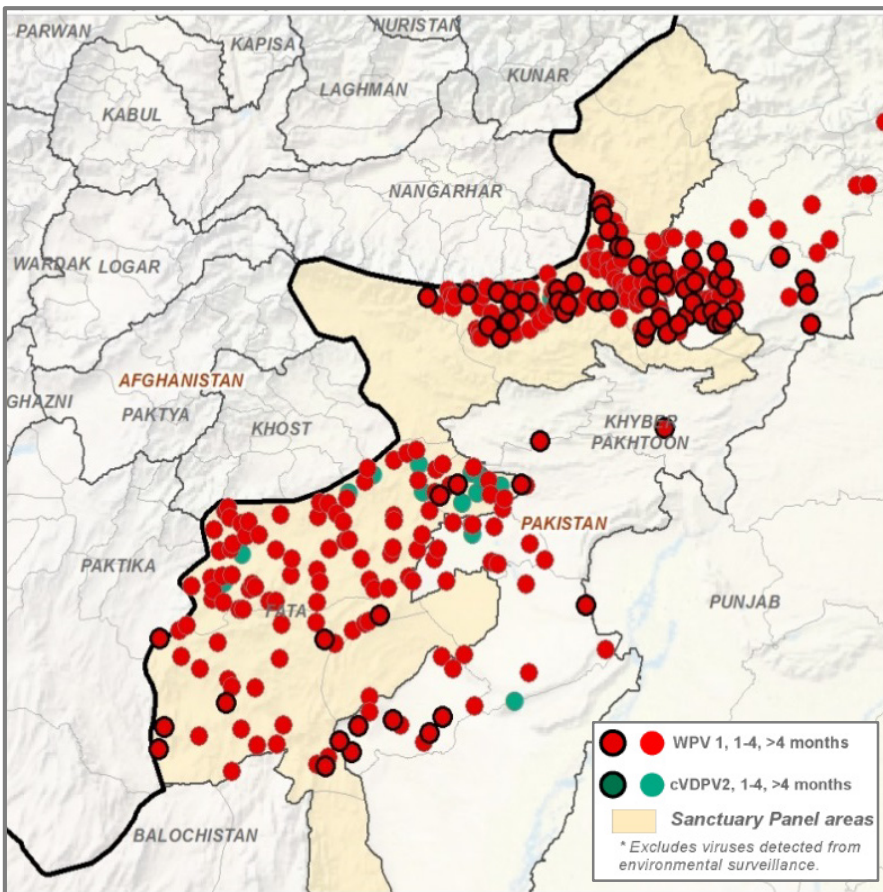
At the time of this report, Pakistan has three designated virus sanctuaries and one risk area:

1. Federally Administered Tribal Areas (FATA) Sanctuary (Khyber Agency)
2. Central and Southern districts of Khyber Pakhtunkhwa province (KP) Sanctuary (primarily Peshaswar and surrounding districts)
3. Karachi Sanctuary
4. Quetta Risk Area

The Quetta block (Quetta, Killa Abdullah, and Pishin) had been included as a sanctuary previously. Evidence suggests that indigenous poliovirus is no longer circulating there since late 2013, although poor performance indicators and recent circulation indicate ongoing risk. This area is considered to be the Quetta Risk Area.

### FATA POLIOVIRUS SANCTUARY

Figure 39. WPV and cVDPV cases, FATA Sanctuary, 25 February 2014 to 24 February 2015\*



**Note:** LQAS surveys provide an assessment of SIA quality through a limited sample obtained from random cluster sampling. LQAS surveys in many areas affected by conflict or security problems in Pakistan have not been conducted at all, to avoid raising the visibility of the programme, or are not conducted in randomly selected areas but rather in areas selected based on feasibility regarding the security situation. This will lead to correspondingly biased results that may overstate SIA quality.

Other notes regarding LQAS:

- Pakistan has continued to use “old” decision rules (‘O’) of 0-5, 6-7, 8-12 and  $\geq 13$  for samples of five clusters of 10 children (50) and six clusters of 10 (60) for testing at thresholds of 95%, 90%, and 80%. These rules overstate SIA quality. Please refer to discussion of methodological limitations in previous reports.

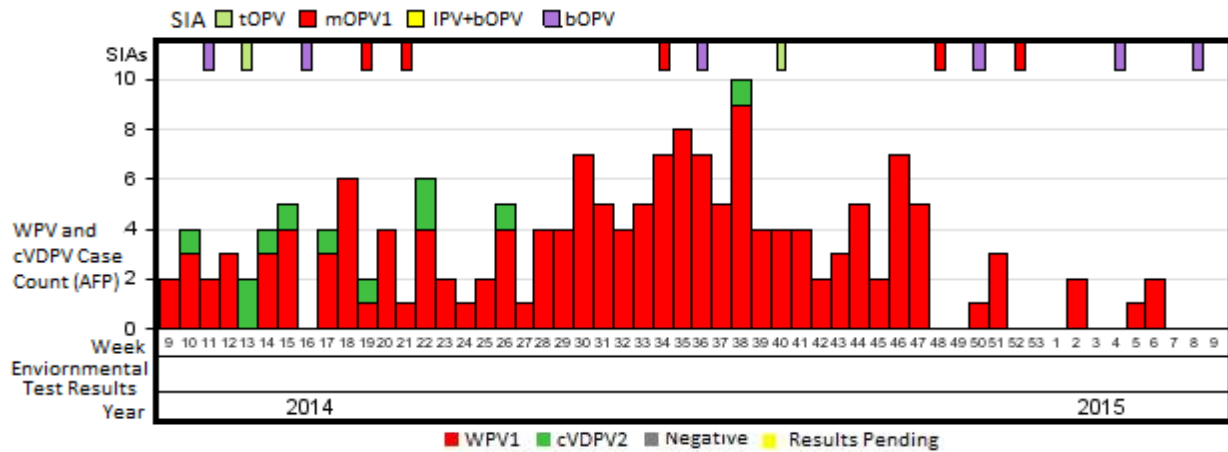
- “New” decision rules (‘N’) of 0, 1-2, 3-6, and 7-50 for sample sizes of 50 and 0, 1-3, 4-8, and 9-60 for

sample sizes of 60 provide a more reasonable quality assessment at 95% (**High Pass**), 90% (**Pass**), and 80% (**Low**) thresholds (or **Fail** if below) for programmatic purposes under the same assumption of variability.

Source: WHO

\*Data as of 3 March 2015

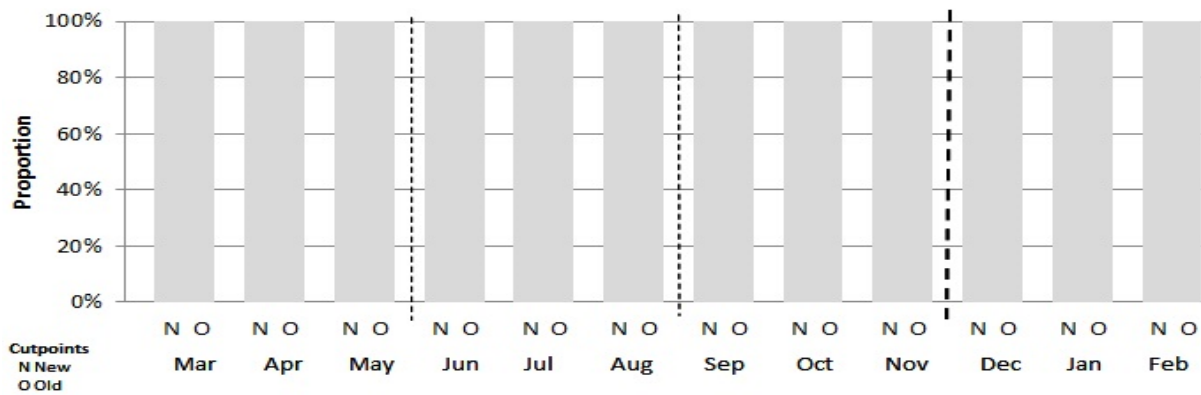
**Figure 40. WPV cases by week of onset and environmental surveillance results, FATA Sanctuary, Pakistan, 25 February 2014 to 24 February 2015\***



Source: CDC

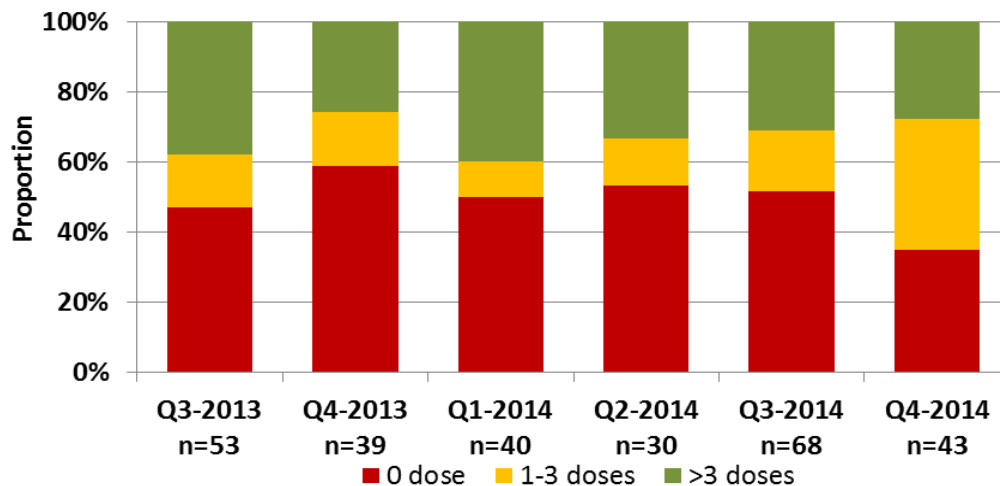
\*Data as of 3 March 2015

**Figure 41. Proportion of Union Councils with LQAS survey results by SIA, FATA Sanctuary, Pakistan, March 2014 to February 2015**



Note: LQAS not conducted in FATA from March to February 2015. Since June 2012, SIAs have not been conducted in North or South Waziristan or in parts of Khyber Agency.

**Figure 42. Proportion of NPAFP cases 6 to 35 months, by OPV status, FATA Sanctuary, Pakistan**



Source: WHO

\*Data as of 3 March 2015

**OWNERSHIP**

Percent of Union Councils with indicators met for each campaign

FATA Sanctuary	Aug '14	Sept '14	Oct '14	Nov '14	Dec '14	Jan '15	Feb '15	Mar '15
UPEC meeting held			77	40	61	64	79	36
UPEC chaired by UCMO			74	66	77	77	79	49
Microplan Validated			95	73	95	95	95	81

≥1 Government member			86	84	84	85	85	78
≥1 Local member			100	100	100	100	100	87
≥1 Female member			10	13	12	10	11	12

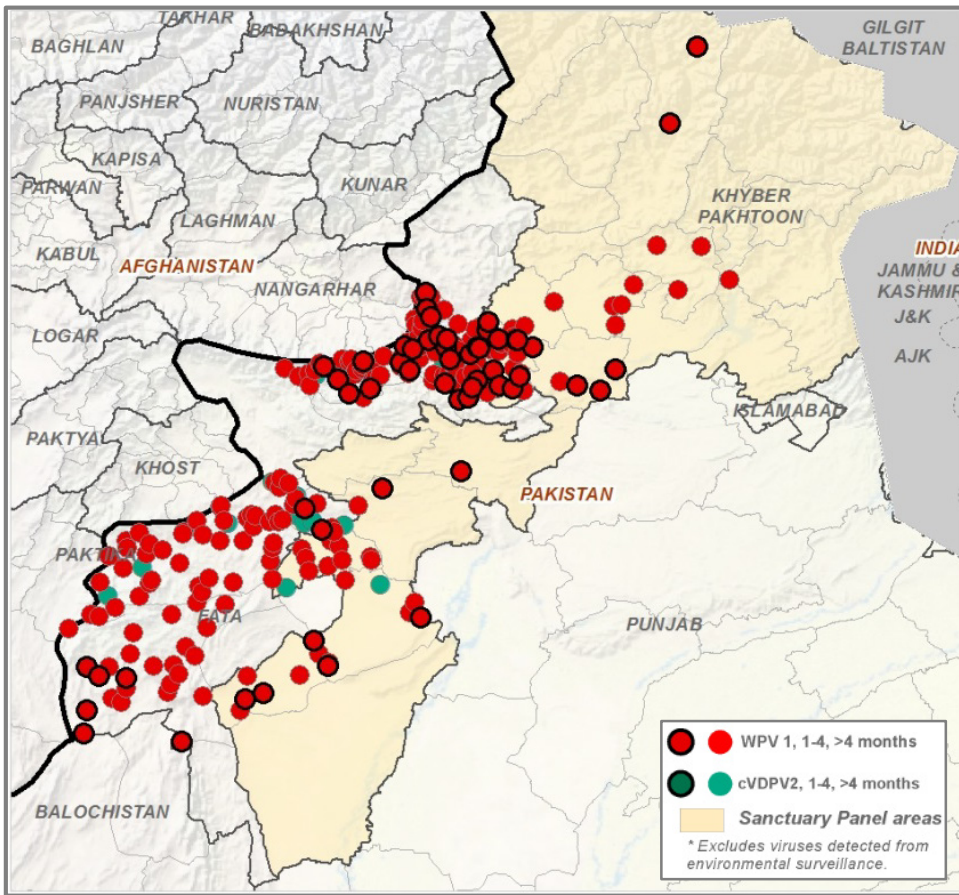
**Abbreviations:** UPEC=Union Council Polio Eradication Committee  
UCMO=Union Council Medical Officer

**Source:** Pakistan National Emergency Action Plan Indicators, WHO-Pakistan

No campaign
No data

**CENTRAL AND SOUTHERN KHYBER-PAKHTUNKHWA SANCTUARY**

Figure 43. WPV and cVDPV cases, KP Sanctuary, Pakistan, 25 February 2014 to 24 February 2015\*

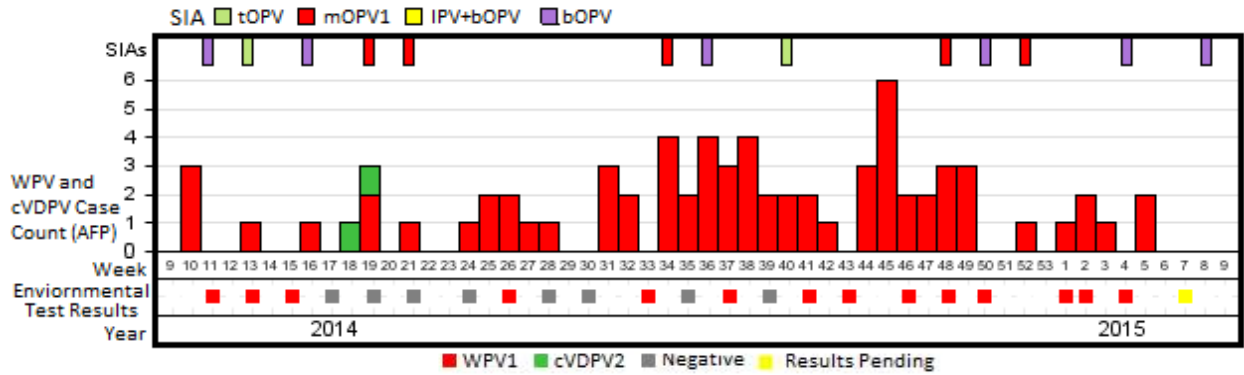


This reservoir consists of Central KP (Peshawar, Nowshera, Swabi, Charsaddah, Mardan districts) and Southern KP (Bannu, Tank, Lakki Marwat districts). Data to follow are presented for the entire province.

Source: WHO

\*Data as of 3 March 2015

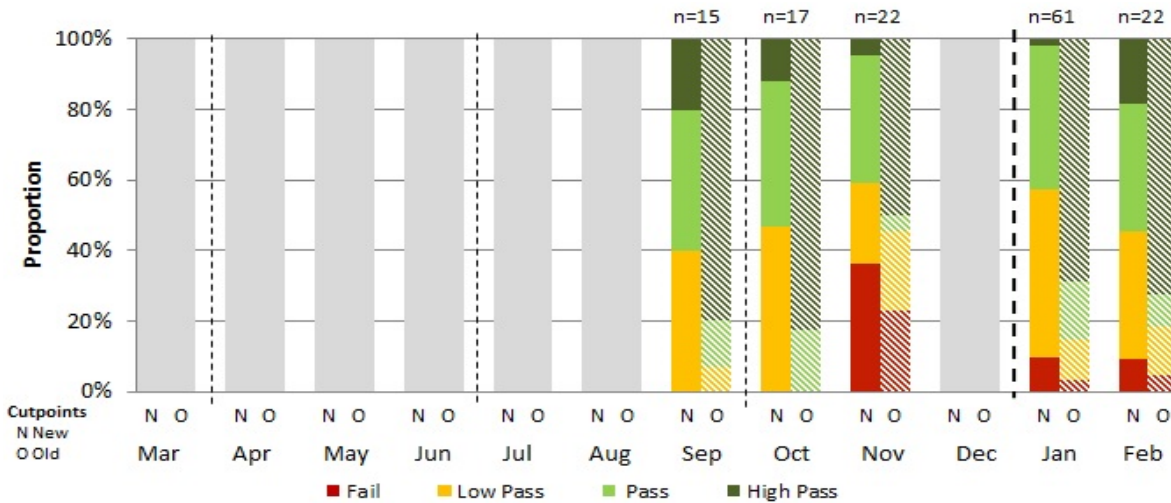
**Figure 44. WPV cases by week of onset and environmental surveillance results, KP Sanctuary, Pakistan, 25 February 2014 to 24 February 2015\***



Source: CDC

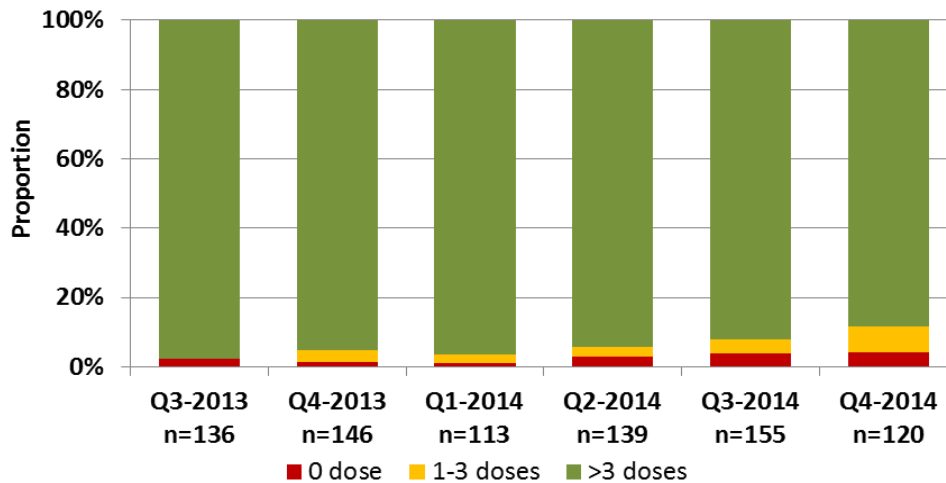
\*Data as of 3 March

**Figure 45. Proportion of Union Councils with LQAS survey results by SIA, KP Sanctuary, Pakistan, March 2014 to February 2015**



Note: LQAS not conducted in KP from March to August 2014 and in December 2014

**Figure 46. Proportion of NPAFP cases 6 to 35 months, by OPV status, KP Sanctuary, Pakistan\***



Source: WHO

\*Data as of 3 March 2015



**OWNERSHIP**

Percent of Union Councils with indicators met for each campaign

KP Sanctuary	Aug '14	Sept '14	Oct '14	Nov '14	Dec '14	Jan '15	Feb '15	Mar '15
UPEC meeting held			83	70	85	81	98	91
UPEC chaired by UCMO			84	85	93	87	100	100
Microplan Validated			75	69	93	95	99	99

≥1 Government			80	69	88	94	92	91
≥1 Local			87	76	96	94	100	98
≥1 Female			60	60	71	78	71	70

**Abbreviations:** UPEC=Union Council Polio Eradication Committee

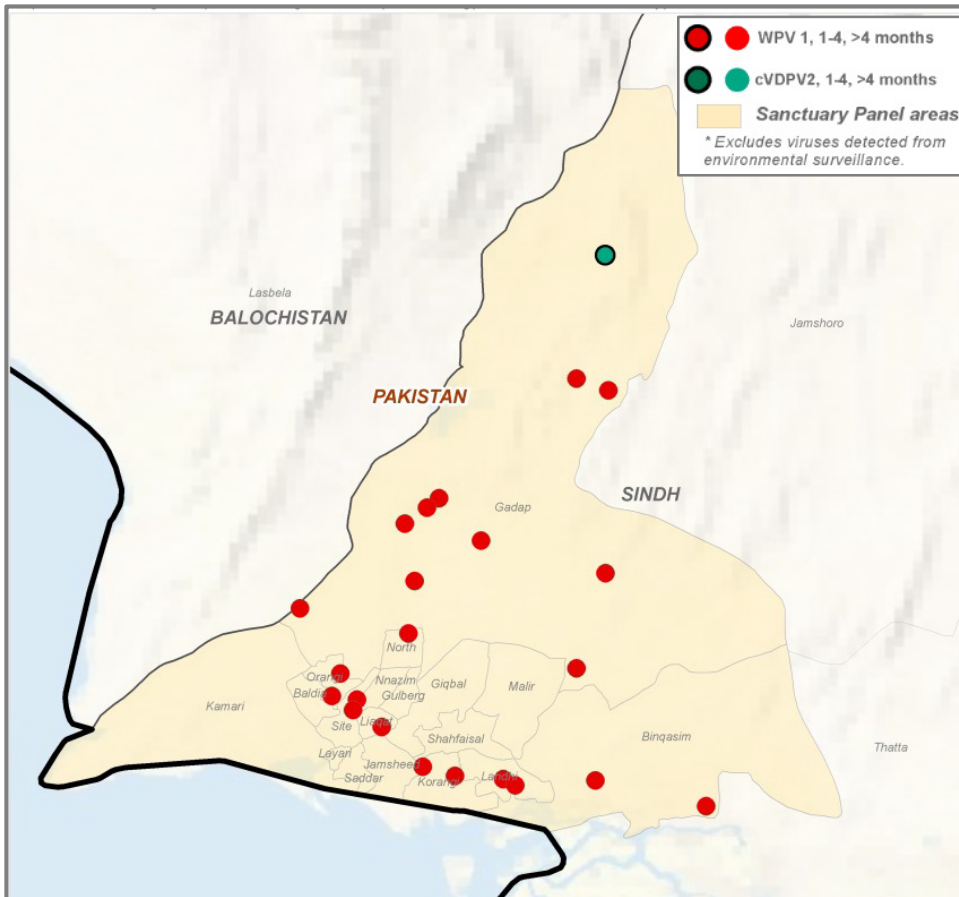
UCMO=Union Council Medical Officer

**Source:** Pakistan National Emergency Action Plan Indicators, WHO-Pakistan

No campaign
No data

**KARACHI POLIOVIRUS SANCTUARY**

**Figure 47. WPV & cVDPV cases and environmental surveillance results, Karachi Sanctuary, Pakistan, 25 February 2014 to 24 February 2015\***



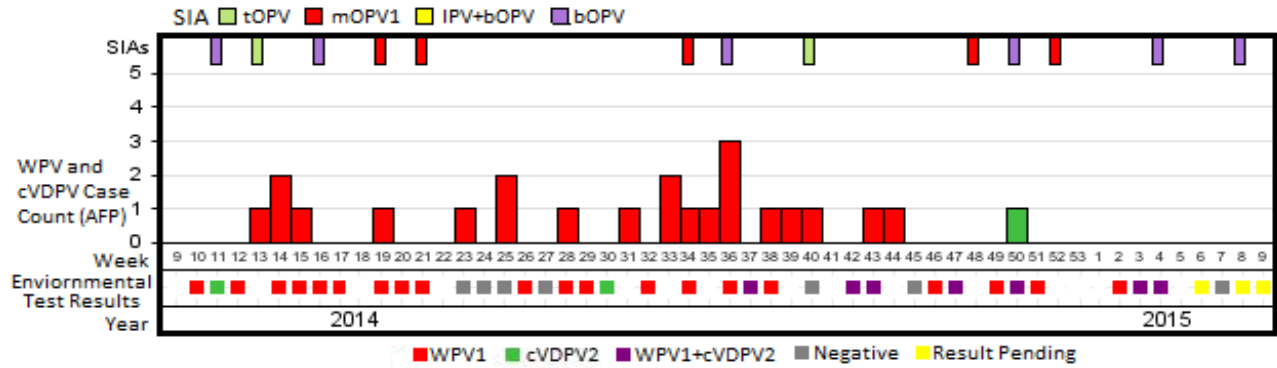
All of Karachi is currently serving as the WPV reservoir within Sindh.

Source: WHO

\*Data as of 3 March 2015



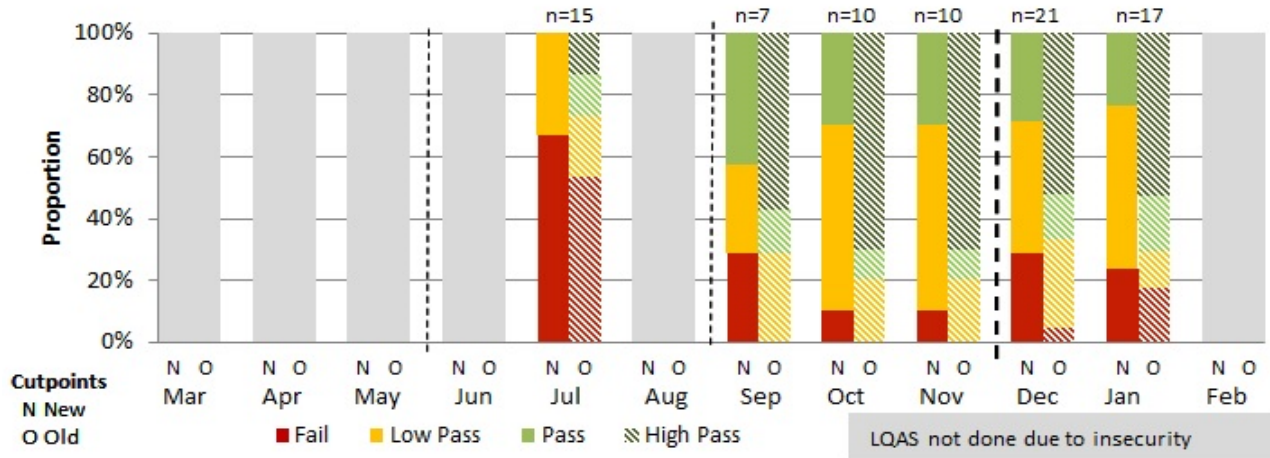
**Figure 48. WPV cases by week of onset and environmental surveillance results, Karachi Sanctuary, Pakistan, 25 February 2014 to 24 February 2015\***



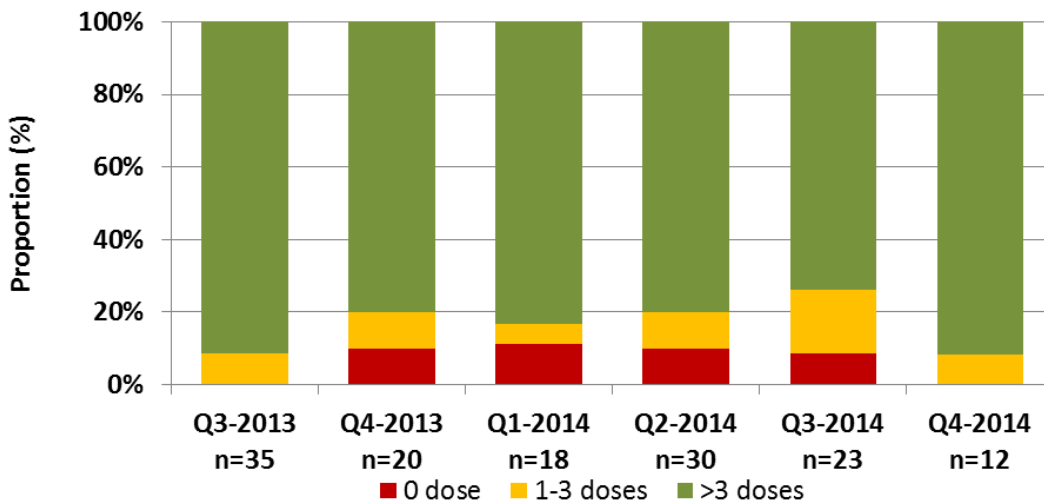
Source: CDC

\*Data as of 3 March 2015

**Figure 49. Proportion of Union Councils with LQAS survey results\* by SIA, Karachi Sanctuary, Pakistan, March 2014 to February 2015**



**Figure 50. Proportion of NPAFP cases 6 to 35 months, by OPV status, Karachi Sanctuary, Pakistan\***



Source: WHO

\*Data as of 3 March 2015

**OWNERSHIP**

Sindh	Percent of Union Councils with indicators met for each campaign							
	Aug '14	Sept '14	Oct '14	Nov '14	Dec '14	Jan '15	Feb '15	Mar '15
UPEC meeting held			100	84	99	63	100	100
UPEC chaired by UCMO			100	92	100	72	100	100
Microplan Validated			97	98	99	99	100	99
≥ 1 Government member			97	96	97	98	96	97
≥ 1 Local member			99	97	98	100	98	99
≥ 1 Female member			93	92	93	93	93	91

**Abbreviations:** UPEC=Union Council Polio Eradication Committee  
UCMO=Union Council Medical Officer

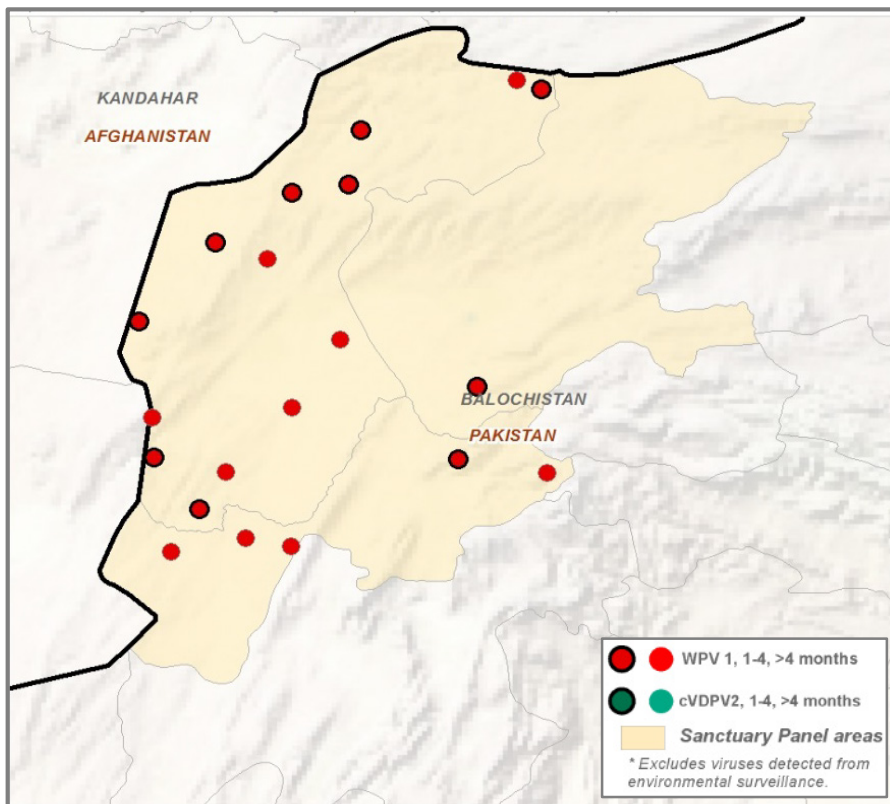
**Source:** Pakistan National Emergency Action Plan Indicators, WHO-Pakistan

No campaign
No data

Data shown above are for all of Sindh Province

**QUETTA RISK AREA (THE THREE HIGH-RISK DISTRICTS OF QUETTA, KILLA ABDULLAH, AND PISHIN)**

**Figure 51. WPV and cVDPV2 cases, Quetta Risk Area, Pakistan, 25 February 2014 to 24 February 2015\***

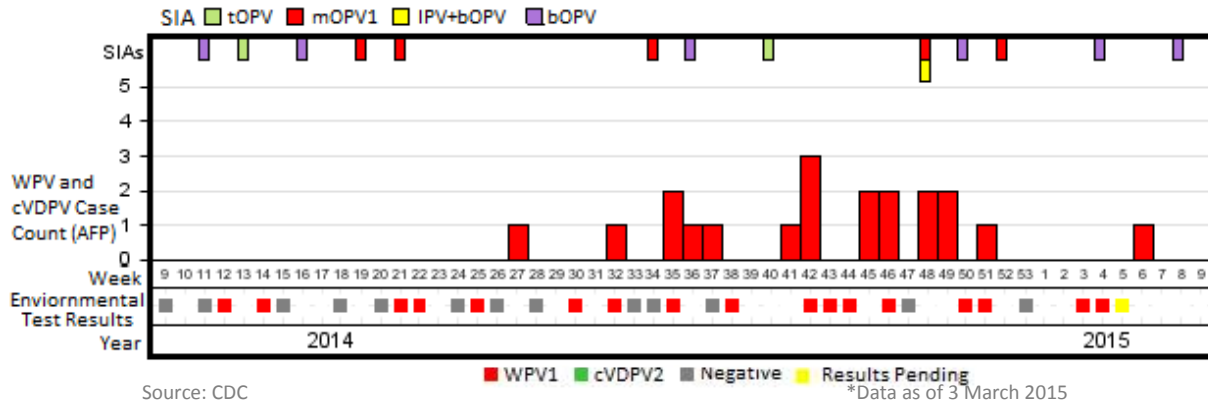


All endemic WPV circulation within the Quetta block had apparently been interrupted. Pishin, Killa Abdulah, and Quetta now constitute a risk zone for reintroduction of WPV, where active transmission has been currently occurring.

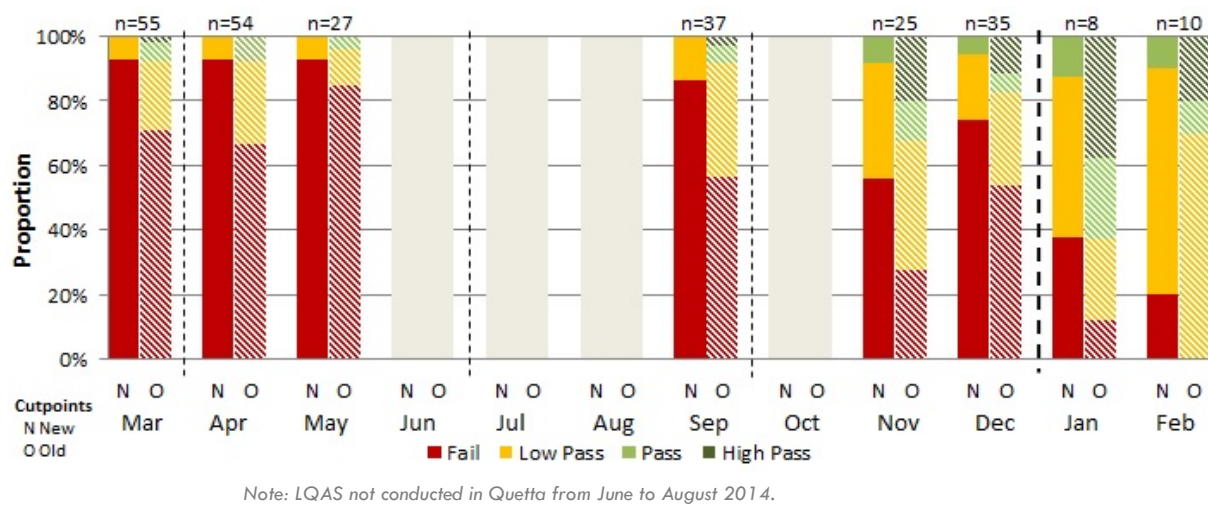
Source: WHO

\*Data as of 3March 2015

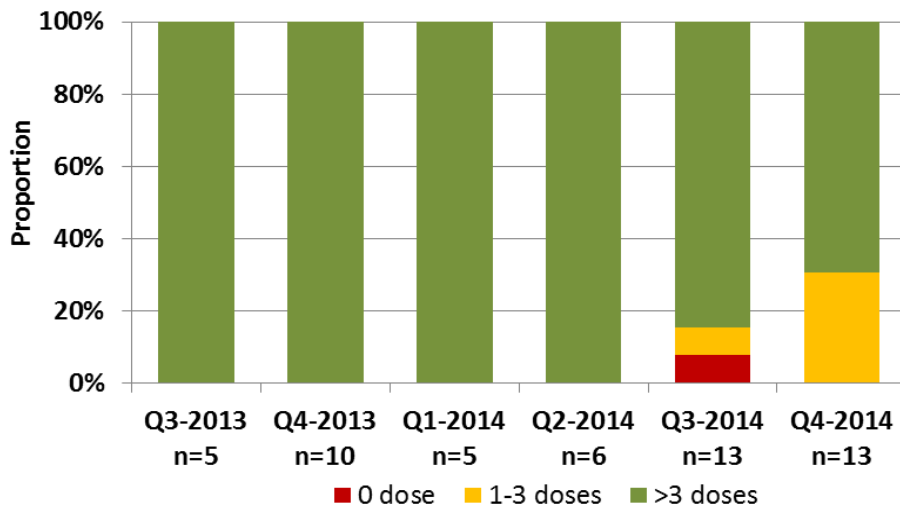
**Figure 52. WPV cases by week of onset and environmental surveillance results, Quetta Risk Area, Pakistan, 25 February 2014 to 24 February 2015\***



**Figure 53. Proportion of Union Councils with LQAS survey results\* by SIA, Quetta Risk Area, Pakistan, March 2014 to 25 February 2015**



**Figure 54. Proportion of NPAFP cases 6 to 35 months, by OPV status, Quetta Risk Area, Pakistan\***



Source: WHO

\*Data as of 3 March 2015

**OWNERSHIP**

Percent of Union Councils with indicators met for each campaign

Balochistan	Aug '14	Sept '14	Oct '14	Nov '14	Dec '14	Jan '15	Feb '15	Mar '15
UPEC meeting held			95	90	91	43	94	81
UPEC chaired by UCMO			95	93	93	80	94	89
Microplan Validated			79	94	73	92	60	61

≥ 1 Government member			73	60	82	77	88	91
≥ 1 Local member			100	84	98	84	100	100
≥ 1 Female member			51	55	51	44	54	56

**Abbreviations:** UPEC=Union Council Polio Eradication Committee  
UCMO=Union Council Medical Officer

**Source:** Pakistan National Emergency Action Plan Indicators, WHO-Pakistan

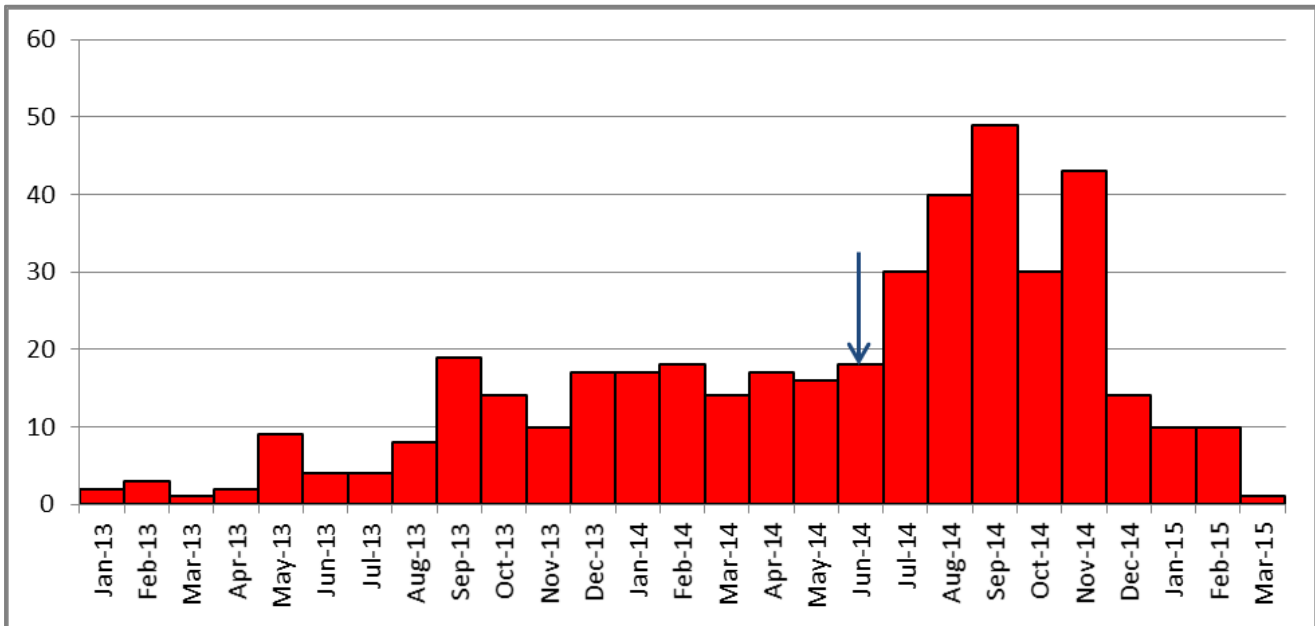
No campaign
No data

Data shown above are for all of the Balochistan Province

**UPDATES ON SANCTUARIES AND RISK AREAS AS OF 16 APRIL 2015**

**PAKISTAN**

**Figure A. Pakistan monthly distribution of WPV cases by onset date, January 2013–March 2015\* (arrow shows the launch of the military operation on 15 June in North Waziristan)**

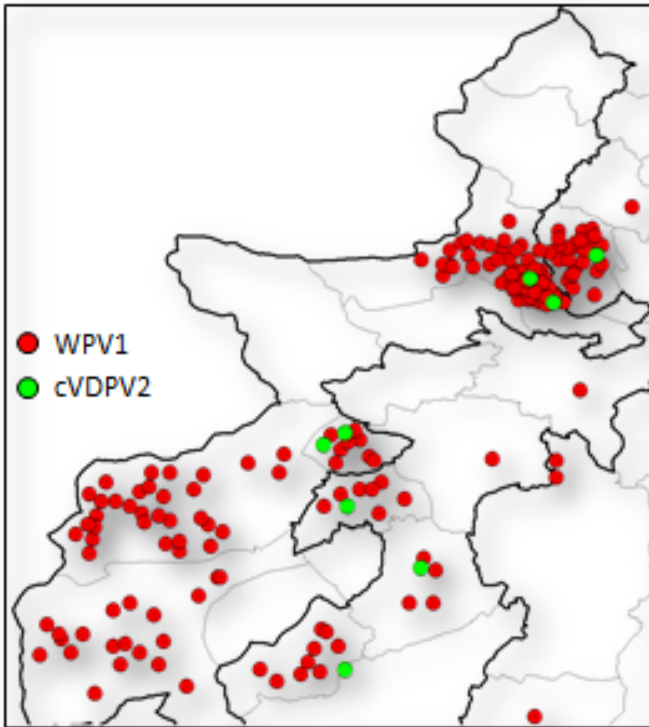


Source: WHO Pakistan

\* Data as of 16 April 2015

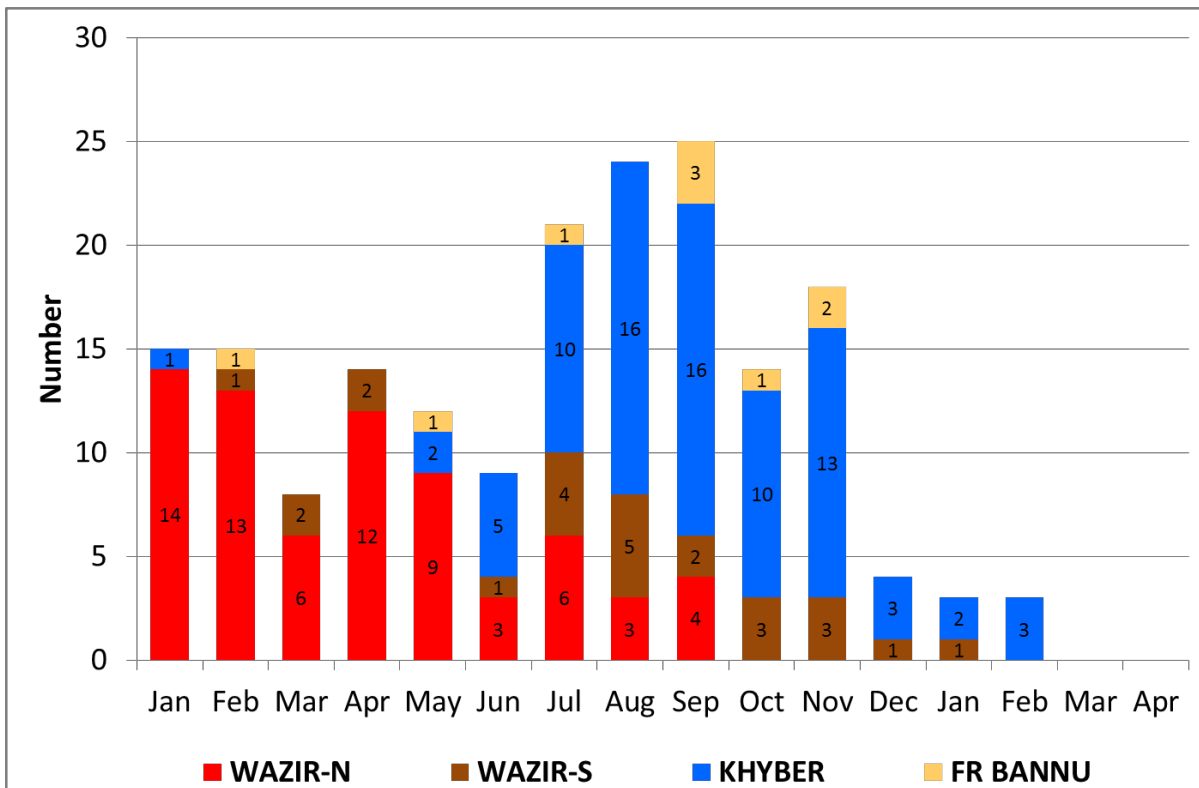
**FATA**

**Figure B. WPV and cVDPV cases, FATA Sanctuary, Pakistan, 16 April 2014 to 15 April 2015\***



Source: WHO Pakistan \*Data as of 16 April 2015

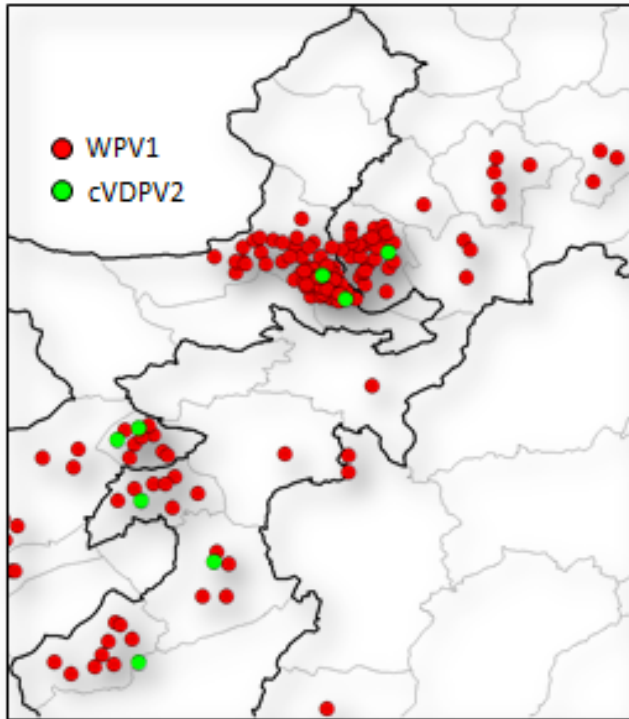
**Figure C. FATA, Pakistan monthly distribution of WPV cases by onset date, 2014–2015\***



Source: WHO Pakistan \* Data as of 16 April 2015

KP

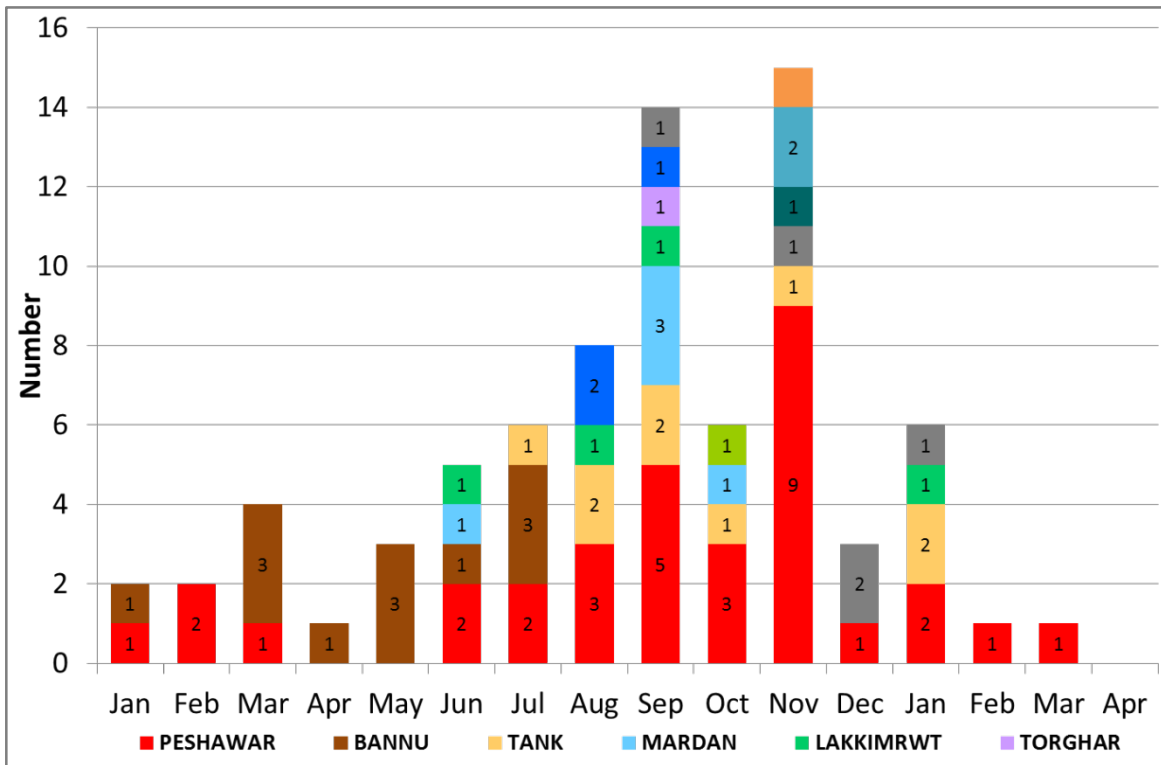
Figure D. WPV and cVDPV cases, KP Sanctuary, Pakistan, 16 April 2014 to 15 April 2015\*



Source: WHO Pakistan

\*Data as of 16 April 2015

Figure E. KP, Pakistan monthly distribution of WPV cases by onset date, 2014–2015\*



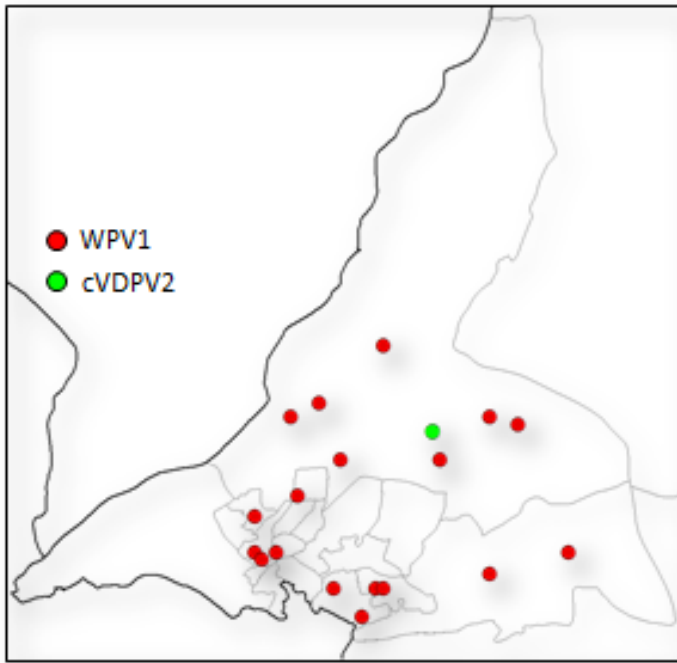
Source: WHO Pakistan

\* Data as of 16 April 2015



**Karachi**

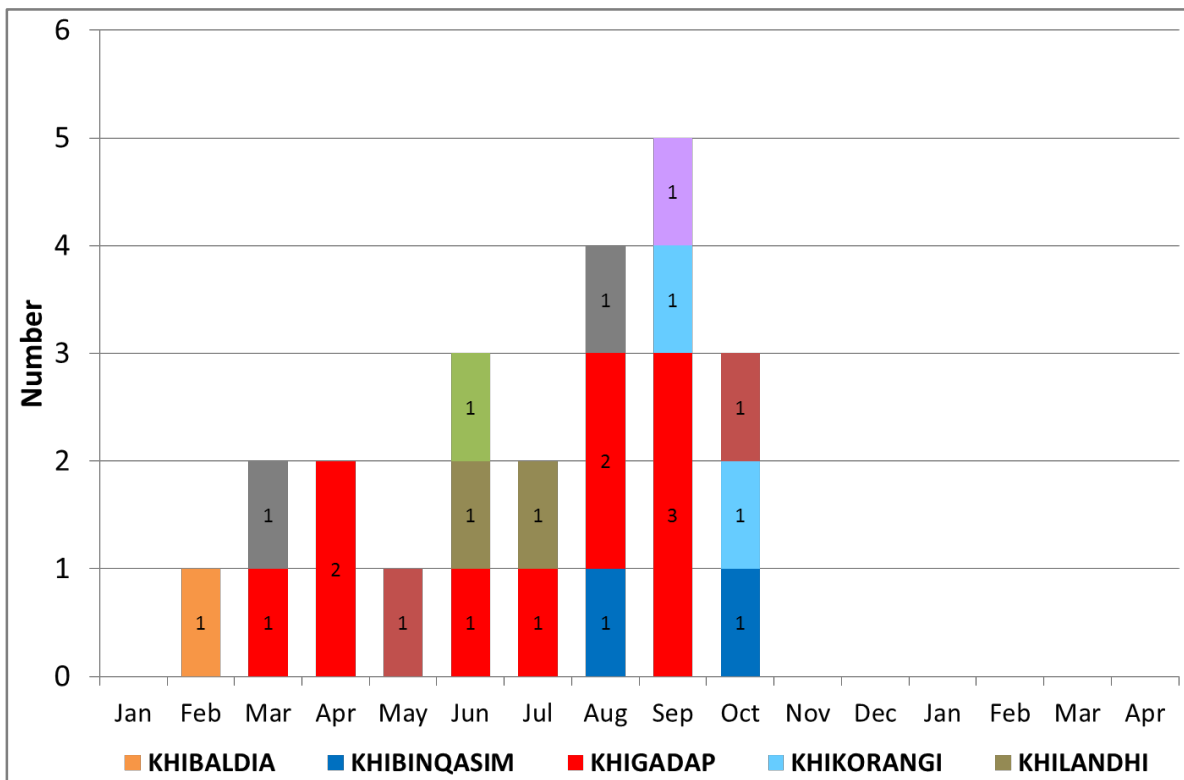
**Figure F. WPV & cVDPV cases and environmental surveillance results, Karachi Sanctuary, Pakistan, 16 April 2014 to 15 April 2015\***



Source: WHO Pakistan

\*Data as of 16 April 2015

**Figure G. Karachi, Pakistan monthly distribution of WPV cases by onset date, 2014–2015\***

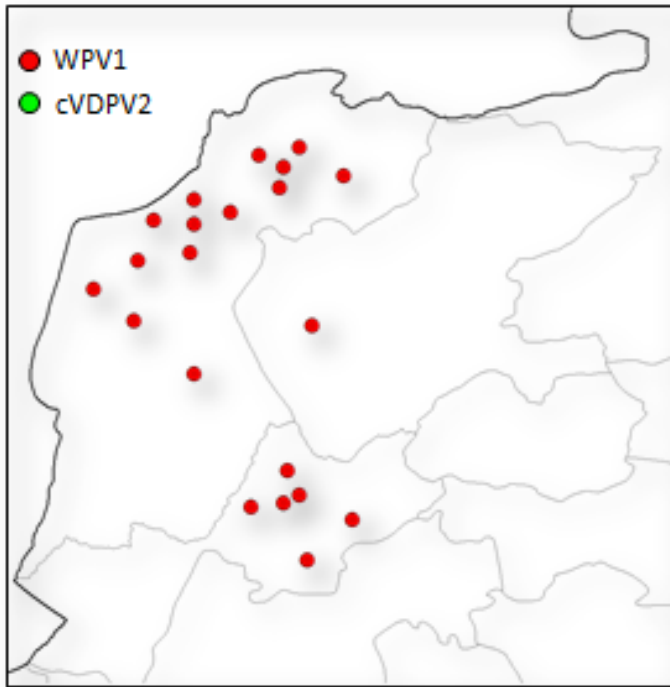


Source: WHO Pakistan

\* Data as of 16 April 2015

**Balochistan/Quetta**

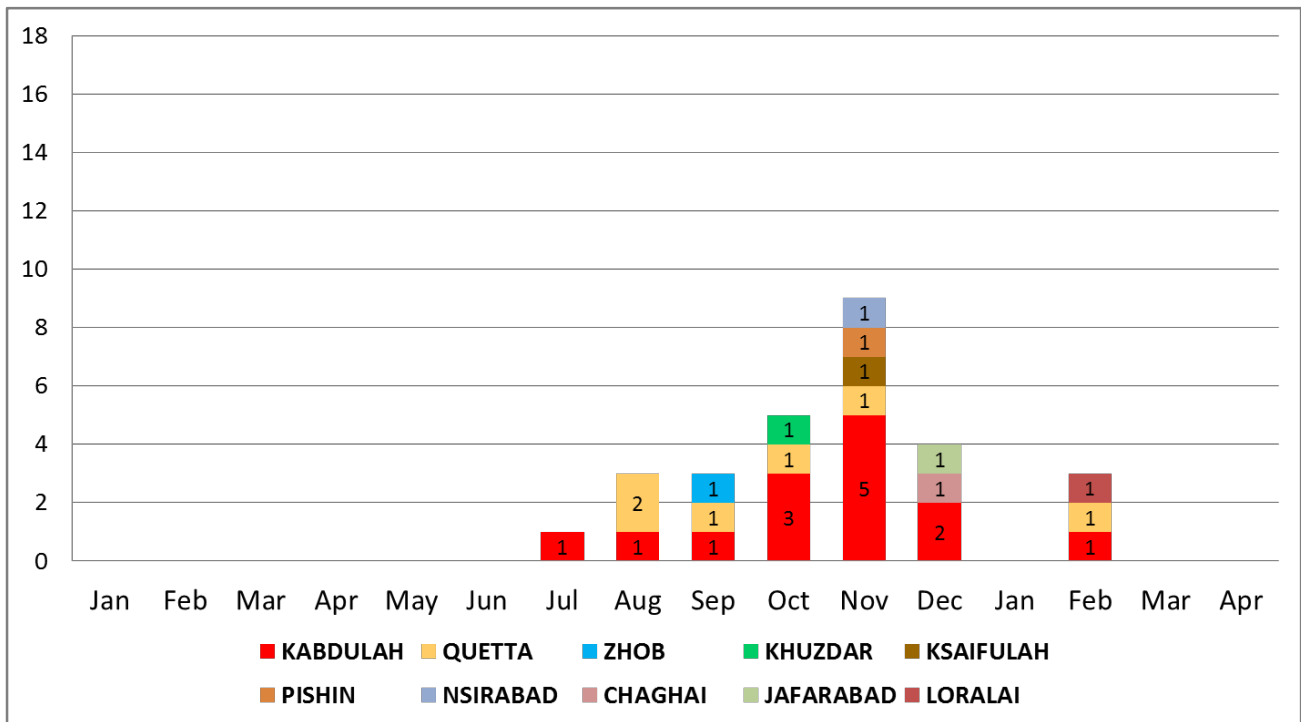
**Figure H. WPV and cVDPV2 cases, Quetta Risk Area, Pakistan, 16 April 2014 to 15 April 2015\***



Source: WHO Pakistan

\*Data as of 16 April 2015

**Figure I. Balochistan, Pakistan monthly distribution of WPV cases by onset date, 2014–2015\***



Source: WHO Pakistan

\* Data as of 16 April 2015

## REACHING MISSED CHILDREN

After recent TAG recommendations, the Pakistan polio programme made a strategic shift from children covered to focus on continuously missed children. A number of initiatives have been introduced to reach more children during Pakistan's 2014–2015 low season. Campaigns were resumed in South Waziristan in November 2014 using a house-to-house strategy, and in North Waziristan using a Hujra strategy (community-selected fixed points). The Governments of KP and FATA joined in a combined initiative, "Alliance for Health," to conduct synchronized campaigns in Peshawar/central KP, Khyber Agency, North and South Waziristan Agencies, and critical districts of southern KP. Following this, one campaign in Bara Tehsil of Khyber Agency reached a substantial number of children previously unreached for more than 2 years.

In the past 6 months, Pakistan has demonstrated unprecedented progress toward greater Government commitment, better coordination among partners, and a more critical, open and creative reflection of the quality challenges that need to be addressed in the programme.

EOCs are functioning at national and provincial levels to strengthen programme management, oversight and operational support. The EOCs have become the hub of joint decision-making and coordination across both polio and routine immunization, with Government in the lead. Although staff are now spending a considerable amount of time there, the EOCs are still evolving to become full-time centers for joint work, data analysis, and planning at all levels. Continued strengthening of the EOC structures and systems is an overarching priority for the Government and the partnership. Building capacity will be a key component of this, including the appointment of dedicated, full time Government coordinators at the provincial levels in particular.

As of 16 April, in the past 2 months, the partnership, under the EOC's leadership, has revamped and coordinated criteria for the identification of high-risk UCs. A final list of 551 high-risk UCs has been agreed upon for focus during the rest of the low transmission season. Microplans in these 551 high-risk UCs have been revised before the March NIDs and a third party has piloted a validation exercise of 53 microplans in March. The Agha Khan University initiated health camps in Gadap town that includes OPV and IPV, and an IPV campaign was conducted in Peshawar and Bannu in March. Post-campaign IM was initiated again after a period of over two years after the March NIDs.

### MISSED CHILDREN

Until this year, the programme has relied nearly entirely on administrative data to determine its overall coverage rates. These data, of course, overestimate coverage at more than 95% for each campaign (see Figure 55). With LQAS data for the February 2015 campaign, Sindh has the highest SIA quality among the provinces, with 79% of UCs passing the 80% threshold. In KP, only 60% of lots passed, and 70% in Balochistan [using local threshold criteria and implemented in a limited number of UCs].

**Figure 55. Trends in missed children, selected high-risk areas of Pakistan, 2014-2015**

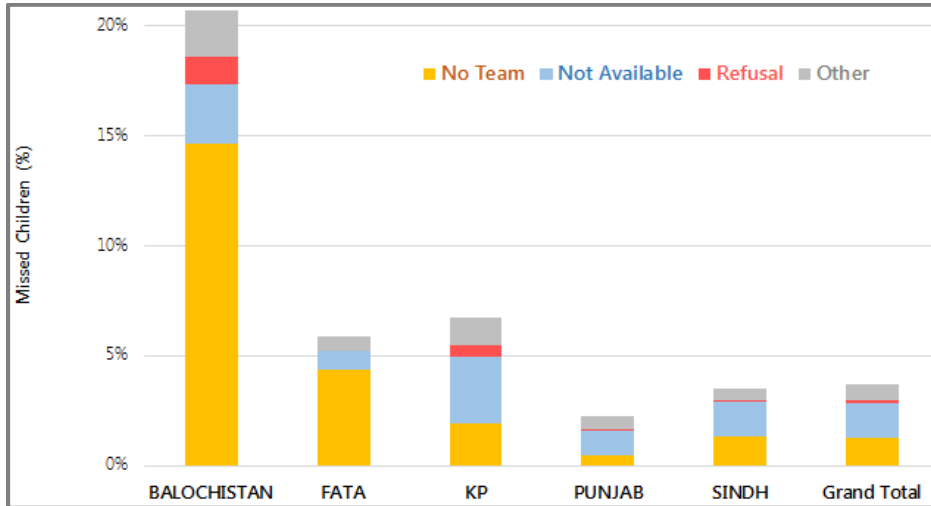


Source: Polio Control Room data

Note: Quetta block included Killa Abdullah, Pishin and Quetta districts in Balochistan province; Not all districts in a given province participated all rounds of campaigns;

Using January 2015 campaign data, the proportion of children missed due to teams not showing up is most acute in FATA and Balochistan: 4.4% and 14.6% of target children under age 5 years are missed because teams have not shown up. This accounts for more than 70% of missed children in both provinces (shown as “No Team” in Figure 56).

Because administrative data cannot collect data on all the reasons for missed children — teams cannot self-report that they haven’t shown up to households they were supposed to, for example — market survey data supplement the analysis. Using January 2015 campaign data, the proportion of children missed due to teams not showing up is most acute in FATA and Balochistan: 4.4% and 14.6% of target children under age 5 years are missed because teams have not shown up. This accounts for more than 70% of missed children in both provinces (shown as “No Team” in figure 56).

**Figure 56. Reasons for missed children January 2015 campaign, high-risk areas in Pakistan**

Source: Market survey data

In December, 2014, a Harvard poll was conducted amongst caregivers displaced from North and South Waziristan after the military offensive, and settled in Bannu, KP. These never-vaccinated families had the highest vaccine demand among any other polled group in Pakistan. All of them polled said they gave their children polio drops the last time a vaccinators came to their home, and 99% of them said they vaccinated their children at a transit point if they came across one. Ninety-seven percent said they intend to give their children polio drops every time they are offered — the highest repeated vaccination intention rate of any other country that has conducted Polling, and within Pakistan’s highest-risk areas. However, when asked how many times these parents had seen a vaccination team, 60% said they saw a vaccination team two times since they arrived. Eleven percent said they saw a vaccination team seven times or more. Bannu had 22 vaccination campaigns in 2014, and seven campaigns specifically targeting IDPs from June to December 2014.

For these reasons, the programme has now begun to implement a number of initiatives focused on the improvement of quality in the 551 highest-risk UCs, with a primary focus on motivating, training, and supervising the frontline workforce. Ensuring operational plans are matched up with adequate security plans is another critical arm of the new approach.

## QUALITY ON THE FRONTLINE

### Community Perceptions about Vaccinators

Over the past year, UNICEF has conducted a number of studies about the perception of vaccinators in high-risk communities. The first of these studies — a Harvard Poll conducted in January 2014 — revealed that only 35% of parents polled in the highest-risk districts felt the vaccinators with whom they interacted were “very knowledgeable.” Thirty-six percent of these parents found vaccinators “very respectful”, and 34% said they trust their vaccinators “a great deal.”

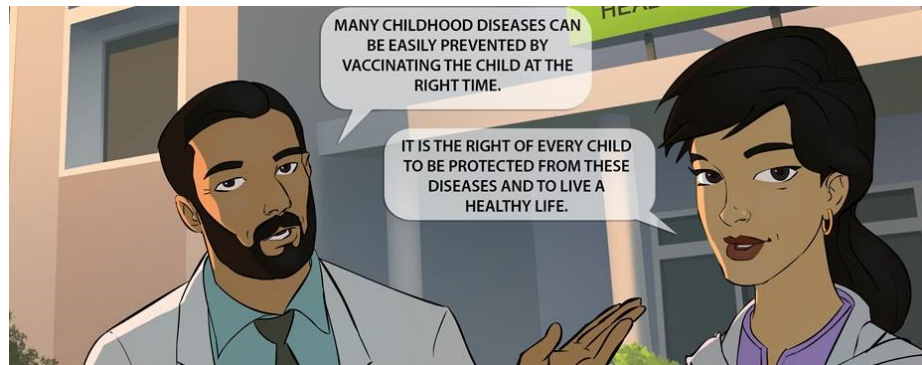
The latest research, a qualitative study conducted in December 2014 by the Nielsen group used a mix of focus group discussions and in-depth interviews in KP (Peshawar, Mardan, FR Bannu and DI Khan) and FATA (Bannu FR, North Waziristan and Khyber agency) to understand health and hygiene practices, attitudes toward vaccines in general and polio vaccine in particular, as well as the decision-making and influencer process of vaccination within communities. The sampling was purposively done to cover areas with the maximum number of polio cases to understand the dynamics in chronically underperforming areas.

The Nielsen study concluded the following:

*"...dissatisfaction of implementation staff was apparent. Low motivation levels due to delayed payment of salaries as well as lack of facilities coupled with absence of incentives were cited as some of the reasons for staff not putting in their best during the polio vaccination drives....Also, some of the caregivers believed that the vaccination staff were not paid their salaries on time and hence did not have enough motivation, which was probably the reason why they kept changing."*

## Capacity Building

To address the knowledge, motivation and supervision of frontline workers, UNICEF and WHO have developed a global vaccinator training module focused on transmitting simple and essential technical information through new approaches. Participatory learning methodologies, including role play, an enhanced focus on interpersonal communication, and principles of supportive supervision are all part of the new training, which uses comic books and flash cards to deliver the material (see picture). This global training curriculum was adapted for Pakistan and rolled out under the EOC's leadership in March, 2015. Among 76 master trainers and AICs trained in Karachi and Peshawar, 94% would recommend the training to others, 78% said it was better than previous trainings they've received, and 89% said they were more confident in their skills than before.



*An image from a new comic book developed for vaccinators to use during a revamped vaccinator training curriculum. The comic book communicates the essential skills a vaccinator needs to know to conduct quality campaigns, whilst portraying them as community and national heroes.*

The pilot training confirmed some important findings. Especially at the AIC level, participants had questions on all levels of the curriculum, from the most basic to the most

advanced. This suggests that the knowledge level in the field is far below a minimum standard for effectiveness. The pilot also confirmed that future trainings must address two very different aspects of a vaccinators work: the technical issues related to polio, EPI, vaccination, microplanning; and the behavioral issues related to interpersonal communication, leadership, supervision, and management. No other training had effectively combined these two dimensions before.

The EOC has established an implementation plan to scale up the pilot so that all vaccinators in the 551 highest-risk UCs are trained with this new approach before the September 2015 NID. IVR surveys and short message service (SMS) tools will continue to be used to monitor and assess the results: all participants will receive a telephonic survey after their training to assess whether they found the training to be effective and useful. As trainings are cascaded down to the field from the initial sessions, trainers will use SMS to report daily whether their training took place, with how many participants, and whether the new curriculum was used. These real-time reporting mechanisms will give the polio programme rapid insight into how well this method is permeating down to the field.

## Selection and Payment

Investing in the appropriate local selection of vaccinators and social mobilizers remains a priority for the programme. The eight "super" high-risk UCs of Karachi are partly covered using the services of FCVs and



FCMs hired on a monthly basis with the support of local community leaders and influential persons. This initiative seems to have proven itself as an improved operational approach, not only for better coverage, but also as a strategy for provision of more effective, local security. Anecdotal evidence suggests areas with FCVs and FCMs demonstrate improved quality than previously. In response, UNICEF and WHO are doubling the number of FCMs and FCVs in these “super” high-risk UCs of Karachi, and expanding this approach to other high-risk areas, including in Peshawar. To avoid duplication, UNICEF and WHO will also standardize community worker TORs and coordinate increased deployment.

The same Nielsen study on community perceptions of vaccinators pointed cultural insights related to the composition of vaccination teams, and underlined the fact that local solutions in each area are more important than blind feminization, especially in FATA:

“...women going door-to-door was not appreciated although women were preferred in the vaccination team for reasons of comfort in interacting with other women when the men were not home. In KPK, where literacy levels and women’s exposure were comparatively higher than FATA, male-female pairing was preferred because men can talk to men and women to women. Wherever male-female pairing was suggested, it was with Mahram relations (an unmarriageable kin with whom sexual intercourse would be considered incestuous)... There seems to be no acceptance of female vaccinators in militant dominated areas.”

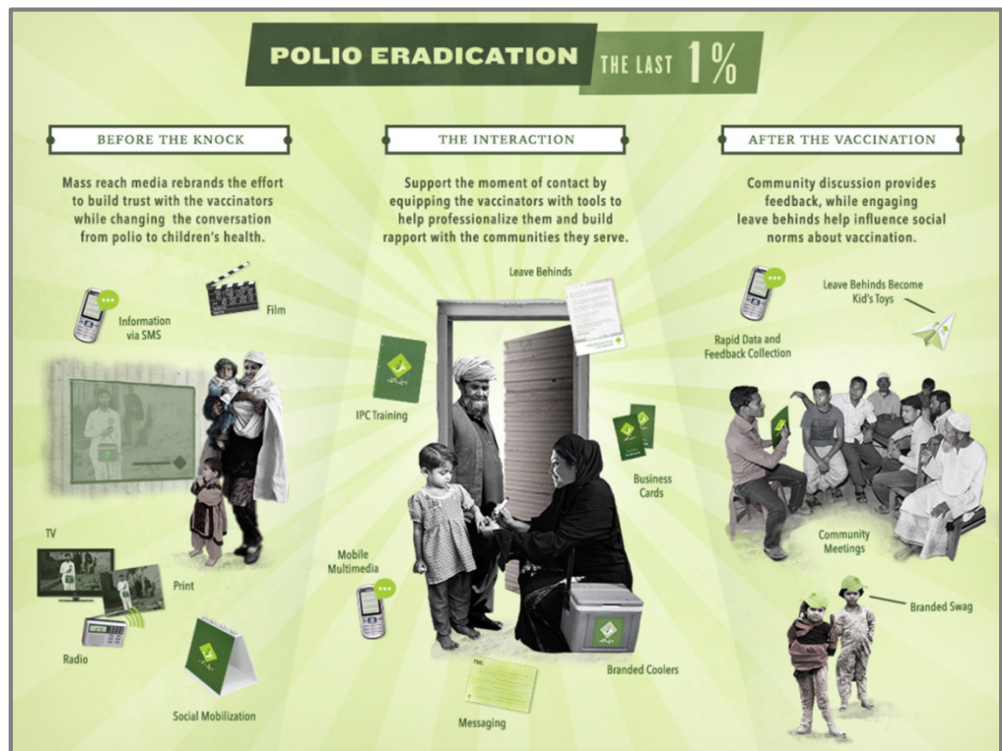
Intensive training and motivation will have little impact if frontline workers are not appropriately selected and paid on time. DDM supported by WHO is a mature and functional mechanism to ensure payment of frontline workers. Recently, the programme got funding from multiple sources with different payment mechanisms and modalities. The complexity of payments coming from different sources and at different times has made it difficult to pinpoint where and why the payment system is breaking down. The programme is reviewing the payment system to remedy long delays and ensure that these workers are motivated to return to work each month.

**Figure 57. Polio Eradication: The Last 1%**

Mobile data collection using IVR — already used effectively to collect data from COMNet workers — could be a powerful tool to obtain payment information directly from frontline workers themselves. This technology is available to the programme and could be applied to workforce, which would provide a substantial amount of data on the magnitude of the problem that is still not fully understood.

**Communication**

As mentioned earlier in the report, to support the operational shifts that have begun to put the frontline worker at the center of quality campaign efforts, a



communications strategy and campaign has been developed by UNICEF, in coordination with the EOC. As a general principle, communication will move away from simple information about polio, and attempt to influence social perceptions and acceptance for health workers. Vaccination will be presented as a social norm that protects communities, families, and tribes rather than a response to oft-used fear stimuli (see Figure 57).

The campaign focuses on the frontline worker as a critical, trusted member of communities, and rebrands the vaccination effort to speak more directly to the highest-risk groups. The first materials of the new campaign were launched in Karachi and Balochistan during the April 2015 SNID.

### **Communicating with High-Risk Groups**

To support this communication strategy and ensure we are incorporating appropriate emotional, cultural and social insights to speak more effectively to our highest-risk groups, UNICEF has engaged with a number of anthropologists to provide socio-cultural profiles of the six Pashtun tribes most at risk of contracting polio.

This anthropological insight will provide guidance to the programme about how it engages with different components of the Pashtun community — in particular, through the networks of Frontline Workers. It will make recommendations on how best to influence social norms that could create community support for vaccination; build more trust in the health system and the eradication programme; help gain access to communities; and build evidence for local, tailored vaccine delivery strategies that are more appropriate, relevant and contextualized.

Six short briefs for each tribe on each of these issues will be available in May 2015, with detailed guidance to operationalize the approaches.

### **Health Camps**

The Nielsen study identified important insights into how additional services could help bolster trust in Pakistan's highest-risk areas:

*“When asked if they would be interested in knowing the vaccination schedule, the anti-vaccination male group in FATA replied that the government should first address their basic needs like water, electricity, roads, etc. (...) There was lack of trust in the government's actions since no other disease in the area has attracted so much of government intervention and funding as polio. This and prevailing misconceptions prevent complete compliance with the polio vaccination drives....People were suspicious of the government's intentions for investing funds on polio vaccination without explaining the logic behind the process or addressing other basic needs. “We must be shown true evidence that polio vaccine has really ended polio from the region. We must be informed why America and our government are investing so much only on this disease and not on many other important ones” (Male group, DI Khan)”*

Pakistan will implement 2,500 basic health camps supported by UNICEF starting April, focusing on selected high-risk UCs during the polio low transmission season (up to the end of June). Agha Khan University/BMGF implemented 1206 comprehensive fixed-site health camps and 804 mobile health camps.

This is the first response to unmet needs, but evidence also calls for more innovative thinking about service delivery. The demands from the community are articulated clearly through polls conducted by Harvard University in 2014 and 2015. More than 70% of the IDPs in Bannu, not surprisingly, said that finding shelter and having a home was their major concern, far more critical than health needs or access to clean drinking water (11%). In the rest of Pakistan, the needs were more diverse, but also call for localized approaches to health camps; clean water, for example, was the highest ranking need cited after electricity and roads.

## ACCESSIBILITY AND SECURITY

The underlying assumption of Pakistan's low-season plan — which was reiterated by the TAG — is that “all children everywhere are reachable.” After the military operation in North Waziristan in June 2014, inaccessibility is improving, but insecurity remains an important barrier to programme success in Khyber, Greater Peshawar, and Karachi.

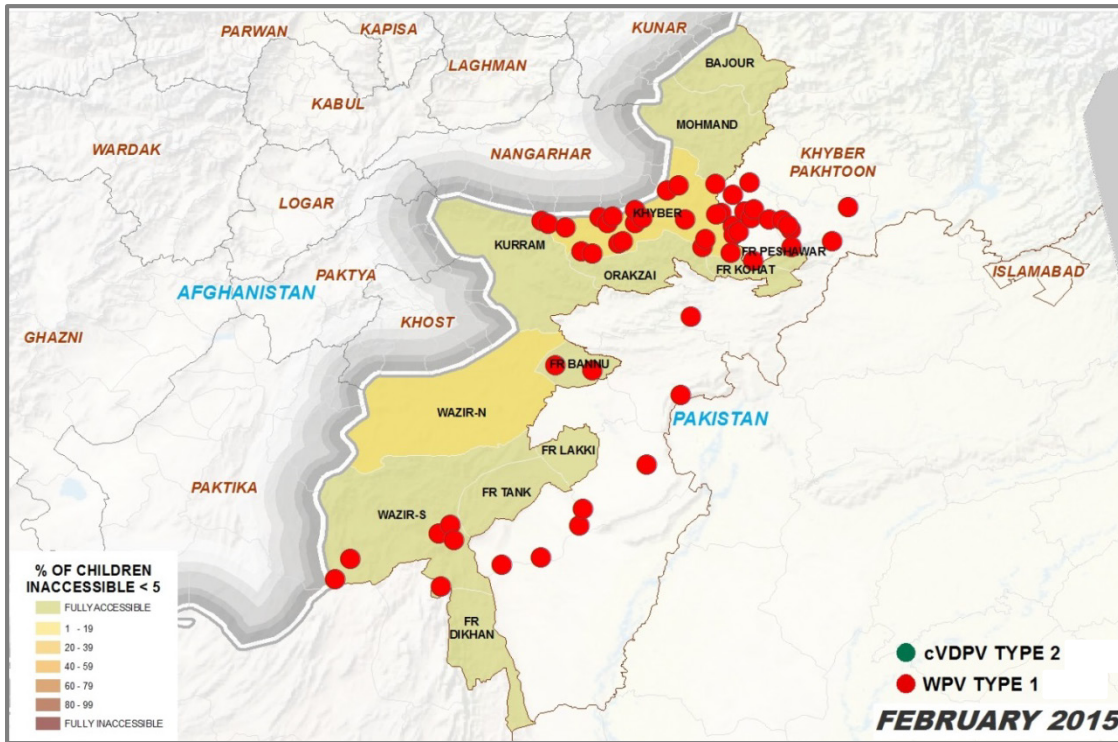
Seventy-six of the 306 cases reported in 2014 were just from a single agency, Khyber, with most cases occurring in the Bara Tehsil of the agency (the largest number of polio cases reported from one single tehsil of Pakistan), and the next highest number of cases was 70 cases from North Waziristan. In 2014, 82.5% of the polio cases were reported from such “inaccessible” areas. In most other parts of Pakistan where access was not hindered, the main reasons for poliovirus transmission relate to persistent gaps in the quality of planning, implementing, and monitoring vaccination campaigns, though in some areas the quality of programme implementation has been affected by environment of insecurity and fear.

The on-going military operation in Pakistan has provided opportunities to vaccinate previously inaccessible children — in South Waziristan, in North Waziristan, and in Khyber Agency. Support from the military, through their active and regular participation in the EOCs at the national and provincial levels, will be essential to also ensure that all returnees are accessed and vaccinated. Although Temporarily Displaced Persons (TDPs) are being allowed to return to their homes in small batches, the process could take many years, based on the slow return of population to South Waziristan since military operations that began there in July 2009. This situation highlights, however, the critical need to ensure that these populations are effectively reached with mobile strategies as they make their way back, and are vaccinated consistently while they are living in settled areas.

The number of inaccessible children in FATA has decreased from about 250,000 to less than 50,000, primarily limited to defined pockets of Khyber and North Waziristan agencies. The same trend has also been observed in previously inaccessible pockets of Karachi (reduction of inaccessible children from 264,549 to 17,057) and Peshawar (reduction of inaccessible children from 14,000 to 2,354 (source: WHO Pakistan).

Given the immense complexity underpinning the security situation in the country, the Government of Pakistan and its various agencies must lead on securing access to children, and ensuring optimal security for the implementation of polio vaccination campaigns. The GPEI partners, as humanitarian organizations, continue to mitigate access issues through engagement of tribal, community and religious leaders, engagement of third party organizations with channels of communication to all parties, through restoration of EPI, medical camps and the expansion of self-vaccination, and ensuring systematic and large scale immunization of displaced populations. The Government of Pakistan, including through its armed forces and law enforcement agencies, provide security to health workers and help provide the protection and access necessary to reach previously inaccessible or high-threat areas. All of these strategies mirror the overall access strategy approved by the Polio Oversight Board in 2014.

**Figure 58. Inaccessible areas, WPV1 cases and cVDPV2 cases, and the estimated proportion of children affected during the SIAs conducted in February, 2015 - FATA Sanctuary, Pakistan\***



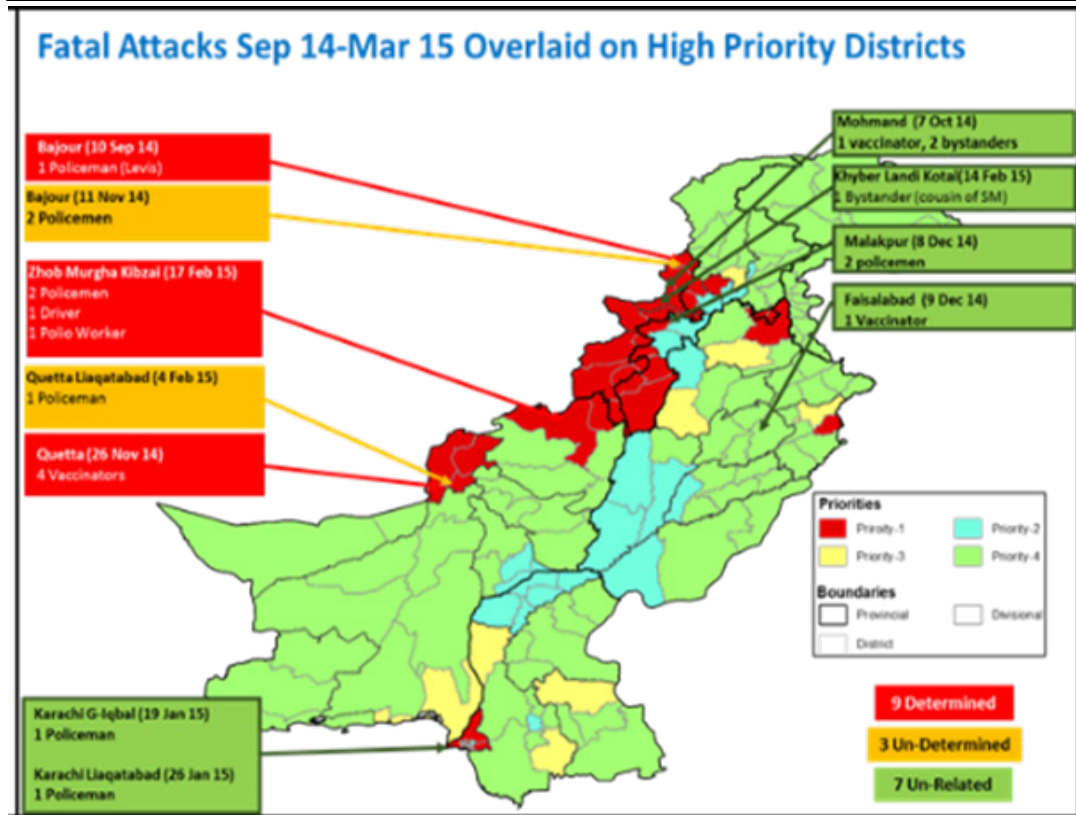
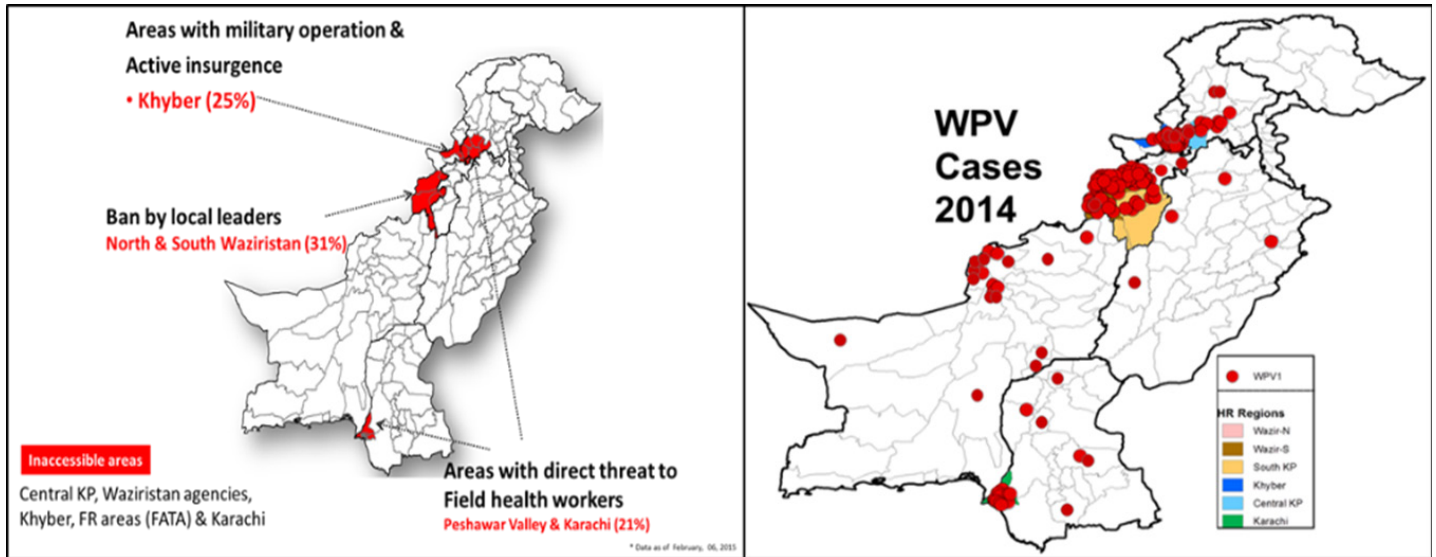
Source: WHO

\*Data as of 3 March 2015

Although media coverage has focussed on attacks on “polio workers,” an analysis of the 77 fatalities between 2012 and 2014 initially reported to have targeted polio workers revealed that 48 attacks (62%) were “not linked to polio” or their “links to polio are unconfirmed” per assessments by a security analyst in the country (see Figure 59). In a worrying trend, more local law enforcement personnel have lost their lives than health workers in these attacks. Much more granular and local information and analyses are needed to further understand these attacks, their motivations, and the perpetrators.



Figure 59. Areas with military operations, WPV cases in 2014, and fatal attacks on polio workers.



The Government of Pakistan, with the establishment of the EOC, has taken considerable efforts to improve the provision of security to frontline workers, especially when the security forces (including the military) have to contend with other challenges. The role of the EOCs as the primary coordination platform is to integrate operations, security, and communications planning for the conduct of

protected vaccination campaigns, whether by the community or security agencies. In December, the Interior Minister directed all provincial police chiefs to provide security to polio vaccinators in their respective provinces. The Government has committed 14,412 police personnel to support key geographical areas<sup>9</sup> (Peshawar, Charade, Madan, Swabia and Karachi). The 29 cases reported in Peshawar in 2014 are a testament to children being consistently missed in certain areas, including due to lack of adequate security. This commitment by the Government is a welcomed directive; however, the frequency of campaigns will make

<sup>9</sup> January 2015 Pakistan TAG

it difficult to plan for the adequate provision of security. In 2014, 18 SIAs were conducted in Pakistan and, taking Peshawar as an example, 10 campaigns have occurred since September 2014. This has culminated in a number of reports that campaigns have been postponed because of inadequate provision of security. The programme will also have to carefully monitor any negative impact of increased involvement of security personnel in the vaccination effort, including arrests of parents or collective punishments to communities. Although it is impossible to ensure fool-proof security for the tens of thousands of vaccinators, there is a continued need to provide support to the EOCs, particularly at the provincial level, to ensure that appropriate security planning takes place in the key geographical areas where security is a factor. The GPEI is assisting the Government at the National and Provincial levels to integrate security planning with operational micro-plans.

There is an ongoing paradigm shift from tracking 'covered children' to 'continuously missed children' with which the access and security component is also adjusting. Effective campaign supervision and monitoring is a core strategy of the polio eradication initiative. Linked to the SIA scheduling, the programme within Pakistan has re-started a robust monitoring and supervision in accordance with the revised National Guidelines for Campaign Supervision and Monitoring from the March NID. It has become widely recognized that there are a multitude of reasons for missed children and insecurity is considered a relatively small component<sup>10</sup>. For security, the keys to success include ownership and leadership by the Government at all levels for security and access, the need to improve the convergence of security and operational micro-planning, and support to the newly formed EOCs.

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<sup>10</sup> The other five reasons for missed children include where incomplete micro plans, inaccessible children in security compromised areas where campaigns are not authorized, teams not working as planned and / or reporting incorrectly, children not available during the campaign, and children whose parents refuse vaccination.



## PROGRAMME INFORMATION

### HUMAN RESOURCES

Location (sanctuary)	Total number of house to house vaccination teams	Number (%) of house to house vaccination teams with a female member	Number (%) of house to house vaccination teams with a local member	Salary per vaccinator per day	Remarks
FATA (South Waziristan, North Waziristan & Khyber (Bara, Jamrud & Triah))*	487	0 (0%)	487 (100%)	SW, NW: \$3.04 Khyber: \$8.24	
KP (province)	17,178	12,144 (71%)	17,093 (100%)	\$2.26	110 teams working in hard to reach areas receive an additional \$1.47 per day
KP (High risk districts: Peshawar, Charsadda, Mardan, Nowshera, Lakki Marwat, Tank, D.I. Khan & Bannu)	8,245	6,576 (80%)	8,148 (99%)	\$4.25	Teams working in security compromised areas not reached in 2014 receive special incentive pay, \$1.96 for one day of training and \$9.81 per day for vaccination.
Karachi (three high-risk towns: Baldia, Gadap, and Gulshan Iqbal)	1,625	1,560 (96%)	1,586 (98%)	\$2.26	Additional government incentive of \$2.45 per day
Karachi (8 Super high risk UCs: Baldia Town (Ittehad town), Gadap Town (Gujro), Gadap Town (Songal), Gadap Town (Mangopir), Landhi Town (Muzafarabad), Landhi Town (Muslimabad), Orangi Town (Chisti nagar), Site Town (Islamia colony))	668	664 (99%)	638 (96%)	\$3.19	No. of teams also include Female Community Volunteers (FCV) who work on a monthly basis in the super high risk UCs of Karachi (\$3.43 per day). Jan and Feb 2015: 238 teams of FCVs; Mar 2015: 577 teams of FCVs
Quetta (Quetta, Killa Abdullah, and Pishin districts)	1,679	831 (49%)	1,311 (78%)	\$2.26	Additional government incentive of \$3.43 per day

\* Accessible areas only

### ROTARY INTERNATIONAL'S WORK IN PAKISTAN — PAKISTAN DIASPORA

In the October 2014 report, the IMB noted that Rotary International would be well-suited as a civil society organization to engage the Pakistani diaspora in support of polio eradication. Since that report, Rotary has developed a plan for outreach which builds on activities already begun in Canada, UK, and the US and the efforts of other partners.

Recently, in the UK, Rotary leadership and staff have met with officials from the University of East London that has a significant diaspora enrollment, representatives from the British Pakistan Foundation, Bloomsbury Pakistan, British Asian Trust, High Commission (included Rotary's polio focal point from Pakistan), and meetings with members of Parliament who are of Pakistani origin (again with representation from Rotary/Pakistan).

In Canada, Rotary has reached out to Members of Parliament of Pakistani descent.

At headquarters level, Rotary is sharing a letter penned by Asifa Bhutto-Zardari to engage/create relationships with the following groups to be followed by the development of a toolkit with key messaging, information, graphics, etc.:

- Pakistani/Islamic organizations and associations for professionals such as the Association of Physicians of Pakistani Descent of North America and the Association of Pakistani Physicians & Surgeons of the United Kingdom
- Pakistani/Islamic student associations in Canada, UK, US, and UK
- Mosques in major metropolitan areas of key countries

Rotary is also engaging with a graduate student of Pakistani origin in Chicago, who is also a member of the US Fund for UNICEF's Next Generation Committee, to further enhance Rotary's outreach strategy as noted above and through proposed diaspora conferences in the US and UK, and social media.

Rotary is also reaching out to diaspora media.

## **PERFORMANCE INDICATORS**

### **IMMUNIZATION AND SURVEILLANCE**

(See Figure 36, Six-month standard immunization indicators among children aged 6–35 months with NPAFP and annualized surveillance indicators by province, Afghanistan and Pakistan, August 2013 to February 2015).

## GPEI POLIO ERADICATION AND ENDGAME STRATEGIC PLAN 2013–2018, PAKISTAN

STRATEGIC PLAN OBJECTIVE	OUTCOME INDICATORS (2013)	RESULTS	STATUS
<b>Poliovirus Detection and Interruption:</b> Complete the interruption of wild poliovirus transmission globally and more rapidly detect and interrupt any new outbreaks due to vaccine-derived polioviruses	All wild poliovirus transmission stopped by the end of 2014		<b>Not Met</b>
	All new cVDPV outbreaks stopped within 120 days	Most cVDPV cases in 2014 were continuation of 2012 emergence. After new emergences in North Waziristan and Karachi, not all reported cases occurred within 4 months from first to most recently confirmed case.	<b>Not Met</b>
	<b>OUTPUT INDICATORS (2013)</b>		
	Achieve and maintain an NPAFP rate* of $> 2/100,000$ in all states/provinces of high-risk countries and maintain an NPAFP rate* of $> 2/100,000$ in all states/provinces	National NPAFP rate during 25 February 2014 - 24 February 2015 period was 5.7/100,000, a 7% decrease from the previous rolling year. Only 6 out of 8 (75%) of provinces have maintained NPAFP $>2/100,000$ this period, compared with 7 provinces, 87.5% the previous rolling year.	<b>Not Fully Met</b>
	Achieve and maintain adequate stool sample collection in 80% of cases in all states/provinces	Nationally the proportion of AFP cases with adequate stool was 92%, marking a relative 2.1% increase from the previous period. All provinces have maintained adequate stool collection in $>80%$ of AFP cases during these last 2 years.	<b>Met</b>
	LQAS passed at 90% threshold in all high-risk areas	Over the last 12 months, of the 468 LQAS assessments conducted in the sanctuaries and risk area, 3% have passed at the 90% threshold and 20% have passed at the 80% threshold. Performance has been particularly poor in Quetta. There were no rounds of LQAS in FATA sanctuary over last 12 months	<b>Not Met</b>
	Establish full safety and security framework	A plan to provide security to UN polio workers has been developed and is supported by all stakeholders. A framework for operating in insecure areas has been incorporated into the current version of the National Emergency Action Plan. Discussions and efforts with provincial and national authorities continue to enhance security for all government health workers involved in SIAs,	<b>Established</b>
	All current cVDPV outbreaks stopped by end-2013	Circulation in 2012–2013 after emergence in 2012 was not interrupted by end-2013	<b>Not Met</b>

\*NPAFP case rates are based on number of AFP cases observed among 100,000 children  $<15$  years of age per year of follow-up.

## SYNOPSIS

- Epidemiology:** As of 16 April, 21 cases of WPV have occurred from 12 districts in 2015, compared with 58 cases from nine districts for the same period in 2014. During 2014–2015, 57% of cases occurred in FATA (mainly in Khyber and North Waziristan Agency, which had 44% and 38% of the cases reported in FATA respectively); the remaining cases were in KP, Sindh, and Balochistan. No WPV3 has been detected in Pakistan since April 2012. Although the number of cases in 2015 to date is smaller than the number of cases during the same period in 2014, the reporting of a case in Kambar district in Sindh Province for the first time and the isolation of WPV1 from environmental specimens in Islamabad for the first time indicate spread of the virus to previously unaffected areas in 2015. However, the recent negative samples in Karachi and Quetta block might indicate some breakthrough in the intense wild poliovirus circulation in these areas. In 2014, 21 cVDPV2 cases occurred from seven provinces in ; no cVDPV cases have been reported during 2015 to date. The incidence of cVDPV cases has decreased in the past 6 months; the latest cVDPV2 case of North Waziristan emergence was in September 2014 in Khyber. However, isolation of cVDPV from environmental surveillance sites in Sindh continued throughout 2014 and in 2015 to date, with an associated case in December 2014.
- Immunization:** Nine SIAs have been conducted since November 2014; four NIDs in December 2014, January, February, and March 2015 have been conducted. SIAs have used bOPV and tOPV. In SNIDs, both mOPV1 and bOPV were used and IPV was used in SIAs in Karachi, Quetta, Bannu, and Peshawar. The quality of SIAs as shown by the number of LQAS passing at 80% has progressively improved, 56% of the lots passed in December NIDs, 63% in January NIDs, 74% in February NIDs, and 71% in March NIDs, though below the programmatic target of 90%, using local threshold criteria. Two SNIDs are planned between now and the end of May 2015. The ongoing detection of cVDPV among cases and in environmental specimens indicates the presence of immunity gaps that remain mainly in populations that have been inaccessible.
- Security:** The Government of Pakistan, with the establishment of the EOC, has taken considerable efforts to improve the provision of security to frontline workers, especially when the security forces (including the military) have to contend with other challenges. The role of the EOCs as the primary coordination platform is to integrate operations, security, and communications planning for the conduct of protected vaccination campaigns, whether by the community or security agencies.
- Surveillance:** Although overall strong, some indicators suggest decreased surveillance performance. The percentage of WPV1 isolates with less genetic linkage than expected has decreased since 2012 but continue. Detection of long-standing WPV and CVDPV circulation only by environmental surveillance provides virologic evidence of gaps in AFP surveillance.
- Ownership:** The high degree of political commitment across all provinces is encouraging and has already produced concrete results. The staffing of EOCs in all provinces is outstanding. The number of UPEC meetings held in each area, particularly in FATA and Quetta, has improved.
- Community Demand:** Despite Pakistan's challenges, the overwhelming majority of Pakistan's parents and caregivers willingly vaccinate their children in polio campaigns. More than 95% of parents in most parts of the country accept vaccine for their children if vaccinators reach the doorstep. However, parents in KP and Karachi are starting to show fatigue. The refusal rate has increased by 80% over the past 3 months in these two areas, predominantly because of repeated doses. According to official data, more than 40% of Pakistan's 2014 cases come from refusal families. Although the refusal proportion is still small, the data show that refusal families are clustered in under-vaccinated communities and can be extremely challenging. Increasing trust in health services and vaccinators will be critical to reduce refusals and all consistently missed children in Pakistan's highest-risk areas.
- Way Forward:** Pakistan is finally on the right path toward eradication. The journey is likely to be longer than the GPEI anticipated; unperturbed focus will be critical to ensuring the quality adjustments that have been identified are consistently implemented in the field, monitored, and managed at national and provincial levels by the EOCs. Still to be urgently done is for Pakistan to appoint a national security focal point in the national EOC and full-time dedicated EOC coordinators in all the provincial EOCs.

## NIGERIA

### NATIONAL POLIO OVERVIEW

The number of WPV cases in Nigeria decreased from 122 in 2012 to 53 in 2013, and six in 2014. In 2015, there are no WPV cases year-to-date as of 16 April, compared with one during the same period in 2014. The onset of the latest reported WPV1 case was 24 July, 2014. No WPV3 has been detected since November of 2012.

In 2014, WPV cases were limited to Kano State (five cases; most recent onset 24 July 2014) and Yobe (1 case; onset 19 April 2014).

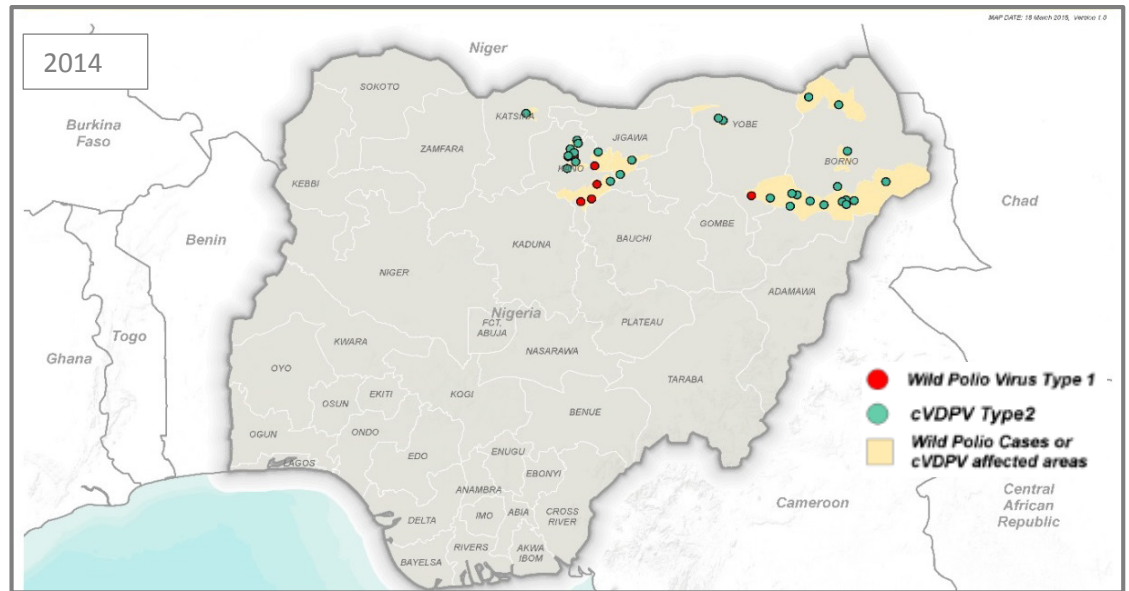
cVDPV case numbers have increased, from eight in 2012 and four in 2013 to 30 in 2014, 10 of which have occurred since July. Fourteen of these cases have occurred in Borno (latest onset 5 September 2014); 10 in Kano (latest onset 2 November 2014); three in Yobe (latest onset 3 November 2014); two in Jigawa (latest onset 8 Oct); and one in Katsina (latest onset 12 September 2014). Environmental surveillance has repeatedly detected cVDPVs in Sokoto and Borno since mid-2013 and sporadically in Kano and in Kaduna more recently. As of 16 April, no cVDPV cases have occurred in 2015. One January environmental sample was VDPV2 positive (Kaduna; 20 January 2015 collection) that is related to other VDPVs isolated from the environment in Kaduna in 2014 without associated cases. A VDPV from the 2005-8 cluster was identified in a March environmental sample from a site in Kaduna (not yet officially reported as of 16 April). Cases due to cVDPV2 clusters commonly identified in Nigeria (2005-8 Nigeria cluster and Chad-A cluster) have not been detected since late November 2014.

Throughout 2013 and 2014, Nigeria implemented a broad array of innovations in its polio programme, resulting in substantial improvement in SIA quality as measured by LQAS, especially in Kano State. Among the 69 highest-risk LGAs in northern Nigeria, >80% have achieved the “≥80%” threshold on LQAS (i.e., eight or fewer missed children out of 60) since January 2014; >90% since May; and ≥95% since November.

Much of the programme’s attention is currently focused on two transmission zones: the “Kano” zone, which includes non-urban LGAs in the south of the state as well as LGAs in north-eastern Kaduna State and north-western Bauchi State, and the Borno/Yobe zone.

The national programme implemented “directly observed polio vaccination” (DOPV) in highest-risk areas to improve team performance in areas with poor performance or a history of non-compliance and “health camps” to help build community confidence in the programme. Additionally, 3.8 million doses of IPV were

**Figure 60. WPV and cVDPV cases, Nigeria, 2014 and no cases in 2015 to date\***



Source: WHO

\*Data as of 3 March 2015



administered with tOPV in Borno and Yobe states, as well as 20 of 44 Local Governments Areas in Kano State between June 2014 and March 2015. The programme plans to co-administer IPV and tOPV targeting another 600,000 children in urban areas of Sokoto metro, Sokoto State and Zaria metro, Kaduna State in April 2015. IPV was added to routine immunization in February 2015 in a staged fashion that prioritized early implementation in polio high-risk states. The programme continues to focus on accelerating routine immunization activities, increasing supervision in SIAs, and strengthening surveillance.

In Borno and Yobe, and northern parts of Adamawa, insecurity continues to be an overriding factor, particularly in a band of LGAs south of Maiduguri stretching from Yobe to Cameroon. The programme has continued innovations previously described, including permanent health teams, transit-point vaccination, vaccination in camps for IDPs, “hit and run” vaccination (rapid implementation of short-interval SIAs to take advantage of openings in inaccessible zones), and “health camps” (fixed-point vaccination centers providing a variety of health services during SIAs). Efforts to vaccinate children at malnutrition treatment centers in Borno have increased. The programme has made concerted efforts to vaccinate IDPs from this area, either in the communities where they arrive to stay with relatives or in IDP camps that have been established in neighboring states. Fifty-seven thousand seven hundred fifty doses of polio vaccine were provided in 48 IDP camps in Borno (22 camps), Taraba (21 camps), Adamawa (four camps), and Gombe (one camp) in 2014 to early 2015. These efforts reached 1,592 zero-dose children. Remaining issues include the need for a better quantification of children displaced elsewhere because of this insecurity and to identify opportunities to vaccinate in refugee camps that have been established in Niger, Chad, and Cameroon.

cVDPV circulation increased in 2014 despite many successful SIA's, largely because most SIAs used bOPV in an effort to interrupt the last remaining chains of WPV1 transmission. Nigeria has experienced a prolonged outbreak of cVDPV2 since 2005, peaking at 155 cases in 2009. By early 2012, a series of tOPV SIAs had mostly stopped new emergences but did not stop continued circulation from that outbreak by the dominant lineage. cVDPV2 circulating in Nigeria in 2014 was from both the 2005 outbreak and from a 2012–2013 cVDPV2 outbreak in Chad that spread to Nigeria, Niger and Cameroon. Poor routine immunization coverage rates in northern Nigeria and heavy use of bOPV between April 2013 and August 2014 resulted in the continued transmission of cVDPV2. To address low poliovirus type 2 immunity, the programme conducted tOPV SIAs in August and November 2014. tOPV was also used in Sokoto during the December 2013 SIA, in selected areas of Borno in February and May 2014, and in Adamawa in February 2014. In addition, the programme has administered IPV throughout Borno and in parts of Yobe and Kano. These efforts resulted in a recent decline in cVDPV2 identification, with no cVDPV2 cases and only one VDPV2 environmental positive (Kaduna, January 2015) occurring between December and March, as of 20 March reporting date. In February 2015, IPV was introduced to the routine immunization system and states at high risk for poliovirus transmission were included in the early group of states adopting IPV. The March NID used tOPV and the April NID will use tOPV in 23 states in northern and central Nigeria and bOPV in much of the south. Further efforts to curb cVDPV2 include a programme decision to treat all cVDPV cases and all cVDPV environmental positives as outbreaks, and to conduct a complete three-round outbreak response to each occurrence.

The polio programme supports targeted efforts to improve routine immunization in key areas, including 76 LGAs in the endemic northern States with weak routine immunization coverage and at high risk of cVDPVs. Capacity building to improve Reaching Every Ward implementation is underway in Taraba and Adamawa.

AFP surveillance performance indicators have improved steadily in Nigeria in recent years, with the national NPAFP rate now exceeding 12 per 100,000 children <15 years of age per year and a national stool adequacy proportion of 97%. In both Borno and Yobe, NPAFP reporting rates remain high, at 13.2 per 100,000 children <15 years per year in Borno and 16.7 per 100,000 children <15 years per year in Yobe, and stool adequacy proportions exceed 97%. There is a need to monitor and report on polio-compatible

cases that suggest possible missed transmission and to focus efforts to further improve surveillance through systematic active case finding in poor-performing areas and surveillance reviews in others.

In upcoming months, Nigeria faces two potential disruptions to its polio programme: the transition of authority between administrations based on the opposition party winning the presidency in the March 2015 elections and the continued insecurity in Borno, Yobe, and surrounding states, including sporadic security incidents in Kano. The challenge for the political situation will be to ensure that polio regains the attention of newly elected and returning politicians — political support is key not only to get to the milestone of interrupting transmission, but also to keeping the country polio-free for an additional two years and more.

## VIROLOGY

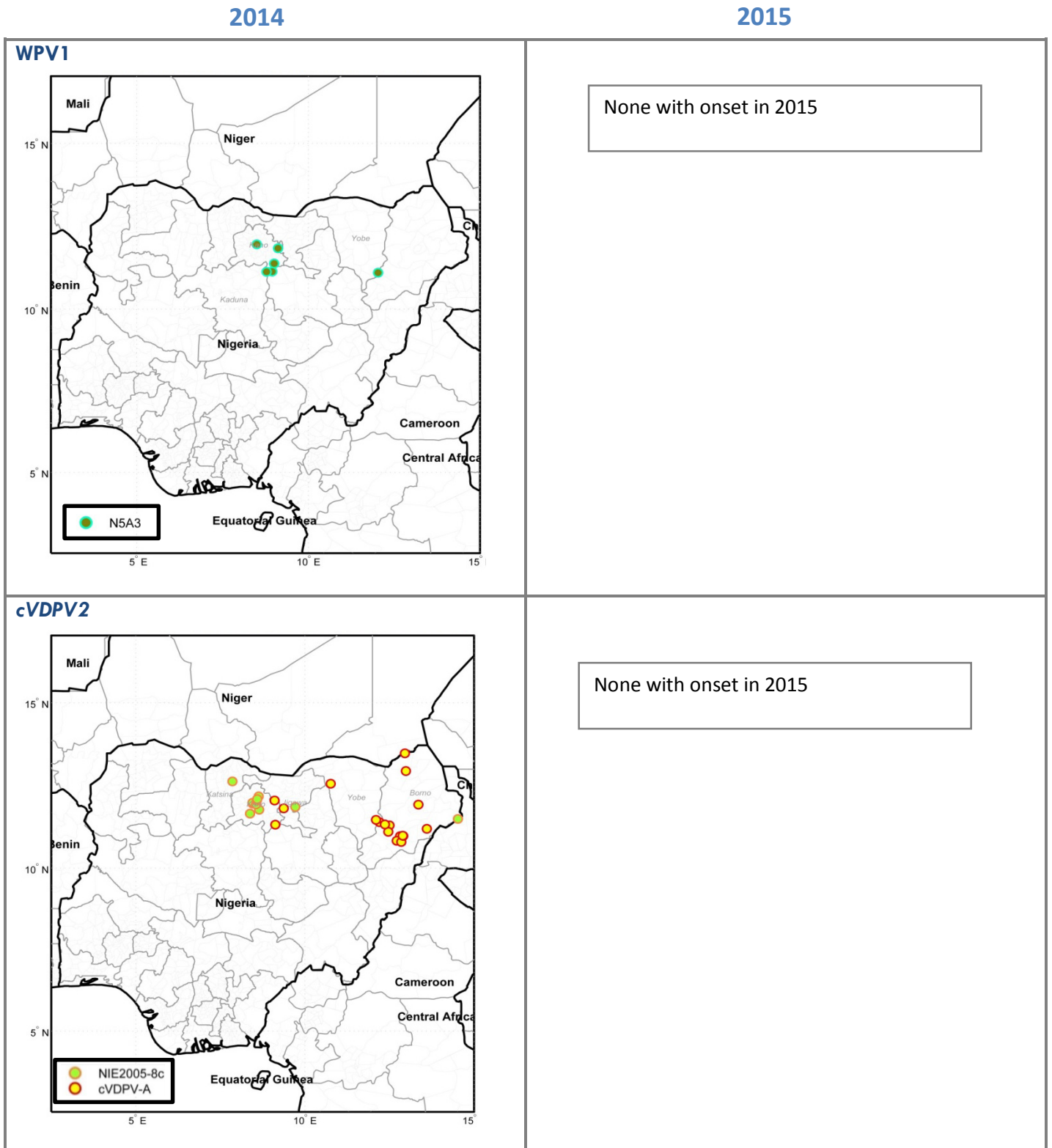
During February 2014–February 2015, genetic diversity continued to decline. During the reporting period, the number of circulating lineages declined from four active clusters in 2013 to two active clusters (N5A1 and N5A3) in 2014. From July 2014 until February 2015, no cases were detected. The last reported cases associated with N5A3 were localized in Kano (5 cases) and Yobe (1 case).

During the reporting period, one WPV1 was isolated from environmental specimens collected in Kaduna state sentinel site in early May 2014. This orphan virus was related to a lineage in cluster N5A1 circulating in Kano in 2013 and Katsina in 2012. Recent isolation of VDPVs from samples taken in Kaduna bear more observation (see below).

Genomic sequence analysis reveals fewer surveillance gaps as indicated by shorter genetic relationships between most recent cases. One WPV1 from an AFP case from Yobe state had less genetic linkage than expected with sensitive AFP surveillance. Nationally, the percentage of WPV1 isolates with much less genetic linkage than expected declined substantially from 33% during the first half of 2014 to 0% during the second half of the reporting period.

1. The genetic diversity of WPV1 strains has declined during February 2014–January 2015 compared with the previous 12-month period.
2. WPV1 isolation from environmental specimens remained low during the reporting period.
3. Virologic data indicate reduced gaps in AFP surveillance.

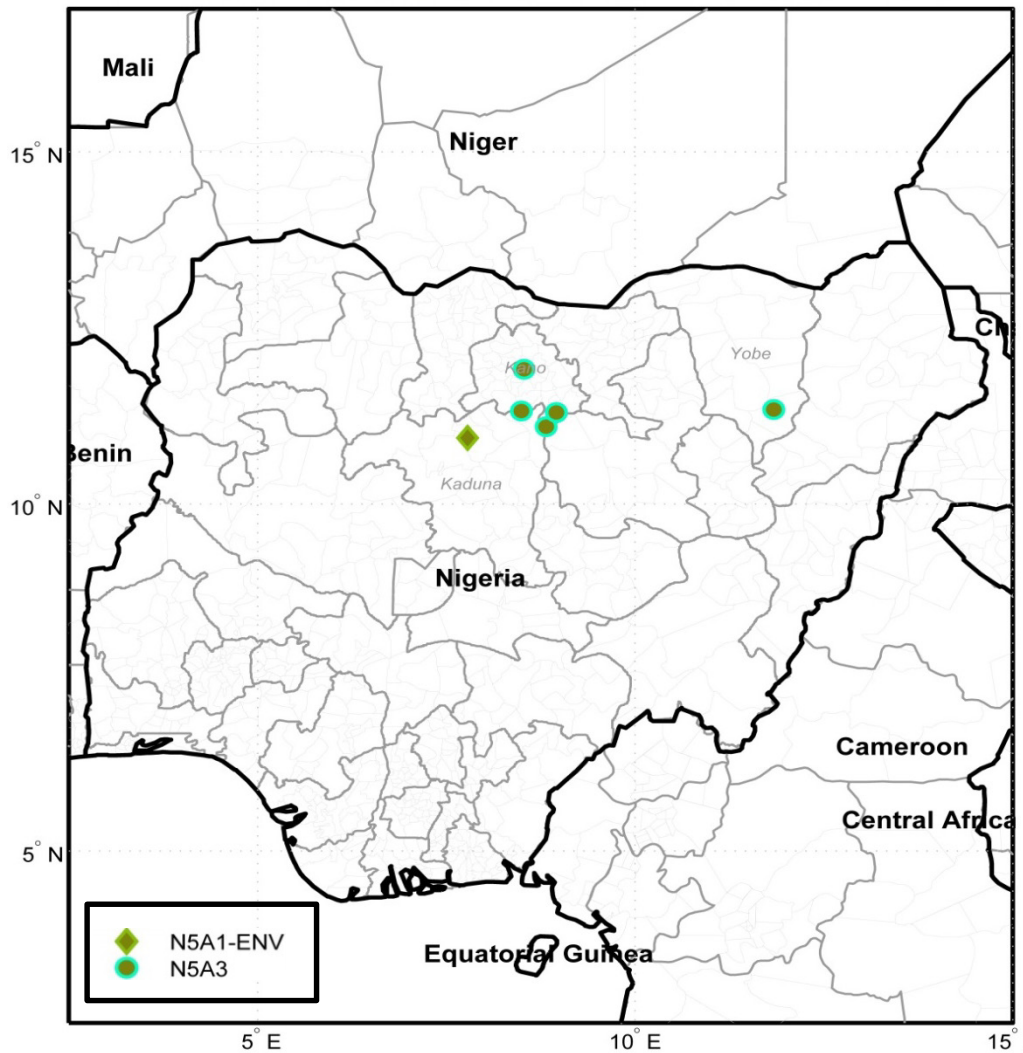
**Figure 61. Wild poliovirus type 1 (WPV1) by genetic cluster and circulating vaccine-derived poliovirus type 2 (cVDPV2) by emergence, Nigeria, 2014 and 2015 to date\***



Source: CDC

\*Data as of 3 March 2015

**Figure 62. WPV1 cases and environmental isolates by genetic cluster, Nigeria, 25 February 2014 to 24 February 2015\***



Source: CDC

\*Data as of 3 March 2015

## VDPV2 IN WEST AND CENTRAL AFRICA

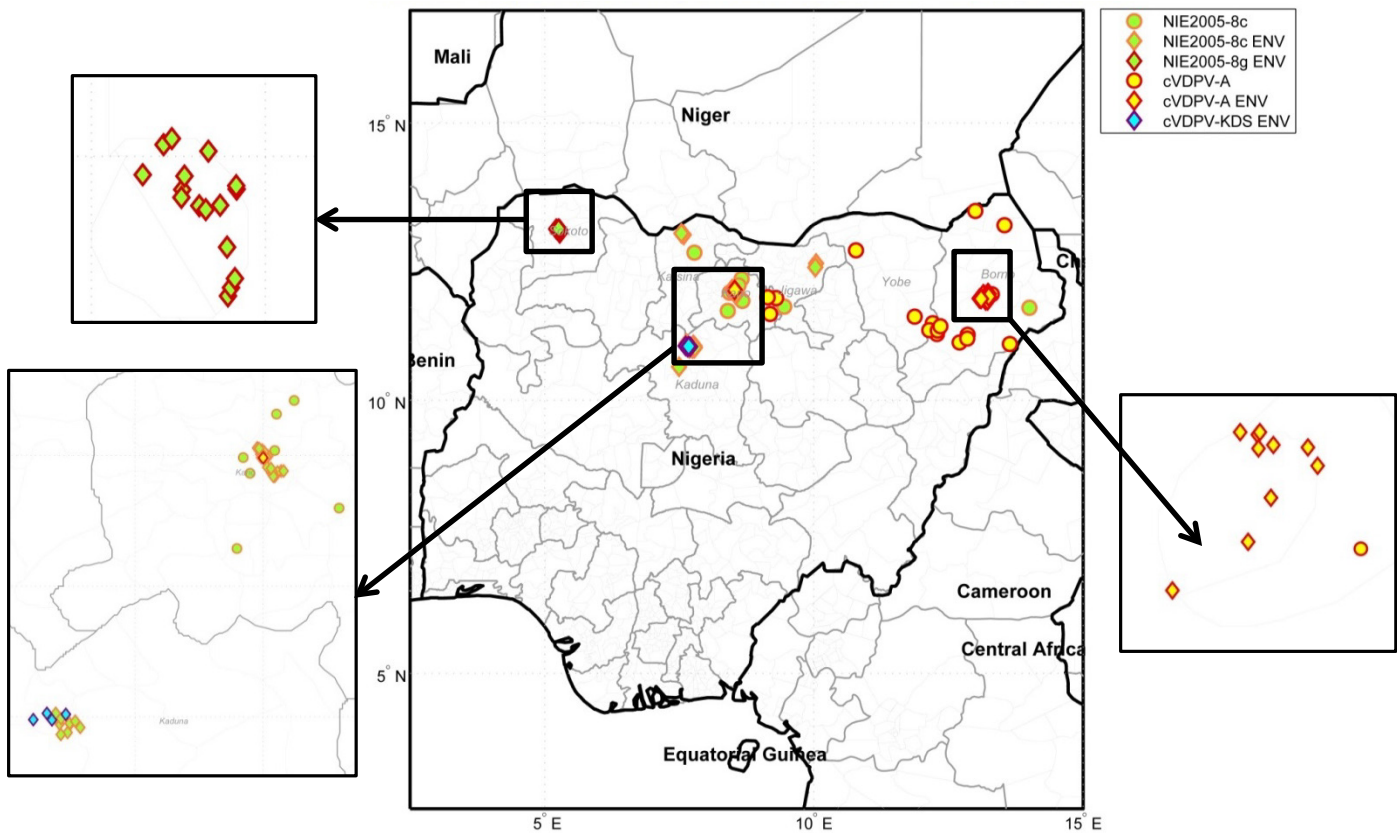
**cVDPV2 emergence in Nigeria:** VDPV related to the Nigerian emergence group 2005-8 has been circulating for more than nine years. The number of cVDPV2 cases associated with circulating Nigerian lineages increased substantially during 2014; seven cases were detected during the first half of 2014 and four cases during the second half of the year. Cases were distributed among four states: Kano (8), Katsina (1), Jigawa (1), and Borno (1). All cases were genetically related to cluster 2005-8c. The last case detected during the reporting period was isolated from an AFP case in Kano with onset date 14 October 2014. From all AFP cases, 19% had less genetic linkage than expected with sensitive AFP surveillance.

Environmental sampling conducted during the reporting period detected 54 cVDPV2s in five states: Kano (22), Sokoto (16), Kaduna (12), Katsina (2), and Jigawa (2). Positive environmental samples were genetically related to clusters 2005-8c and 2005-8g. Two orphan viruses were detected from environmental samples collected in Jigawa and Kano states and were genetically related to cluster 2005-8c.

**cVDPV2 emergence in Kaduna state:** Four samples collected from two separate environmental collecting stations in Kaduna state were genetically related to this independent emergence. The first and last positive samples were collected in 9 August 2014 and 20 January 2015 respectively. No cases are associated with this cluster to date.

**aVDPV2 emergences:** Detection of independent aVDPV2 emergences occurred in five states (two cases in Kano and Federal Capital Territory, and environmental samples in Kano, Sokoto, and Yobe) during the reporting period. The last aVDPV2 detected was isolated from an environmental sample collected in Sokoto state in January 2015.

**Figure 63. cVDPV2 in Nigeria and Niger by emergence, 25 February 2014 to 24 February 2015\***



Source: CDC

\* Data as of 3 March 2015

**cVDPV2 emergence in Chad:** During the reporting period, 18 new cases were detected, corresponding to the emergence group A of the 2012 Chad cVDPV2 outbreak (cVDPV2-A). Most cases were detected in Borno (13), in addition to cases in Kano (2), Yobe (2), and Jigawa (1) states. The latest case from this emergence was isolated from an AFP case detected in Yobe state with onset date 03 November 2014. During the reporting period, 32 viruses genetically linked to the Chad cVDPV2 group A emergence were detected in several environmental sites in Borno (31) and Kano (1) states. The latest detected virus was from a Borno environmental sample collected in June 2014. During the reporting period, no cases were reported from Cameroon. One AFP case associated to cVDPV-A emergence was reported in Niger with onset date 14 May 2014. During the reporting period, three cVDPV2-A from AFP cases in Borno and Kano states had less genetic



linkage than expected from sensitive AFP surveillance and two orphan viruses were detected from environmental samples collected in Borno and Kano states.

### POLIOVIRUS SANCTUARIES AND RISK AREAS

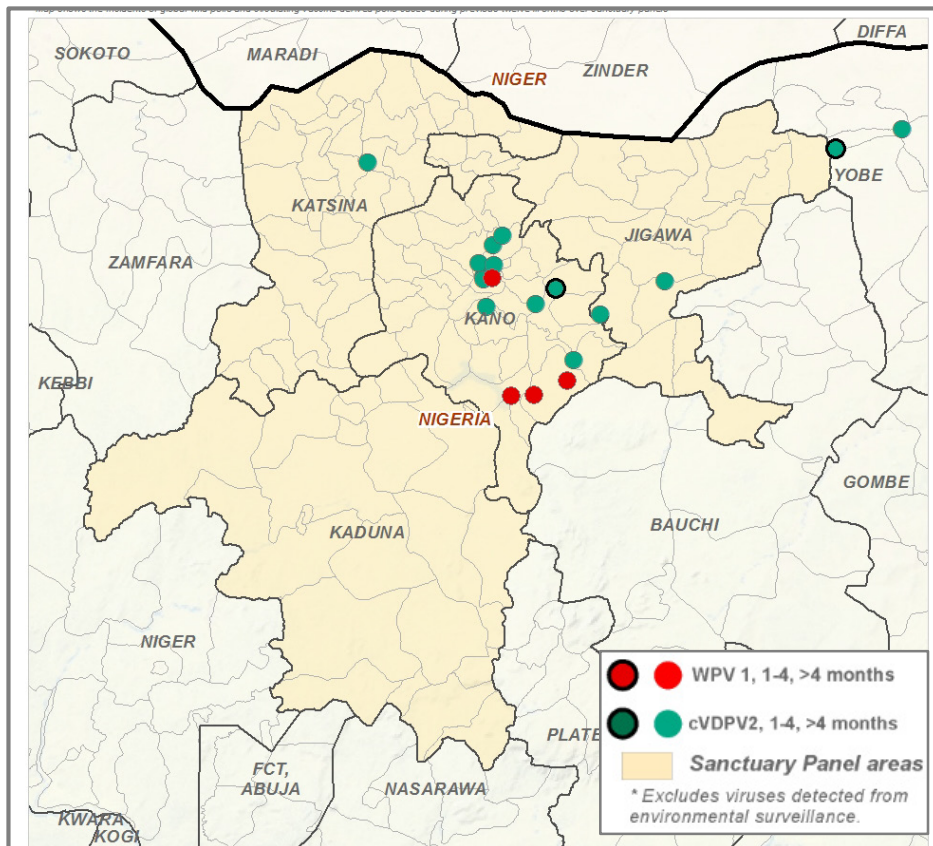
At the time of this report, Nigeria has two virus sanctuaries and one risk area:

1. North-Central Sanctuary (Kano, Katsina, Jigawa, and Kaduna)
2. Northeast Sanctuary (Borno and Yobe)
3. Northwest Risk Area (Sokoto and Zamfara)

Although WPV cases have not been identified in Katsina and Kaduna since 2012, these states along with Kano and Jigawa formed a common reservoir of linked WPV clusters until that time which often led to circulation in Bauchi state. The Northwest states of Sokoto and Zamfara do not appear to have circulating WPV; these states are referred to as the Northwest Risk Area.

#### NORTH-CENTRAL SANCTUARY

**Figure 64. WPV and cVDPV cases, North-Central Sanctuary, 25 February 2014 to 24 February 2015\***



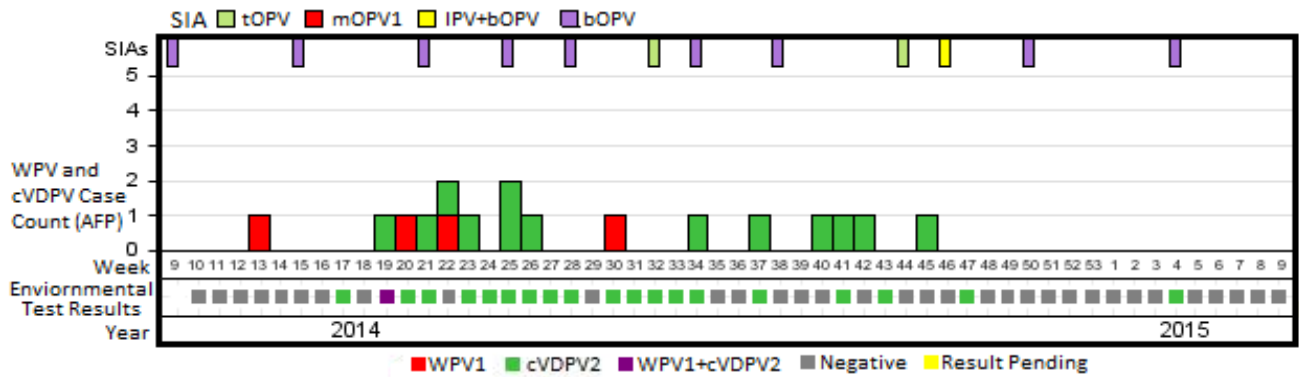
Notes regarding Nigeria's LQAS survey results (see next page). Decision rules of 0–3, 4–8, 9–19, and 20–60 for sample sizes of 60 in Nigeria provide a reasonable assessment of SIA quality at 90% (High Pass), 80% (Pass), and 60% (Low) thresholds (or Fail if below) for programmatic purposes under the assumption of moderate variability in cluster-level results.

Source: WHO

Data as of 3 March 2015



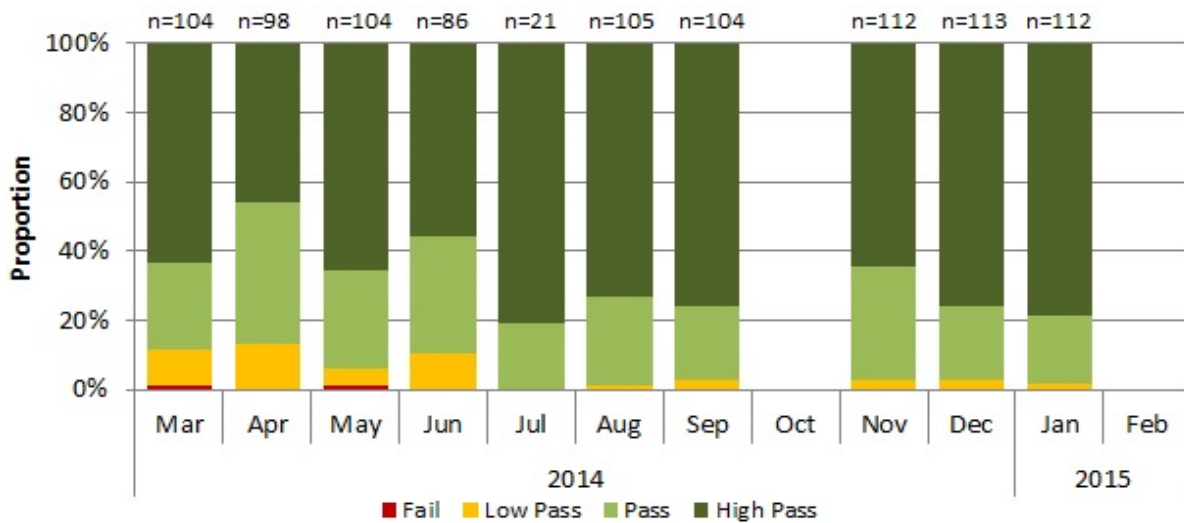
**Figure 65. WPV and cVDPV cases by week of onset and environmental surveillance results, North-Central Sanctuary (Kano, Katsina, Jigawa, and Kaduna), Nigeria, 25 February 2014 to 24 February 2015\***



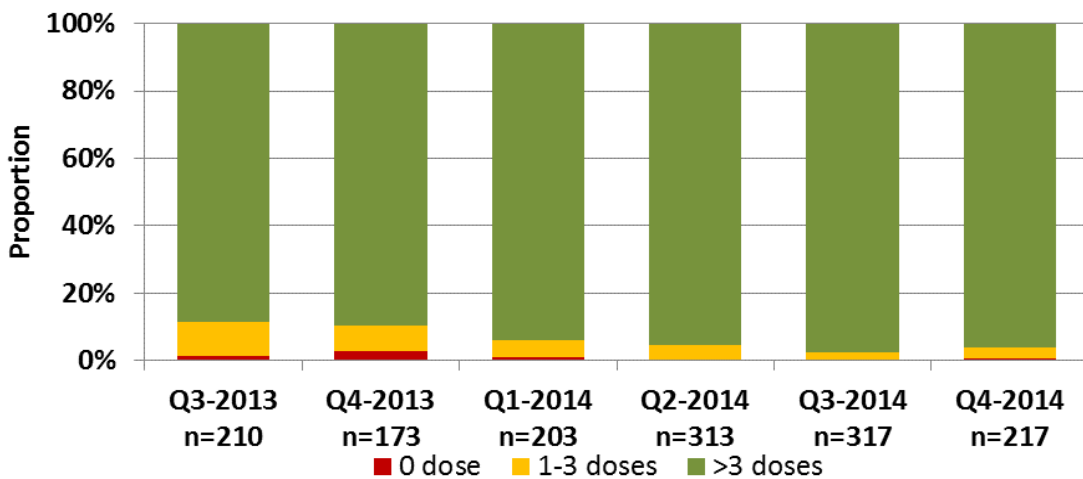
Source: CDC

\*Data as of 3 March 2015

**Figure 66. Proportion of LGAs with LQAS survey results by SIA, North-Central Sanctuary, Nigeria, March 2014 to February 2015**



**Figure 67. Proportion of NPAFP cases 6 to 35 months, by OPV status, North-Central Sanctuary, Nigeria\***



Source: WHO

\*Data as of 3 March 2015

**OWNERSHIP**

**Percent of LGAs meeting indicators 1 week pre-campaign**

North Central Sanctuary	Aug '14	Sept '14	Oct '14	Nov '14	Dec '14	Jan '15	Feb '15
LGAs participating	128	128		127	115	128	
LGA task force met	99	70		99	95	77	
LGA counterpart funding released	0	35		34	28	30	

**Percent of LGAs meeting indicators 3 days pre-campaign**

Aug '14	Sept '14	Oct '14	Nov '14	Dec '14	Jan '15	Feb '15
128	128		127	115	128	
100	100		100	100	100	
88	93		83	83	65	

**Jigawa**

State task force met	No	No		Yes	No	Yes	
State counterpart funding released	No	No		No	No	No	

Yes	Yes		Yes	Yes	Yes	
No	No			No	No	

**Kano**

State task force met	Yes			Yes	Yes	Yes	
State counterpart funding released	Yes			Yes	Yes	Yes	

Yes			Yes	Yes	Yes	
Yes			Yes	Yes	Yes	

**Kaduna**

State task force met	Yes	Yes		Yes	Yes	Yes	
State counterpart funding released	No	No		No	No	No	

Yes	Yes		Yes	Yes	Yes	
Yes	Yes		Yes	Yes	Yes	

**Katsina**

State task force met	Yes	No		No	Yes	Yes	
State counterpart funding released	Yes	Yes		Yes	Yes	Yes	

Yes	Yes		Yes	Yes	Yes	
Yes	Yes		Yes	Yes	Yes	

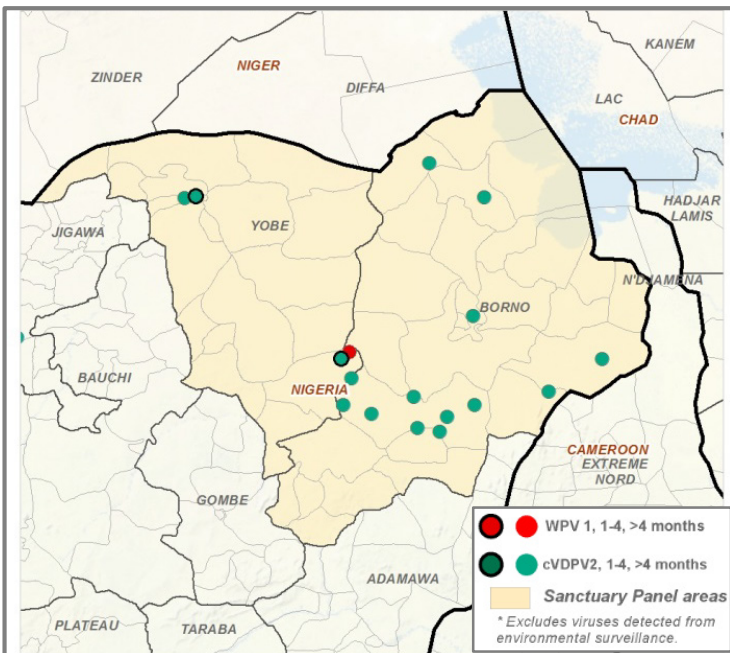
**Abbreviations:** LGA=Local Government Area

**Source:** Nigeria Polio Campaign Dashboard, WHO-Nigeria

No campaign
No data

**NORTHEAST SANCTUARY**

**Figure 68. WPV and cVDPV cases, Northeast Sanctuary, 25 February 2014 to 24 February 2015\***

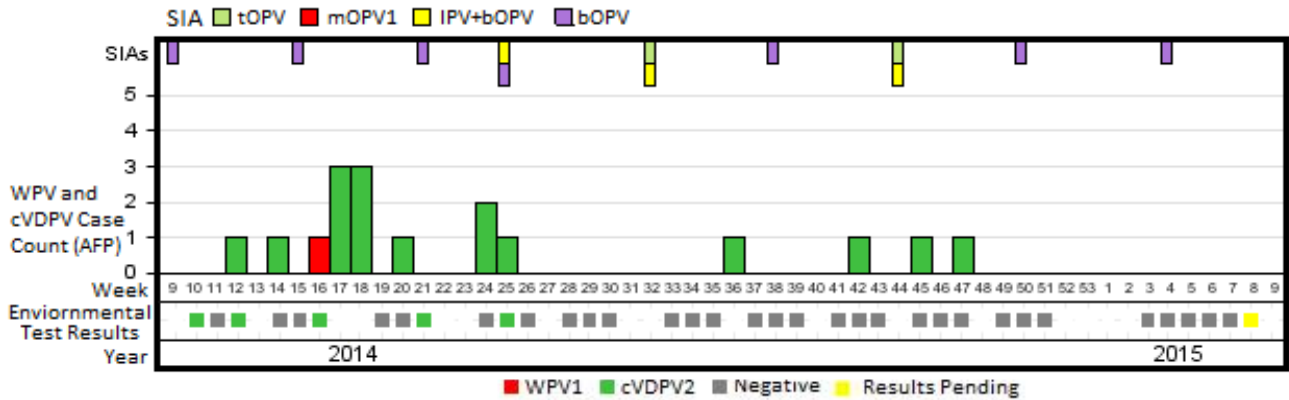


Note: LQAs results for the combined states masks the considerable lower quality results found in Borno, where conducted.

Source: WHO

\*Data as of 3 March 2015

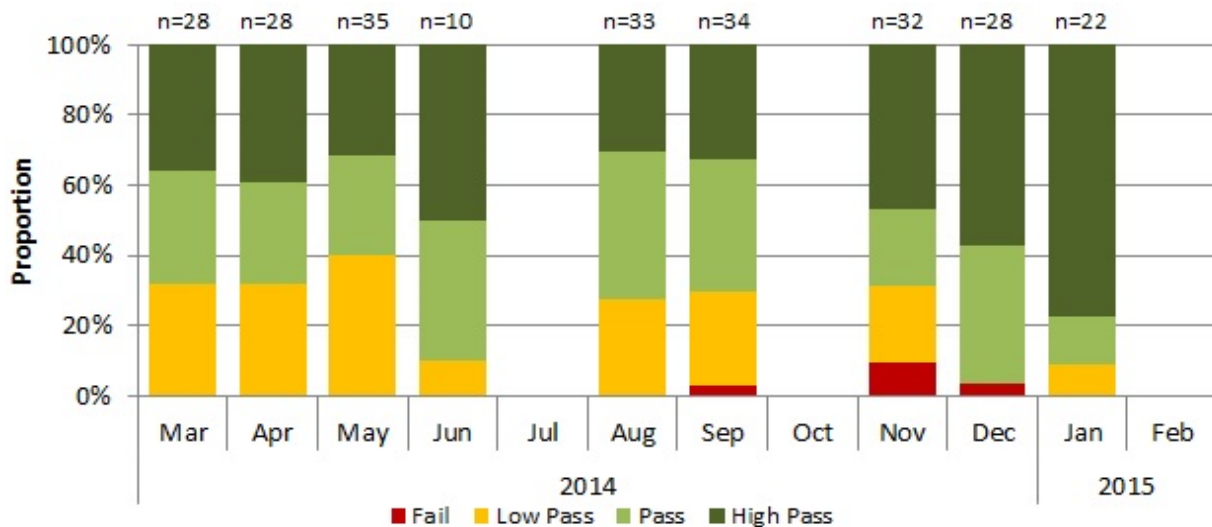
**Figure 69. WPV and cVDPV cases by week of onset and environmental surveillance results, Northeast Sanctuary (Borno and Yobe), Nigeria, 25 February 2014 to 24 February 2015\***



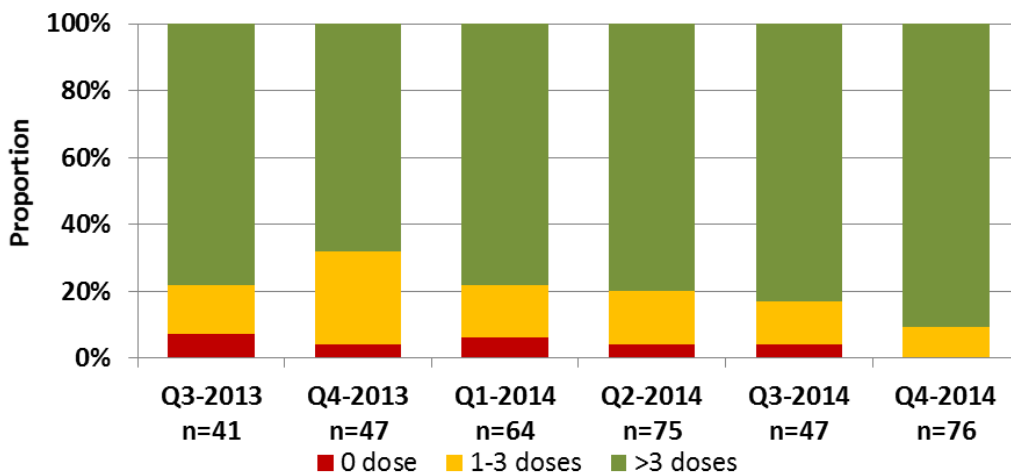
Source: CDC

\*Data as of 3 March 2015

**Figure 70. Proportion of LGAs with LQAS survey results by SIA, Northeast Sanctuary, Nigeria, March 2014 to February 2015**



**Figure 71. Proportion of NPAFP cases 6 to 35 months, by OPV status, Northeast Sanctuary, Nigeria\***



Source: WHO

\*Data as of 3 March 2015

**OWNERSHIP**

	Percent of LGAs meeting indicators <b>1 week</b> pre-campaign							Percent of LGAs meeting indicators <b>3 days</b> pre-campaign						
	Aug '14	Sept '14	Oct '14	Nov '14	Dec '14	Jan '15	Feb '15	Aug '14	Sept '14	Oct '14	Nov '14	Dec '14	Jan '15	Feb '15
<b>Northeast Sanctuary</b>														
LGAs participating	43	38		35	28	26		43	38		35	28	26	
LGA task force met	39	90		90	69	59		39	90		90	56	59	
LGA counterpart funding released	95	48		48	36	25		98	74		83	56	59	
<b>Borno</b>														
State task force met	Yes	Yes		Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes	
State counterpart funding released	Yes	Yes			Yes	Yes		Yes	Yes			Yes	Yes	
<b>Yobe</b>														
State task force met	Yes	Yes		Yes	Yes	Yes			Yes		Yes	Yes	Yes	
State counterpart funding released	Yes	Yes		No	No	No			Yes		Yes		Yes	

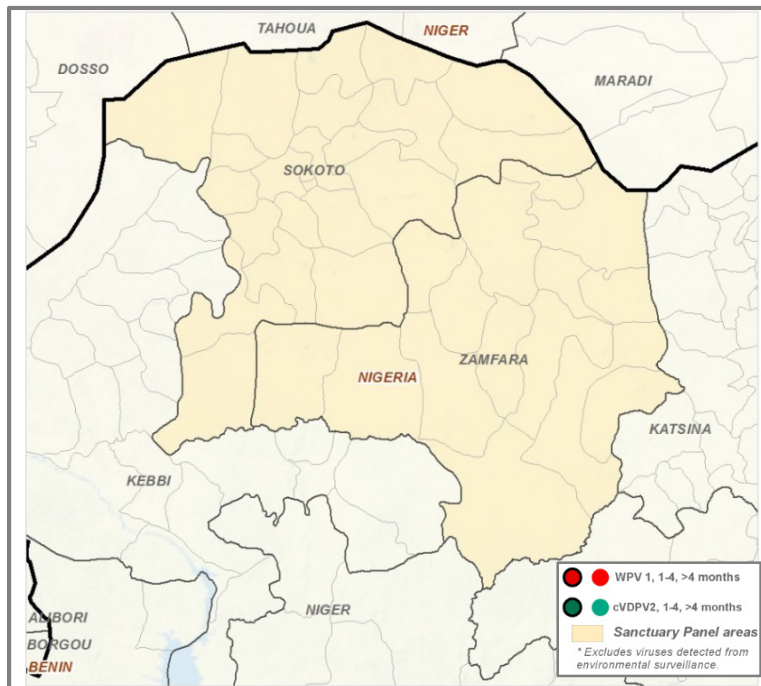
**Abbreviations:** LGA=Local Government Area

**Source:** Nigeria Polio Campaign Dashboard, WHO-Nigeria

No campaign
No data

**NORTHWEST RISK AREA**

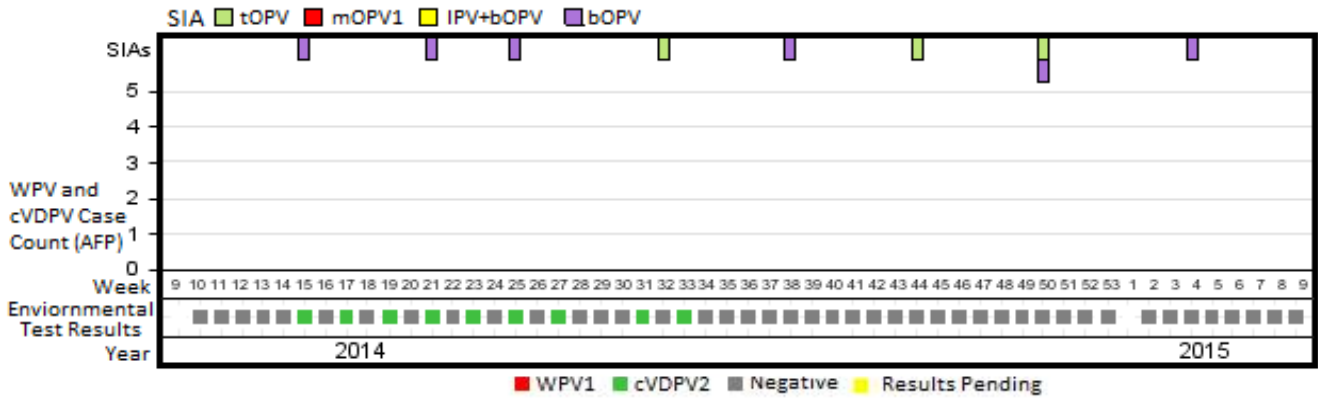
**Figure 72. No WPV and cVDPV2 cases, Northwest Risk Area, 25 February 2014 to 24 February 2015\***



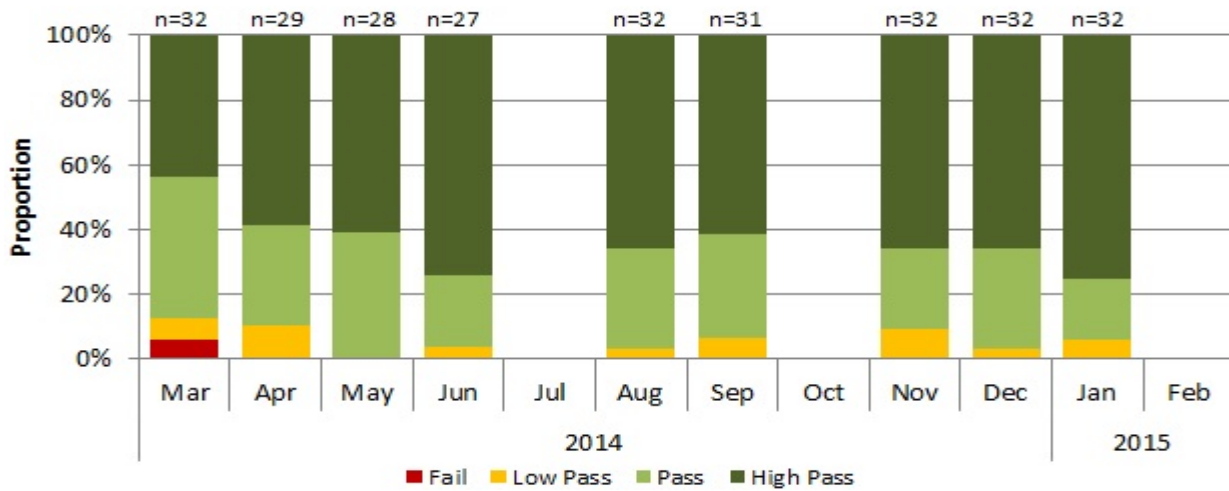
Source: WHO

Data as of 3 March 2015

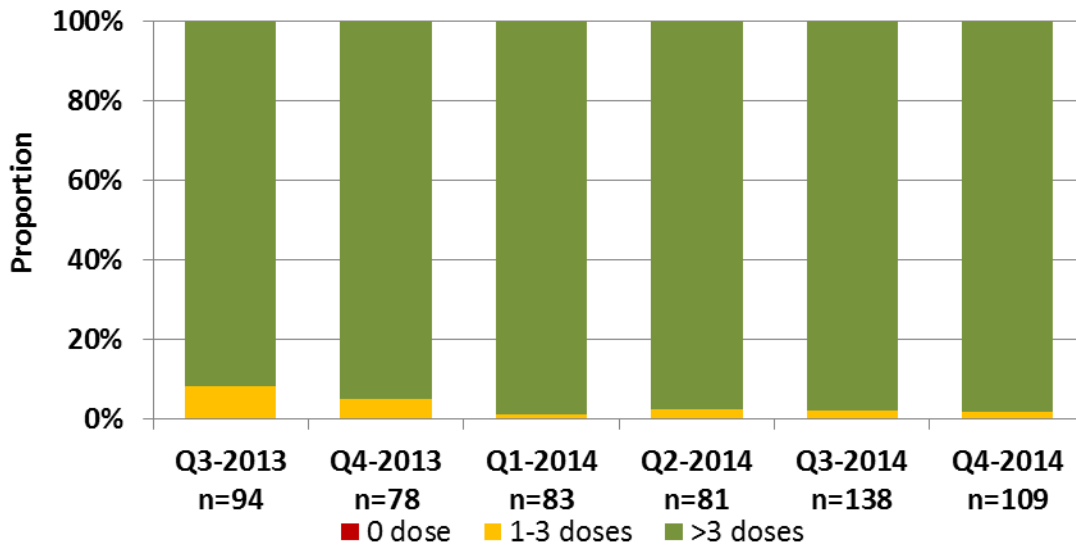
**Figure 73. WPV and cVDPV cases by week of onset and environmental surveillance results, Northwest Risk Area (Sokoto and Zamfara), Nigeria 25 February 2014 to 24 February 2015\***



**Figure 74. Proportion of LGAs with LQAS survey results by SIA, Northwest Risk Area, Nigeria, March 2014 to February 2015**



**Figure 75. Proportion of NPAFP cases 6 to 35 months, by OPV status, Northwest Risk Area, Nigeria\***



Source: WHO

\*Data as of 3 March 2015

## OWNERSHIP

	Percent of LGAs meeting indicators <b>1 week</b> pre-campaign							Percent of LGAs meeting indicators <b>3 days</b> pre-campaign						
	Aug '14	Sept '14	Oct '14	Nov '14	Dec '14	Jan '15	Feb '15	Aug '14	Sept '14	Oct '14	Nov '14	Dec '14	Jan '15	Feb '15
<b>Northwest Risk Area</b>														
LGAs participating	37	37		34	37	37		37	37		34	37	37	
LGA task force met	100	100		92	81	81		100	100		100	97	100	
LGA counterpart funding released	2	0		0	0	5		38	19		0	16	19	
<b>Sokoto</b>														
State task force met	Yes	No		No	No	No			No		Yes		No	
State counterpart funding released	Yes	Yes		Yes	No	No			Yes		Yes		Yes	
<b>Zamfara</b>														
State task force met	Yes	Yes		Yes	Yes	No		Yes	Yes		Yes	Yes	Yes	
State counterpart funding released	No	No		No	No	No		No	No		No	No	Yes	

**Abbreviations:** LGA=Local Government Area

**Source:** Nigeria Polio Campaign Dashboard, WHO-Nigeria

No campaign
No data

## REACHING MISSED CHILDREN

Nigeria has been dominated by two main factors that have had an impact on programme delivery over the last six months: the 2015 general elections and the continuing insurgency in the northeastern part of the country. The state of emergency in Adamawa, Borno and Yobe since May 2013 remains in place, resulting in an ever increasing level of military action from national and international forces, insurgent retaliation and vice versa. In January 2015, it was reported that inaccessibility within Borno was at 67%. This was also causing spillover effects into Yobe, which also registered 17% inaccessibility (see Accessibility and Security below). The Nigeria programme needs to investigate further what numbers of children are actually still living in security-compromised areas, and identify whether children being immunized through special initiatives are coming from these areas.

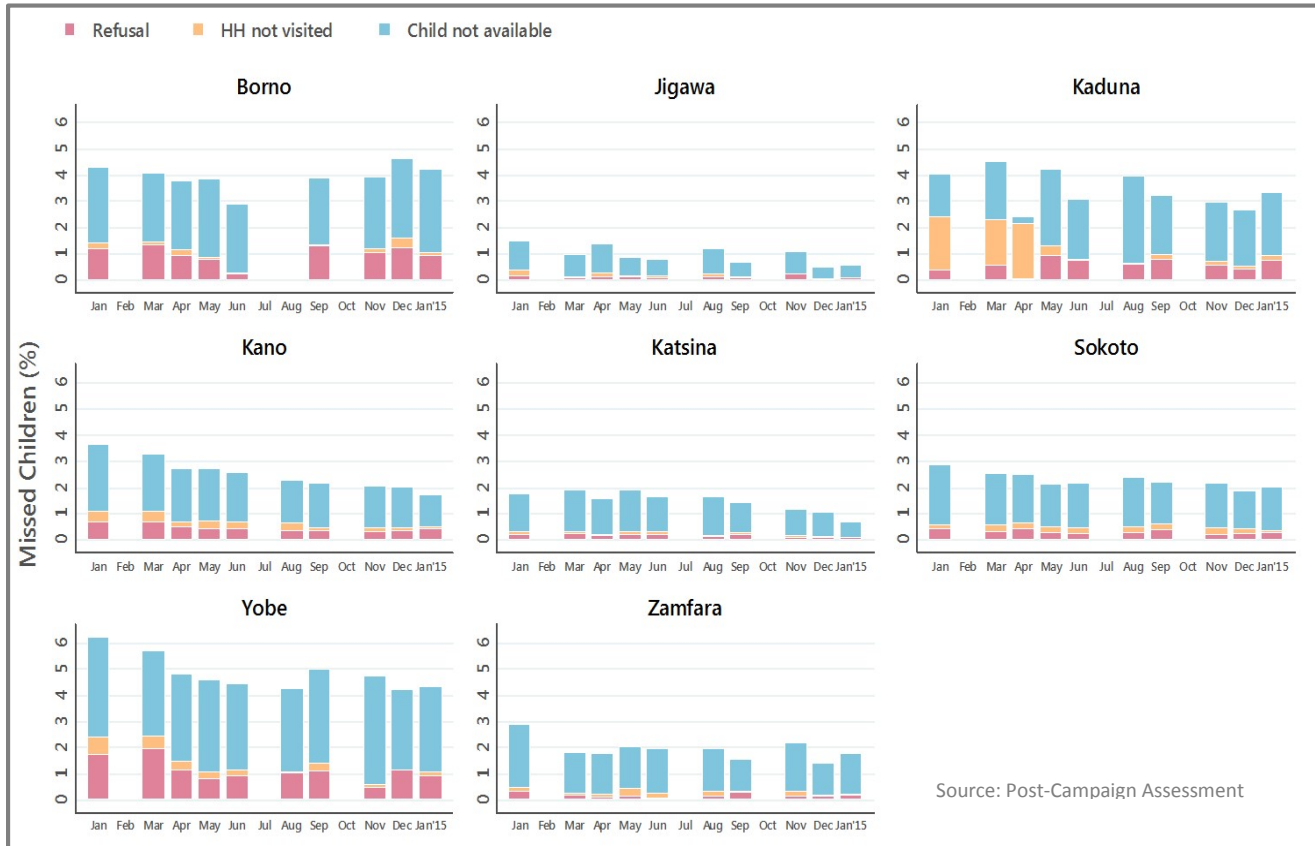
## General elections 2015

The general elections which took place at the end of March posed significant risk of political instability, decrease in programme oversight, and general insecurity. In preparation, the programme strengthened alliances with traditional and religious leaders to maintain commitment, and to mobilize parents for polio vaccination. This strategy helped to maintain performance during this phase of political transition. The elections and post-election period were peaceful. There will be 23 new state governors following the elections, and the programme needs to put in place measures to conduct post-electoral advocacy and sensitization to the newly elected governors and LGA chairmen to continue supporting the polio programme, including timely release of government counterpart funds at all levels.



**Missed Children**

**Figure 76. Trends in missed children in high-risk provinces of Nigeria 2014-2015**



Source: Post-Campaign Assessment

Based on IM data, coverage is more than 95% in all states except Borno and Yobe (See Figure 76). Among children who are missed, they are largely (70%) due to children absent when vaccination teams visit, and non-compliance (approximately 12%). The majority of absent children are in streets, playground, schools, markets, and social events such as naming ceremonies. Although the proportion of missed children due to non-compliance was recorded to be relatively low, evidence shows that vaccination teams were often concealing non-compliance, or assisting caregivers to conceal their refusal.

DOPV — outside household vaccination — was introduced as an innovation by the national programme in September 2014 to reach chronically missed children in Very, Very High Risk (VVHR) and Very High Risk (VHR) LGAs where non-compliant parents were colluding with house-to-house vaccination teams to fingermark the children without vaccination.

The National EOC recommended increased use of DOPV to reach absent children and children from non-compliant households who could be encouraged to bring their children outside for vaccination with additional incentives such as sweets, milk sachets and whistles. For children who are outside the home during door-to-door activities, or for very young children under two years old,



Street entertainers accompany vaccination teams to bring children out for Directly Observed Polio Vaccination (DOPV) in northern Nigeria

nutritional supplements like milk, or functional incentives like detergent sachets, are provided by outside vaccination teams to attract caregivers to bring their children for vaccination. To ensure high quality, DOPV teams are supported by an external monitor to observe the vaccination process.

Since its inception, DOPV, which is supported by some 6,000 musicians and entertainers to promote a positive vaccination experience, has helped improve accountability of the vaccination teams, and has contributed to the reduction in missed children in selected high-risk communities.

Tracking and vaccination of children in IDPs camps was intensified with 57,715 children vaccinated at 48 IDPs camps in four States of Borno, Gombe, Adamawa and Taraba.

### **Community Demand**

Nigeria's network of frontline social mobilizers has continued to grow to be the largest in the world. More than 9,700 social mobilizers are deployed in the highest-risk settlements, with a 1000-strong layer of management above them at ward level. In addition to this network, 221 religious focal points and 1,620 women from the non-governmental organization (NGO) FOMWAN also work to mobilize community support for OPV.

The VCM network has supported the reduction in non-compliance by nearly 80% over the past two years. Once the country with the highest magnitude of non-compliance, Nigeria now has among the lowest rates anywhere in the world. This success is due to a number of best-practice initiatives. First, a performance evaluation system is in place that helps weed out poor performers and motivate those who are performing well. A data management platform is being developed that will digitize and help demonstrate the performance of each VCM worker and each team across all high-risk states. Using this dashboard, managers can make human resource decisions based on objective criteria and update data after each campaign.

### **The value of bundling polio with health services**

In the working paper "Immunized Against the State: Non-Compliance with Polio Vaccination in Northern Nigeria" researchers from Harvard University and MIT (Shelby Grossman, Jonathan Phillips and Leah R. Rosenzweig) conducted fieldwork and re-analyzed village-level monitoring data to identify factors that correlate with non-compliance over time.

Their approach focused on the way Nigerian citizens react to a new and intense interaction with the State through the polio programme, in a context of limited and often unsatisfying experiences with broader public services. They developed and tested a theory of incongruence, which suggests that individuals and communities resist polio vaccination because of the incongruity between their poor past experience with government services and the intense polio campaign: "We argue that the incongruence citizens observe produces two effects. First, individuals may find the incongruence of polio vaccination suspicious and 'exit' from vaccination, seeking to avoid further contact with government. Second, incongruence reveals government's prioritization of polio eradication over local priorities...Previous poor experience with public services predicts non-compliance."

The study provides interesting insights on the value of convergence. The authors found substantial evidence that negative experiences with health clinics, schools and water points were associated with resistance. As the quality of the facilities in the area improved, non-compliance — whether defined to include cases where the child is reported to be not at home, or not — was reduced. Interestingly, the number of schools/clinics seemed less important than their quality. Although this analysis could not rule out the possibility that some omitted variables were causing both poor public services and non-compliance, by controlling for population density and measures of development, the evidence was consistent with the interpretation that experiences with public

services shape non-compliance. Additional research is ongoing to identify more precise causal estimates by assessing the effect of health camps in improving experiences with broader public services and raising trust.

Further, the authors show that although greater vaccination coverage of a village reduces non-compliance, controlling for coverage, more rounds of vaccination campaigns is associated with increased non-compliance (see Figure 9). This is not driven solely by the campaign targeting more rounds to the most resistant places; parents in intensely targeted areas are more likely to report that their reason for not complying is because of too many rounds. This is consistent with perceived incongruence of the campaign with local priorities generating distrust and resistance. The analysis of the correlation between past/available services and compliance allowed the authors to conclude that *“a more visible, effective and credible allocation of public services alongside vaccination may be the only way to both reduce distrust and limit strategic bargaining opportunities.”*

### **The impact of health camps**

The recently concluded 29th meeting of the Expert Review committee (ERC) has recommended expanding health camps and other interventions to improve coverage. They also recommended that the “program should conduct an evaluation of health camps and identify areas where such camps are essential to maintain vaccination coverage among non-compliant and hard-to-reach populations and areas where they may not be cost-effective.” Such a study also aims to fuel Nigeria’s legacy plans, providing concrete evidence that will inform the transition of GPEI assets in the post-polio era.

The study will begin in April 2015 and will undertake an assessment of health camps that deliver services in support of polio eradication as well as primary health care services in selected northern states of Nigeria. Evaluation metrics will include a review of the proportion of zero-dose children covered with OPV, additional services delivered together with OPV, and the impact on refusal/not available rates in areas where the camps have been conducted. Perceptions and satisfaction of services, trust in the health system and other attitudinal metrics will be measured. The study will also aim to document best practices as well as lessons learnt in implementing health camps, especially with regards to addressing inequity of health service delivery.

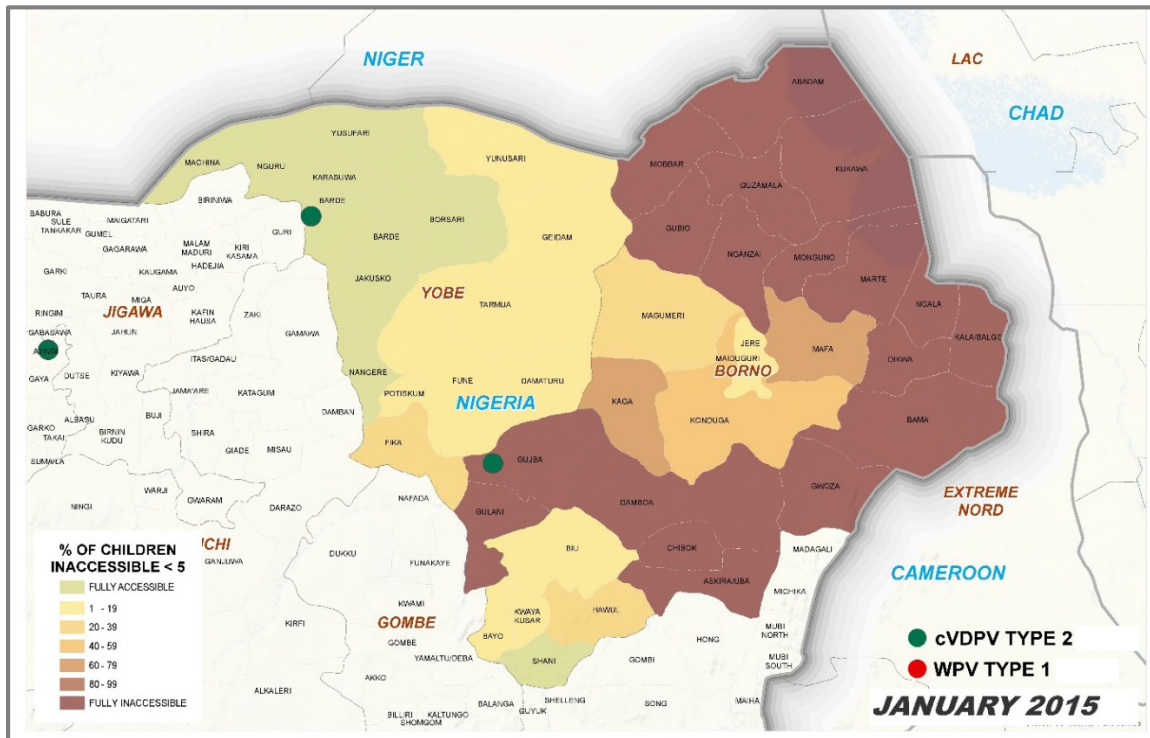
### **Other demand creation activities**

Beyond health camps, the Nigeria programme is implementing a number of activities aimed at enhancing trust and building demand for polio immunization. The programme is taking advantage of all available opportunities during and in between campaigns to immunize children, bringing together immunization, health and nutrition interventions in the 11 high-risk states. Between June and December 2014 some 115,000 children were vaccinated for polio at Community-based Malnutrition Assessment and Management (CMAM) sites representing an average of some 16,000 children each month.

The role of the VCMs also goes beyond polio, and their package now includes routine immunization, surveillance, antenatal care, hygiene promotion, nutrition and maternal and child health. In some areas the VCMs are helping to ensure birth registration of the newborns that they are tracking. An average of 2,500 children are linked to health facilities for Routine Immunization services on a weekly basis by the VCMs. This figure represents 90% of the new born children tracked by VCMs in the selected settlements.

## ACCESSIBILITY AND SECURITY

**Figure 77. Inaccessible areas, cVDPV2 cases, and the estimated proportion of children affected during the SIAs conducted in January, 2015 – Northeast Sanctuary, Nigeria**



Source: WHO

Data as of 3 March 2015

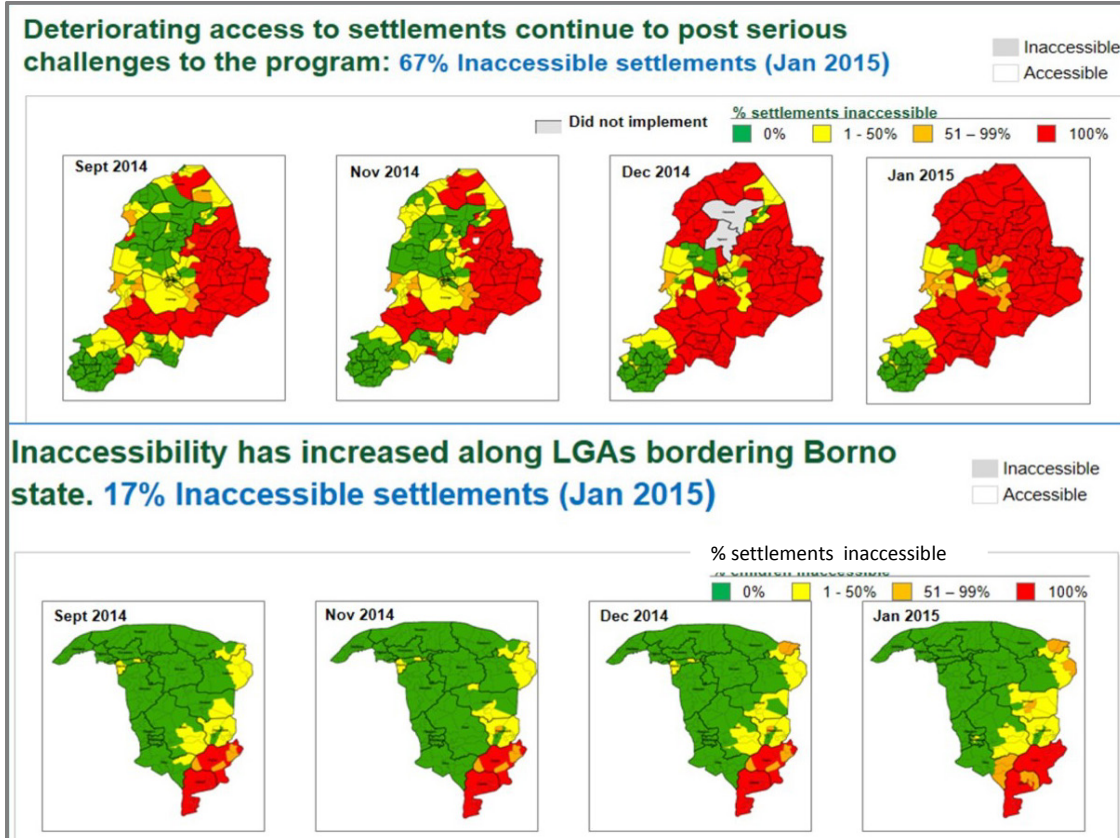
The state of emergency in Adamawa, Borno and Yobe since May 2013 remains in place resulting in an ever increasing level of military action from national and international forces, insurgent retaliation and vice versa. In January, 2015, it was reported that inaccessibility within Borno was at 67% while in Yobe, LGAs bordering Borno state have become increasingly hard to reach with the state registering 17% inaccessibility (see Figures 77 and 78). The insurgents have adapted their responses with the targeting of cities, military and police bases as well as destroying resources in rural areas. This has led to the displacement of more than 1,200,000 people (see Figure 79). A considerable amount of work has been invested to map the locations of IDPs by State health teams supported by the Local Access facilitators.

Despite these challenges, the Nigeria programme has dealt with the issues of insecurity and inaccessibility in a systematic manner. Monthly security risk assessments are conducted to gauge operational feasibility. Following the assessments, a number of interventions may be taken, which include, as appropriate: maintaining a low profile and reducing visibility for staff and assets in areas of insecurity; involving local communities from the insecure areas in programme implementation and for information gathering and analysis; developing a menu of operational solutions to reach transient populations, and to exploit narrow windows of access; developing strong relations with local traditional and religious leaders to ensure full trust and acceptance of the immunization activities; delivering a broader health package, in addition to polio vaccinations through health camps and other incentives; ensuring that contingency plans (hibernation, relocation, evacuation) are up-to-date; securing and using specialized security equipment (vehicles, communications); and mainstreaming security planning and budgeting into all aspects of the programme.



To rapidly boost population immunity in these insecure areas, the programme accelerated the introduction of inactivated polio vaccine (IPV) in Borno and Yobe. By November 2014 almost all LGAs had conducted IPV vaccination with more than 2 million children reached in these states.

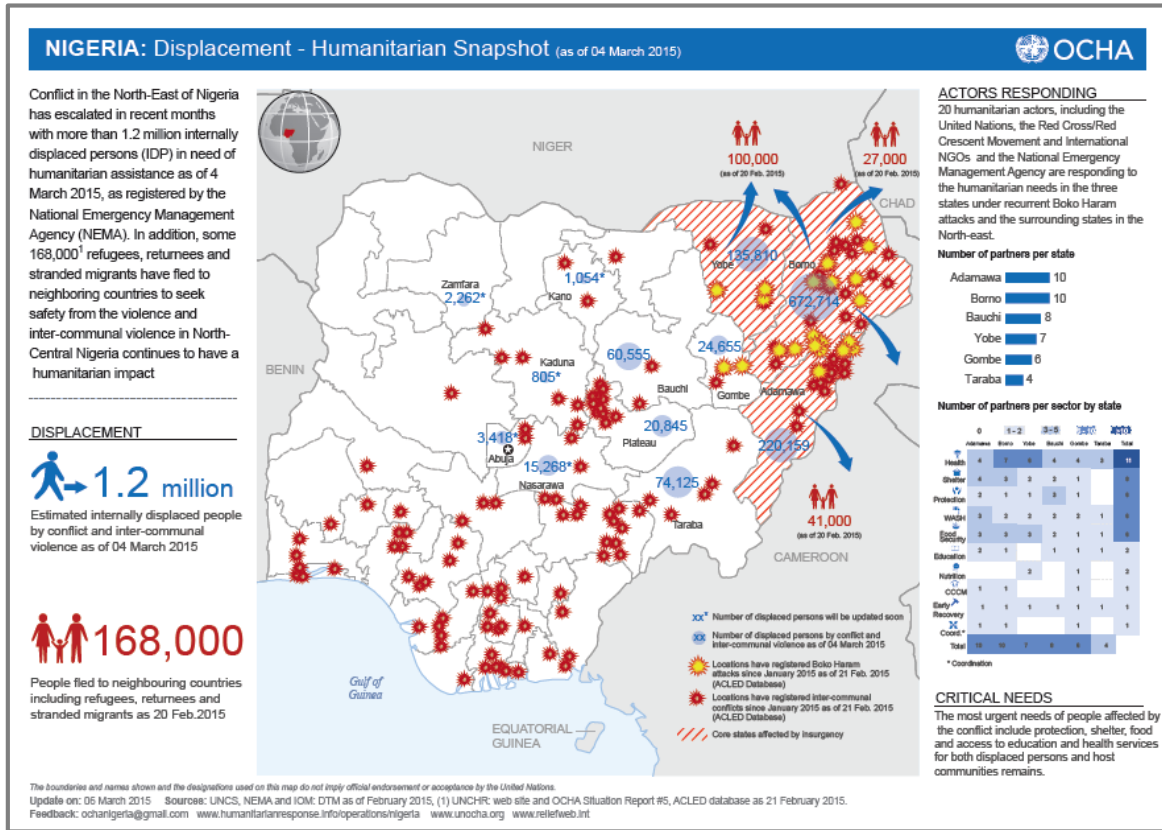
Figure 78. Decreasing access to settlements in Borno and Yobe Provinces, Nigeria, January 2015



Source: UNICEF

Regional context: In Nigeria, the increased level of cross border activities conducted by insurgents in the Lake Chad sub region since January 2015 has increased with military forces from Cameroon, Niger and Chad responding in kind. There is also the expectation of the mobilization and deployment of a 7,500 strong African Union force to respond to this regional security threat. The likelihood of increased conflict and (kinetic and asymmetric) engagements is thus high, affecting both the humanitarian space and the programme.

Figure 79. Cross-border movement due to conflict in NorthEast Nigeria, March 2015





## PROGRAMME INFORMATION

### HUMAN RESOURCES

Location (sanctuary or risk area)	Total number of vaccination teams	Number (%) of vaccination teams with a female member	Number (%) of vaccination teams with a local member	Salary per vaccinator per day	Number of current GPEI staff (WHO)	Number of current GEPI staff (WHO-Surge)	Number of additional GPEI staff needed (if surge is planned)
Northwest (Sokoto and Zamfara)	6,044	6,044 (100%)	6,044 (100%)	\$3.70	34	278	0
North central (Kano, Katsina, Jigawa, and Kaduna)	30,939	30,939 (100%)	30,939 (100%)	\$3.70	101	924	0
Northeast (Borno and Yobe)	5,086	5,086 (100%)	5,086 (100%)	\$3.70	38	328	0

Source: WHO

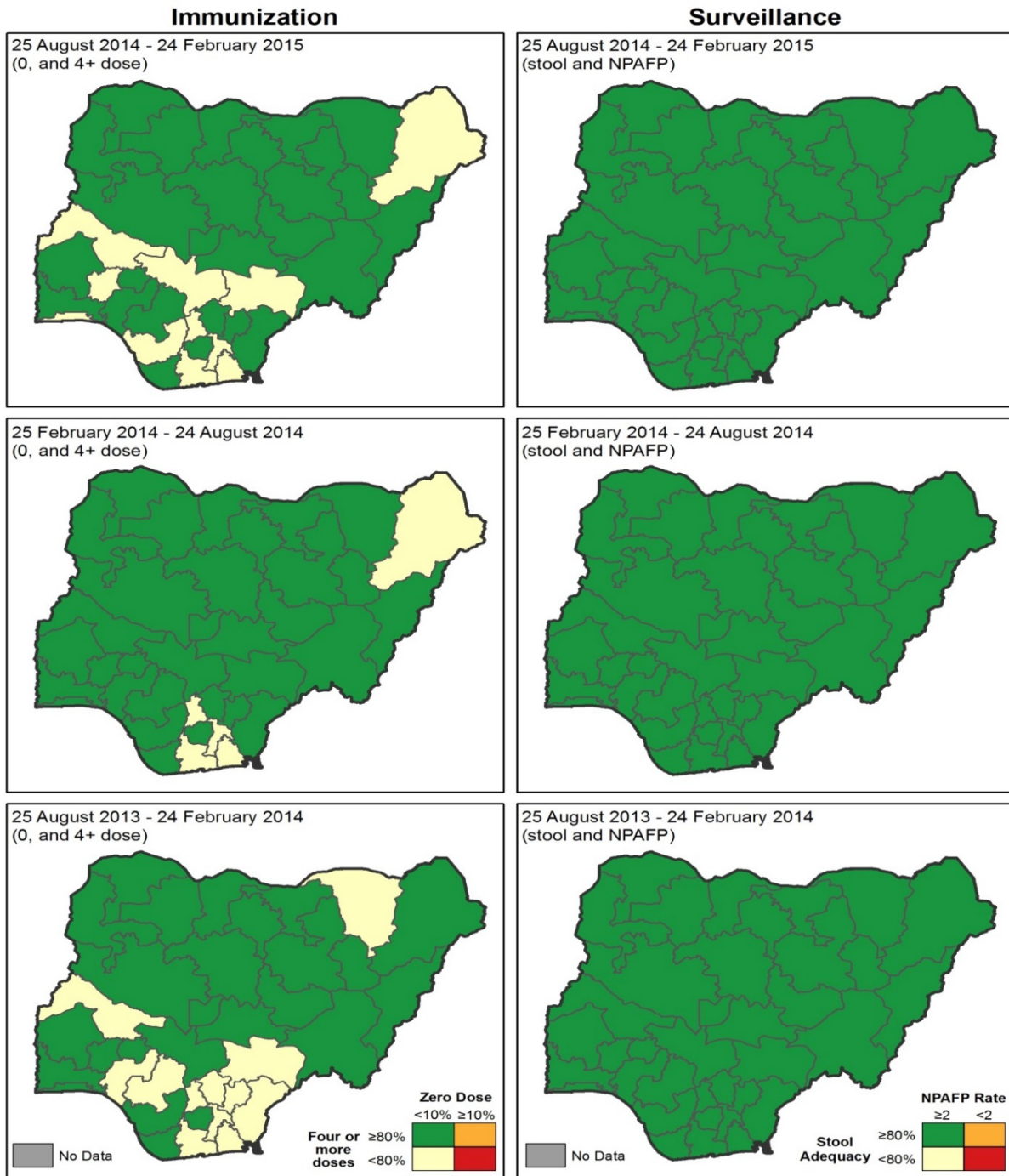
### ROTARY INTERNATIONAL'S WORK IN NIGERIA

More than 6,000 Rotary members live in Nigeria. This large network is deeply engaged in the fight to end polio. Rotary has invested \$193.7 million to support polio eradication efforts in Nigeria. Rotary has deployed and supported polio field coordinators in seven high-risk states (Kano, Katsina, Kaduna, Sokoto, Kebbi, Zamfara and Borno). Rotary supports health camps throughout Nigeria. These camps — which provide parents and children with additional health interventions beyond the polio vaccine — have been a critical step to ensuring that all children receive the vaccine. Nigerian Rotary leaders work closely with community, religious and political leaders to advocate for support of the polio vaccine. Rotary has donated items such as soap, medicines and mosquito nets, which are distributed in conjunction with vaccination activities. Rotary members from the south of Nigeria have been recruited to monitor immunization activities in the north to ensure programme accountability and accuracy. And finally, Rotary members have recruited the support of local celebrities to help raise awareness about polio and support for the vaccine.

**PERFORMANCE INDICATORS**

**IMMUNIZATION AND SURVEILLANCE**

**Figure 80. Six-month standard immunization indicators among children aged 6-35 months with AFP and annualized surveillance indicators by state, Nigeria, August 2013 to February 2015\***



Source: CDC

\*Data as of 3 March 2015

## GPEI POLIO ERADICATION AND ENDGAME STRATEGIC PLAN 2013–2018, NIGERIA

STRATEGIC PLAN OBJECTIVE	OUTCOME INDICATORS (2013)	RESULTS	STATUS
<b>Poliovirus Detection and Interruption:</b> Complete the interruption of wild poliovirus transmission globally and more rapidly detect and interrupt any new outbreaks due to vaccine-derived polioviruses	All wild poliovirus transmission stopped by the end of 2014	The most recent WPV case had onset on 24 July 2014	Pending
	All new cVDPV outbreaks stopped within 120 days	Circulation of cVDPV imported from Chad, as evidenced by cases and environmental isolation, was not stopped within 120 days of confirmation.	Not met in 2014
	<b>OUTPUT INDICATORS (2013)</b>		
	Achieve and maintain an NPAFP rate* of $> 2/100,000$ in all states/provinces of high-risk countries and maintain an NPAFP rate of $> 2/100,000$ in all states/provinces	From 25 February 2014 - 24 February 2015, the national NPAFP rate was 12.0/100,000, a relative 11% increase from the previous year. All 37 states have been maintaining NPAFP $>2/100,000$ these last 2 rolling years	Met
	Achieve and maintain adequate stool sample collection in 80% of cases in all states/ provinces	During the last 12 months, 98% of AFP cases nationally had an adequate stool specimen. This is a slight relative (1.1%) increase from last rolling year. All 37 states in Nigeria have maintained adequate stool collection in $>80%$ of AFP cases these last 2 rolling years.	Met
	LQAS passed at 80% threshold in all high-risk areas	In the last 12 months in the 85 highest-risk LGAs, $>80%$ have been achieving the 80% threshold, and since May 2014, $>90%$ have.	Not Met in 2013 Met in 2014, 2015
	Establish full safety and security framework	A UN security management and enhancement plan has been developed and funded. The national programme has developed a specific operational plan with innovative strategies to vaccinate children in highly insecure LGAs of Borno. An Emergency Operations Center has been established in Borno.	Established
	All current cVDPV outbreaks stopped by end-2013	There have been 2014 environmental isolations of indigenous strain from emergence in 2005 and a recent case; imported Chad A emergent strain continued circulation into 2014. Virologic evidence indicates ongoing surveillance gaps.	Not Met

\*NPAFP case rates are based on number of AFP cases observed among 100,000 children  $<15$  years of age per year of follow-up.

## SYNOPSIS

- Epidemiology:** Only six WPV1 cases were reported in 2014 (Kano, 5; Yobe, 1). No WPV cases have been reported in the Northwest sanctuary for more than 2 years and none in the Northeast for 11 months. Further, the last WPV1 case reported was eight months ago (Kano; 24 July 2014 onset). WPV3 has not been detected since 10 November 2012. cVDPV2 cases increased in both Kano and Borno in 2014, and environmental sampling detected cVDPVs across most of the north. However, cVDPV detection has declined in the last quarter with no cases and one environmental positive of persistent cVDPV2 identified between November 2014 and March 2015.
- Immunization:** LQAS data continue to show improvement. In the seven SIAs implemented since May 2014, more than 90% of high-risk LGAs have achieved coverage at the  $\geq 80\%$  level. IPV was used in SIAs covering 3.8 million children aged less than five years in all of Borno and selected areas of Yobe and Kano.
- Security:** Insecurity continues to limit access in Borno and Yobe States, with a notable decline in the number of children being able to participate in SIAs during the second half of 2014 and early 2015. The overall security situation deteriorated in the Northeast during the period and insurgent groups reportedly holding key geographic areas particularly south of the Borno state capital hamper the ability to deliver programme elements safely and securely.
- Surveillance:** AFP surveillance performance indicators have steadily improved in Nigeria in recent years, with the national NPAPF rate now exceeding 12 per 100,000 children < 15 years of age per year and a national stool adequacy proportion of 97%. In Both Borno and Yobe, NPAPF reporting rates remain high, at 13.2 per 100,000 children <15 years per year in Borno and 16.5 per 100,000 children <15 years per year in Yobe, and stool adequacy proportions exceed 97%.
- Ownership:** There is strong political support for polio eradication, but it needs to be sustained and intensified to drive the programme to a successful conclusion. The Presidential inauguration and Gubernatorial elections require active advocacy and education by the programme to ensure that they do not slow the momentum and implementation of polio services. The national programme needs to develop advocacy and education approaches in an effort to proactively address any issues that might arise during the post-election period, including educating new political leadership in any political districts where transition of leadership might occur.
- Community Demand:** IM data continue to show relatively low rates of vaccine refusal in Nigeria. Three of the five cases reported in Kano in 2014 were in families that refused to allow their children to be vaccinated.
- Way Forward:** Moving forward, Nigeria needs to maintain its momentum and quality of campaigns, particularly with a newly elected Government. Advocacy efforts at all levels must be redoubled to support oversight and funding for polio eradication activities. While Nigeria approaches the one-year polio-free milestone, success should not be declared prematurely. Resources and oversight must continue to be maintained beyond June 2015.

## NON-ENDEMIC COUNTRIES

### OUTBREAK PREPAREDNESS AND RESPONSE

The HoA, Central Africa and Middle East outbreaks clearly highlighted a number of important lessons for more successful and efficient outbreak responses in the future. Paramount above all other lessons: national governments must be fully engaged in all phases of the outbreak response. A coordinated GPEI response team, deployed immediately, and with a clear designated coordinator, is of near-equal importance. An immediate risk assessment should be done to define the outbreak zones, strong surveillance should be in effect, a high quality immunization response should be planned, supported by evidence-based communication and social mobilization at all levels. Qualified human resources commensurate with the ambition of the operational plan should be available, trained, and rapidly surged to implement the operational plan. These staff, as well as all others responsible for the outbreak response should be held accountable to the quality of campaigns through a standardized and common monitoring and accountability system.

A process of internal review within the GPEI, coupled with the 2014 GPEI Management Review allowed these lessons to be put into action. New Standard Operating Procedures (SOPs) for Outbreak Response have been finalized by the GPEI in early 2015. The SOPs introduce a concept of “grading” polio outbreaks to facilitate a response plan and budget that is commensurate with the scale of the outbreak. To ensure a coordinated GPEI response team from the outset, the GPEI has established an interagency Rapid Response Team. This team includes a list of “on-call” staff that can be rapidly deployed — within 72 hours’ notice — to an outbreak zone for a duration of up to one month. To support this team with technical staff, a single online platform has been established (EXPERT) that is accessible to all partner agencies, and includes a roster of consultants for all components of an effective outbreak response: security and access, communications, surveillance, operations, finance and others. This roster will be used to deploy experts for up to six months.

The first round of training and simulation on the Outbreak SOPs will be delivered to fifty staff and consultants from the roster and rapid response teams. A leadership and management training will also be delivered directly after the technical training for thirty future outbreak “leaders.” Both trainings will be delivered in April 2015. Directly following the training, regional plans in priority countries will be developed to incorporate the roll-out of the SOPs and associated tools (dashboards, toolkits, etc.). All of this work is being led by the Outbreak Preparedness and Response Task Team within the newly restructured Eradication and Outbreak Management Group. The task team also supports at-risk countries to develop preparedness plans and monitor outbreak assessments.

### HORN OF AFRICA OUTBREAK

The WPV1 outbreak in the HoA started in April 2013. The first case was identified in Banadir (Mogadishu) Somalia in May 2013 with subsequent cases identified in Kenya and Ethiopia. The latest reported cases in Kenya and Ethiopia had onset on 14 July 2013 and 5 January 2014, respectively. As of 16 April 2015, the most recent WPV1 case linked to this outbreak in the sub-region occurred in Somalia on 11 August 2014, >12 months after confirmation of the first case of the HoA outbreak. The six cases in 2014 accounted for 2% of the polio cases globally.

Two cVDPV2 were reported in South Sudan’s Unity state with onset on 10 and 12 September 2014. Unity is one of the three security-compromised states in the country.

Across the three countries of the Horn, quarterly polio outbreak assessments have been systematically conducted. The findings for Somalia and Ethiopia indicated the aggressive response in 2013-2014, coupled with high-level government commitment, improved campaign quality and high vaccine acceptance have helped control the outbreak. Yet, the gains are fragile.

Prevailing insecurity still limits access to a substantial proportion of children, particularly in south central Somalia and conflict-affected areas of South Sudan. Lower campaign coverage among nomadic/pastoral populations, and pockets of suboptimal surveillance, in Somalia and the Somali region of Ethiopia, pose a risk of continued undetected low level poliovirus circulation. Recent political instability in Yemen is also a newly emerging challenge in the Eastern Mediterranean Region.

In 2014, efforts in the region focused on maintaining operational momentum, addressing rising campaign fatigue, and improving the sensitivity of the AFP surveillance system. In 2015 there will be stronger focus on the under-vaccinated mobile population, especially pastoralist and nomadic communities, improved community-based surveillance and strengthening of vaccine management systems. As the outbreak winds down, the use of polio assets to strengthen routine immunization is an emerging priority for the region.

## SOMALIA

The number of cases has dropped from 194 in 47 districts in 2013 to five cases in two districts (Jariban, 4 cases and Hobyo, 1 case) in 2014. All of these cases in 2014 occurred in pastoralist families residing in hamlets outside larger settlements and were missed during previous SIAs during 2013 and 2014. Of these cases, none had received an SIA dose of OPV and only one had received a single dose through the EPI programme, in a neighboring city. The latest case was reported in Mudug region in August 2014.

The outbreak response in 2014 included a total of eight SIAs using bOPV (5 NIDs, 3 SNIDs) and six SIADs conducted in Bari, Jariban and Hobyo. Two NIDs earmarked for November and December 2014 were postponed to early 2015 (except for December NIDs in Puntland). Administrative coverage ranged from 90% to 98% for all rounds. IM data have improved steadily but IM is mainly limited to urban settings. Plans to introduce LQAS to improve post-campaign assessments are underway; a pilot LQAS study in Jariiban and Gaalkacyo showed promising results.

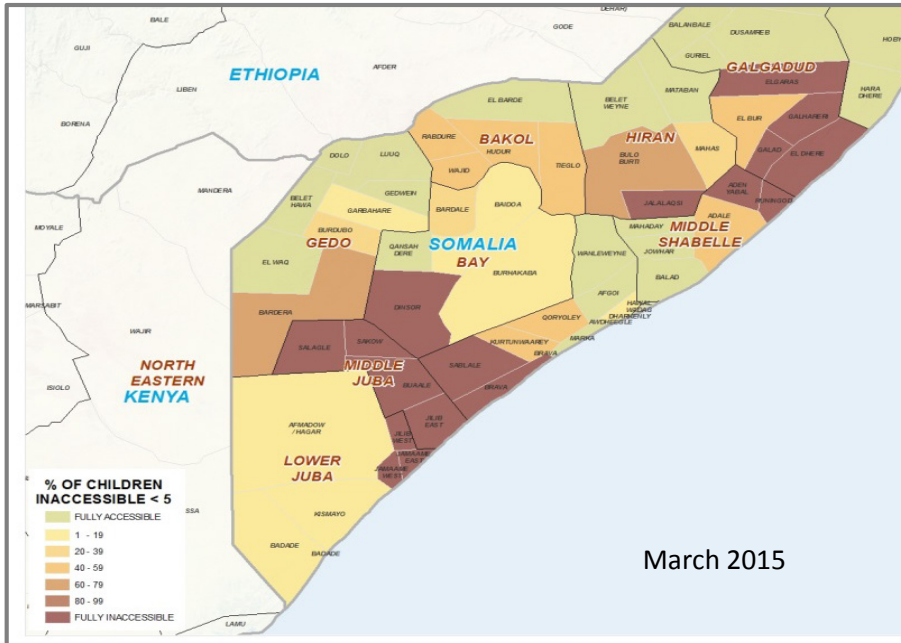
At least six NIDs (4 with bOPV and 2 with tOPV) and three additional rounds in hard-to-reach areas have been proposed for 2015. The first 2015 NIDs were carried out during 4–7 February in South Central Zones, 7–10 February in Puntland and 8–11 February in Somaliland. The campaign targeted 2.1 million children aged 0–59 months with bOPV. One SIA with bOPV in a hard-to-reach area was carried out during 22–25 February in South Central Zones and 1–4 March in Somaliland; Puntland did not implement an SIA in hard-to-reach areas. NIDs with bOPV and Vitamin A were planned for 8–11 March in Central Zone, 10–13 March in South Zone and Puntland and 29 March–1 April in Somaliland. SIADs in newly accessible zones will continue whenever possible; one SIA took place in three newly accessible districts (Tieglo and Wajid on 3–9 February and Bulo Burti 15–18 February).

Other key activities related to the outbreak response in Somalia include the roll-out of LQAS, on-the-job training of Regional and District Social Mobilization Coordinators, expansion of Village Polio Volunteer (VPV) network, strengthening of routine immunization and recruitment of polio staff (including national SIA and operations coordinators, and national and international AFP surveillance coordinators).



ACCESSIBILITY AND SECURITY

**Figure 81. Somalia, Inaccessibility experienced during SIAs conducted in March 2015 (no WPV or cVDPV cases during the previous four months)**



Source: WHO

Data as of 25 March 2015

The situation in the HoA continues to be complex and dynamic. The African Union Mission to Somalia and the Somalia National Armed Forces have conducted a series of military operations in which key ground has been gained but significant access challenges remain in south central Somalia. Despite these challenges, an additional 151,000 children since August have been immunized in nine districts, which are now considered fully or partially accessible. Although there has been further “atomization” of the key militant group in Somalia, it maintains significant capacity to launch attacks, and a strong threat remains to all UN staff and any UN-affiliated programme, including polio.

Recent clashes among key tribes in Galgadud, and in the Sool and Sanaag regions, have also impacted the implementation of SIAs.

WPV has not been reported in South Sudan since June 2009 but multiple access and security challenges have affected the conduct of response measures to deal with the VDPVs. Sporadic clashes have continued between government and opposition forces in a number of districts in Unity, Upper Nile and Jonglei States, which have directly affected access to children in these areas. All the counties in three affected states were required/ planned to have five SIAs (three as part of cVDPV2 response targeting children <10 years of age, and two NIDs, including the March 2015 campaign). The recent assessment noted that, because of evolving security situations, as of now five counties have done none of these activities, 15 have done one, three have done two, and nine have completed all three planned SIAs. Insecurity is expected to worsen in the short-term before the upcoming rainy season.

**CENTRAL AFRICA OUTBREAK**

The WPV1 outbreak in Central Africa was discovered in October 2013 in Cameroon with subsequent spread to Equatorial Guinea. To date, there have been 14 WPV1 cases (nine in Cameroon, five in Equatorial Guinea); the most recent WPV1 case this outbreak occurred in Cameroon in a refugee from the Central African Republic (CAR) with onset on 9 July 2014. The most recent case in Equatorial Guinea had onset on 3 May 2014.

Missed children in Central Africa on IM remain over the 5% threshold for nearly all countries, across all campaigns, indicating campaign quality has still not reached sufficient levels. Gabon, Cameroon and CAR are the largest concern. Missed children due to refusals and absences remain problematic in localized parts of the countries, such as the Centre, Littoral and Far North regions in Cameroon. Pockets of resistance to OPV continue to occur in some high-risk states of Cameroon (Littoral, Centre and Adamaoua region) and Gabon (Woleu Ntem, Haut Ogooué, Libreville Owendo and the Moyen Ogooué) despite an increase in the number of social mobilizers for interpersonal communication. With GPEI support, Cameroon and Gabon are carrying out a rapid assessment to build evidence and improve the communication strategy for subsequent rounds. Polio fatigue remains a challenge in Cameroon: 12 SIA rounds (SNIDs and NIDs) in one year are perceived by the population to be excessive. Nevertheless, the quality of social mobilizers and supervisor performance has improved, though it still requires more work. Vaccine dose histories of NPAFP cases in the two outbreak countries also show a gradual increase in the proportion who received at least 3 doses of OPV.

Social mobilizers in Cameroon increased from 8,000 to 14,000 between November 2014 and March 2015. This increase permitted raising of parents' awareness prior to SIA rounds from 78% in April 2014 to 89% prior to the campaign in December and contributed to reducing the number of missed children from 9% in April 2014 to 3% in December 2014. Still, some pockets of extremely low awareness remain, particularly in Center, with only 20% campaign awareness, Adamaoua with 50%, and Extreme Nord with 65%. A strategic shift to move from awareness to addressing refusals and absences is also underway.

The coordination in Central Africa has been strengthened with an Outbreak Coordinator appointed at Libreville by the Regional Director of the WHO Regional Office for Africa to ensure a well-coordinated, multi-country response. The response was bolstered by additional technical staff from WHO/HQ and CDC. Over twenty staff have been deployed in the past six months to support programme management and surveillance. UNICEF has also appointed a focal point to the coordination structure based in Cameroon. A high-level GPEI partners (WHO, UNICEF, CDC, BMGF) advocacy mission went to Cameroon in November 2014 to meet with the Prime Minister, the Minister of Health, and a number of other national authorities.

AFP surveillance indicators in most of the countries in Central Africa meet the globally set national standards except in Equatorial Guinea and Gabon where the rate of adequate specimens has improved, but remains below the established level of 80%. Gaps in sub-national AFP surveillance, particularly in Equatorial Guinea, Gabon and Central African Republic pose a risk of missing WPV transmission. Efforts are being made to conduct sub-national risk analysis and strengthen AFP surveillance by taking additional measures including collection of samples from contacts of all AFP cases, particularly in the high-risk areas within the outbreak countries. Slow improvement in quality and coverage of campaigns, inconsistent performance between provinces and low parental awareness of NIDs, particularly in Cameroon are the additional risk factors as reported in the recent outbreak assessments of these countries.

Repeated postponement of planned SIAs in Gabon, Equatorial Guinea and Central African Republic reflects the level of commitment of national governments. GPEI plans to hold advocacy meetings with Health Ministers and Heads of State of these countries in the second half of 2015.

## CAMEROON

Thirteen polio vaccination campaigns (10 NIDs and 3 SNIDs) were conducted in 2014, with various degrees of quality. In November 2014, a high-level GPEI advocacy visit was made by senior polio staff in an effort to galvanize government commitment to stopping polio transmission.

## EQUATORIAL GUINEA

Eight polio campaigns (7 NIDs and 1 SNID) were conducted in 2014, with various degrees of quality. The government did not fund any campaigns in 2014. The response remained plagued by difficulties in polio responders obtaining visas and insufficient staff to conduct adequate AFP surveillance.

### ACCESSIBILITY AND SECURITY

In northern Cameroon the security situation has become extremely volatile given the spill-over of the conflict and insurgency in neighbouring Borno State of Nigeria. There have also been significant movement of refugee populations into Cameroon from Borno. The involvement of military forces from Chad, Niger, and Cameroon in the “Extreme Nord” province of Cameroon, and in the Lake Chad region has also impacted the effective conduct of SIAs.

In Central Africa, the movement of populations and militant groups from the Central African Republic (CAR) into neighboring Cameroon, Chad, DRC and the Sudan, continue to impact the implementation of effective vaccination campaigns, and surveillance, especially in the border areas. The deployment of a large UN peacekeeping force, the withdrawal of the French and Chadian peacekeeping force, and the start of high-level political negotiations in Bangui all contribute to continued instability and insecurity in the country and the sub-region. The splintering of the two militant groups ahead of the high-level talks is also compromising access negotiations and has increased attacks on and kidnapping of humanitarian workers.

## MIDDLE EAST OUTBREAK

### SYRIA

On 28 October 2013, the Minister of Health of the Syrian Arab Republic announced the return of polio to the Middle East. Thirteen cases caused by WPV1 were confirmed from Deir Al Zour province in Syria. Genetic sequencing indicated that the virus, originating from Pakistan, likely had been circulating undetected in Syria for nearly a year (and genetically linked to WPV1 detected in environmental samples collected in Egypt in December 2012, and in Israel, the West Bank and Gaza during February 2013–March 2014). A total of 36 cases have been reported since the onset of the outbreak. To date, it has been over a year since the latest case was reported on 21 January 2014. This is largely because of the swift and robust response to the outbreak, whereby the country conducted 11 NIDs and one SNID as of February 2015. During the November/December 2014 NID, the estimated coverage, determined by post-campaign monitoring, was 91%. While the first mass vaccination campaign was conducted using tOPV, the Syrian government fast-tracked the registration of bOPV in November 2013 and it has been used in all subsequent SIAs. AFP surveillance indicators have also exceeded recommended benchmarks. During 2014 the NPAFP rate was 4.0 per 100,000 children < 15 years of age per year and the proportion of AFP cases with adequate specimens was 84%.

### IRAQ

Iraq confirmed the first WPV1 case since 2000 in a 6-month old, intentionally unvaccinated child in Baghdad who had onset of paralysis on 10 February 2014. In April 2014, the second case was reported in Baghdad. Genetic sequencing indicated that the viruses were most closely related to virus detected in December 2013 in Hasakeh, Syrian Arab Republic. During February 2015, Iraq conducted its 13th SIA since October 2013, most of which used tOPV; except for campaigns in June, August, and September, which used bOPV. During the October NID, 5,660,100 children under 5 years of age were vaccinated, with post-campaign monitoring

coverage of 86%. The majority of zero-dose NPAFP cases reported during 2013 and 2014 were from Baghdad. During 2014, the NPAFP rate was 4.1/100,000 children <15 years of age and sample adequacy proportion was 89% compared with an NPAFP rate of 3.1/100,000 children <15 years of age and stool adequacy of 84% during 2013.

## MIDDLE EAST OUTBREAK RESPONSE

Since WPV cases were first detected in Syria, the outbreak has been considered to be regional and the outbreak response has been targeted accordingly. Eighty percent of the polio cases in the outbreak were under 2 years of age and over 90% were under 3 years. More than half of all confirmed polio cases were completely unvaccinated and a further 40% were inadequately immunized (1-2 OPV doses). During November 2013–December 2014, 55 SIAs were carried out in seven countries. The most recent review of the response was conducted in January 2015. In the course of completing Phases 1 and 2 of the outbreak response, the programme has reached more than 27 million children with polio vaccine in the region's largest ever mass immunization campaign. During the November/December 2014 campaigns, the vast majority of children across the Middle East were reached, with estimated coverage of 91% and 94% in Syria and Jordan, respectively. Coverage in Lebanon was, however, suboptimal (74%). Despite the unprecedented scale of the response, the existence of immunity gaps and the possibility of missed virus transmission among hard-to-reach and vulnerable populations remain sources of concern. Although national benchmarks for key AFP surveillance indicators improved in 2014 relative to 2013, gaps were identified at the subnational level, necessitating measures to further strengthen surveillance activities in the sub-region.

The response to the outbreak was a massive, multi-country, multi-phase action aimed at interrupting poliovirus circulation in outbreak countries (Syria and Iraq) and maintaining the surrounding countries as polio free. In Phase I of the response, Syria and surrounding countries conducted 29 SIA rounds using bOPV and tOPV. More than 87 million OPV doses were used. The SIA response continued in Phase II, in which twenty-six rounds were implemented administering more than 55 million OPV doses. After a slow start, most of the response plan countries conducted PCAs which generally showed an improving trend over time, with the exception of Lebanon. In refugee hosting countries (Lebanon and Jordan in particular), specific PCAs for Syrian refugees were carried out to determine that these population groups were being effectively reached.

The impact of Phase I and II Response activities is seen in the absence of polio cases since April 2014, and no detection of WPV1 from the environment since March 2014. Three overall reviews of the outbreak response have been held, along with specific reviews and field assessments in Syria and Iraq.

The most recent review, conducted in February 2015, concluded that there is currently no evidence of continuing transmission of wild poliovirus in the Middle East, but that there remain major risks. These include the possibility of missed transmission in hard-to-reach areas/populations, continued intense transmission of WPV1 in Pakistan (source of the outbreak virus), sub-national inconsistencies in implementation of surveillance, SIAs, and routine immunization, and immunity gaps in vulnerable/hard-to-reach populations.

A plan for Phase 3 of the regional response is being developed and implemented, and envisions activities through at least mid-2015. During the third phase of the outbreak response, priority will be given to: a) improving routine immunization activities; b) conducting SIAs, with particular focus on high-risk areas; c) enhancing the AFP surveillance system national polio laboratory support, and social mobilization for EPI and polio eradication and d) strengthening the coordination between all concerned partners. Successful implementation of these activities will help to ensure that the sub-region remains polio free, in light of

sustained intense transmission of polio in Pakistan and the risk for importation to other countries in the region.

## COMMUNICATION

When the outbreak began in Syria, it was critical to re-establish public commitment to vaccinating children during SIAs and tackle any social barriers or rumors that could impede this goal. For the second phase of the response, a regional mass media campaign was developed to reinvigorate public knowledge and commitment towards polio vaccination. It included television spots for different target audiences, social media, direct engagement with media professionals, outdoor signs and informational materials. The campaign was aired on the highest viewed Pan Arab/regional TV stations and advertised on Google, YouTube, skype, MSN, and Facebook. As a result of the regional media workshop with leading journalists, it is estimated that an average of more than 5 million people regionally were exposed to the campaign. Social media engagement reached above 95 million people around the region. Upon completion, an independent assessment was undertaken with a multi country sample from Syria, Jordan and Lebanon. Results showed about 63% of people in Lebanon who saw the campaign, 97% in Syria and 98% in Jordan said the material encouraged them to vaccinate their children during the NIDs.

## ACCESSIBILITY AND SECURITY

The Middle East response has been robust; however, the region still faces threats from insurgent groups particularly in Iraq and Syria. In January 2015, a report concluded that the normal modality of house-to-house campaigns was not being allowed to proceed in a small number of provinces of Syria as militant groups perceived that vaccinators would reveal the group's locations. In March 2015, the next round of polio SIAs were conducted in both Government and opposition controlled areas. Iraq conducted cluster level mapping of the country in October along with the development of an access approach and the Ministry of Health agreed to continue this approach in the future. Given the increased violence and volatility in Syria, it is highly likely that the quality and scope of the upcoming SIAs in 2015 will be compromised.

## MADAGASCAR

In October 2014, a case of VDPV1 was confirmed in the Analalava district of the Sofia region of northwest Madagascar (date of onset 29 September 2014) with positive specimens from contacts. Subsequently, a sub-national polio campaign was conducted in six regions in December 2014, targeting approximately one million children aged 0-59 months. A new case of VDPV1 (unrelated to the October case) was confirmed in a two-year-old zero-dose child in February 2015 (date of onset January 31, 2015) in Nosy Varika district, Vatovavy Fitovinany region in southeast Madagascar; the child passed away on February 15, 2015. Genetic sequencing indicated that the virus had been circulating undetected for over three years. A nationwide polio campaign will be held April 27–May 1, 2015. Madagascar has a long history of VDPV emergences related to weak routine immunization infrastructure.

## COUNTRIES AT RISK

### EBOLA-AFFECTED COUNTRIES

The outbreak of Ebola virus disease in Guinea, Sierra Leona and Liberia continues to pose a serious risk to the goal of stopping transmission of polio in Africa in 2015. The cancellation of SIAs, the weakening of routine immunization and surveillance systems and the diversion of resources are some of the factors currently affecting the polio programmes in these countries. There has been a decline in AFP case detection and reporting in all 3 countries, especially in the second half of 2014. In Liberia, it has fallen below international standards.



Steps are being taken and mass immunization campaigns have been held in Ebola-free countries in Western Africa to enhance immunity and create a buffer zone. There has been advance planning and resource mobilization taking place so that the health system is ready to start immunization and surveillance strengthening activities as soon as the Ebola situation allows. Sierra Leone and Liberia plan to conduct measles and OPV vaccination in May and OPV SIAs in July 2015.

## SURVEILLANCE AND IMMUNIZATION INDICATORS

Countries that have stopped transmission of indigenous WPV are subject to the risk for WPV importation from remaining reservoirs. Depending on the level of immunity in the population, outbreaks can result. Although substantial epidemics resulted after WPV1 importation into Tajikistan and other countries in the European Region (EUR) in 2010 and into China in 2011, the primary risk for outbreaks remains in the WPV-endemic regions of WHO — the African (AFR) and the Eastern Mediterranean (EMR) Regions, as indicated by the 2013–2014 WPV1 outbreaks. Many outbreaks in polio-free countries in the past occurred in the “WPV importation belt” of the African Continent — a band of countries from West Africa to the HoA with outbreaks from the West Africa B (WEAF-B) WPV1 genotype originating from Nigeria. Additional outbreaks occurred in South/Central African countries due to South Asia (SOAS) WPV1 genotype originating from India. The 2013–2014 WPV1 outbreaks in the HoA, Central Africa, and the Middle East demonstrate the ongoing risk for spread after importation from Nigeria, Afghanistan and Pakistan, even in the face of preventive SIAs in some areas. Additionally, emergence and transmission of cVDPVs have occurred in some of these same outbreak countries as well as other countries in AFR and EMR with compromised population immunity.

See Figures 84 and 85 for surveillance performance indicators and dose-histories in NPAFP cases (reflecting immunity status) in 71<sup>11</sup> countries — 46 countries in AFR: Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, CAR, Chad, Comoros (not for immunity status), (Republic of) Congo, Cote d'Ivoire, Democratic Republic of the Congo (DRC), Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius (not for immunity status), Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Sierra Leone, South Africa, South Sudan, Swaziland, Togo, Uganda, United Republic of Tanzania, Zambia, Zimbabwe; 22 countries and areas in EMR: Afghanistan, Bahrain, Djibouti, Egypt, Iran (Islamic Republic of), Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Pakistan, Qatar, Saudi Arabia, Somalia, Sudan, Syrian Arab Republic, Tunisia, United Arab Emirates, West Bank and Gaza Strip, Yemen; and three countries in the WHO EUR: Israel, Turkey, Ukraine.

We also present an overview of the assessment of risk for WPV transmission based on NPAFP dose history, history of outbreaks and proximity to transmission, indicators of routine immunization system delivery and other factors that were recently evaluated by Risk Assessment Task Team comprised of WHO, CDC and the Institute of Disease Modelling (Global Good) along with the BMGF and UNICEF to arrive at a consensus on which countries are at highest risk in the AFR and EMR as well as selected countries of other regions. Lastly, mitigating activities in 2015 are briefly reviewed.

## SURVEILLANCE PERFORMANCE

For surveillance indicators, 51 (72%) of the 71 countries evaluated here for the period of this report, met the national target of an annual rate of  $\geq 2$  NPAFP cases per 100,000 population aged  $< 15$  years. The breakdown by region follows: 39 (85%) of 46 countries in AFR, 12 (55%) of 22 countries and areas in EMR, and zero for the EUR countries. For the period of this report, 27 (84%) of 32 countries with poliovirus cases during 2009–2014 and 14 (78%) of 18 neighboring countries met the national target of an annual rate of

<sup>11</sup> Non reporting country in Africa: Seychelles

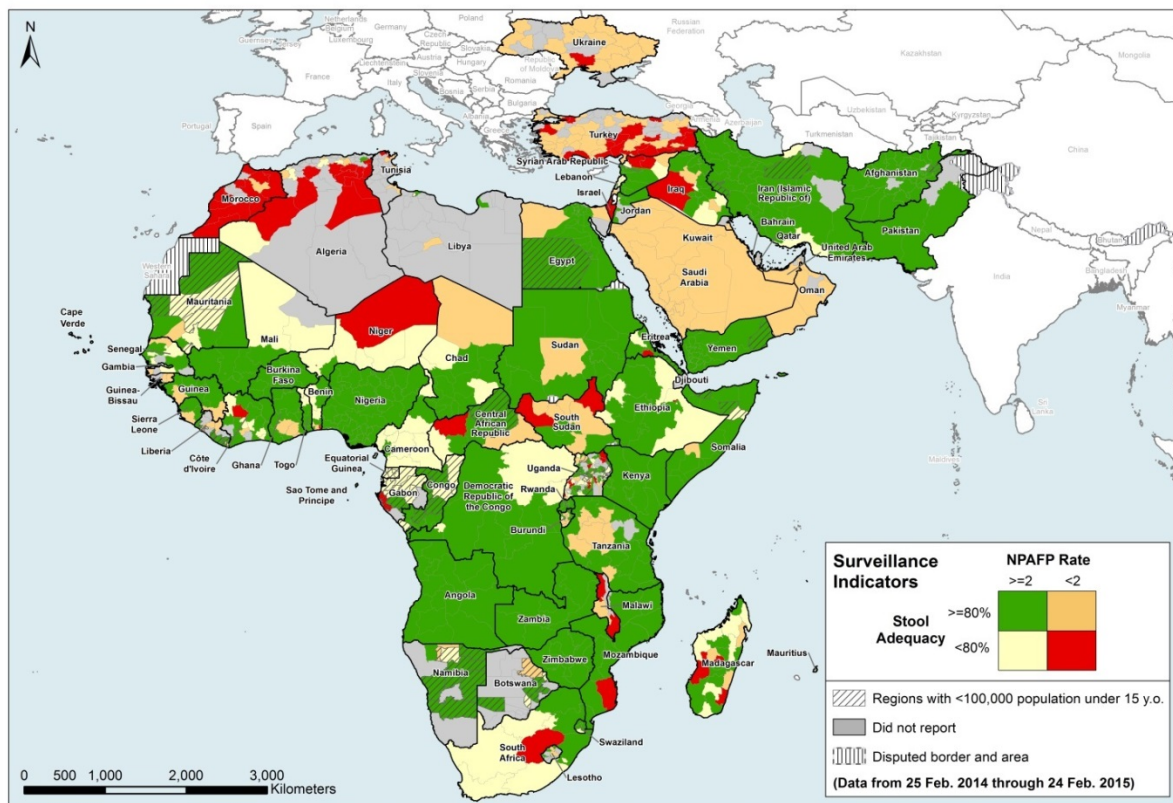


≥2 NPAFP cases per 100,000 population aged <15 years. The countries where the NPAFP rate indicator did not meet the national target were, from the AFR region: Benin (1.45), CAR (1.26), Gabon (0.99), Liberia (1.58), Malawi (1.5) and South Sudan (0.75); from EMR: Djibouti (1.4); and from EUR: Israel (1.5), and Turkey (1.2).

The national target of ≥80% of AFP cases with adequate stool specimens was met by 56 (79%) of 71 countries over the last 12 months. The fifteen countries where the stool adequacy rate indicator did not meet the target were 11 in AFR: Algeria (41%), Cameroon (74%), Cape Verde (0%), CAR (79%), Equatorial Guinea (16%), Ethiopia (79.7%), Gabon (41%), Gambia (67%), Malawi (79.4%), Niger (71%), South Africa (74%); three in EMR: Djibouti (75%), Lebanon (74%), Morocco (65%), and one in EUR: Israel (77%)

Figure 82 presents composite surveillance indicators for the previous 12 months at a sub-national level (state/province) for selected 71 countries in AFR, EMR, and EUR, highlighting sub-national weaknesses that are masked by overall national data. Only nine (13%) countries out of the selected 71 have all the sub-national levels meeting both NPAFP rate ≥2 cases per 100,000 population aged <15 years per year of follow-up and adequate stool quality in ≥80% of AFP cases. These countries are eight (17%) in AFR (Angola, Burkina Faso, Comoros, Nigeria, Rwanda, Sao Tome and Principe, Zambia, and Zimbabwe), and one (5%) in EMR (Afghanistan). Sub-national AFP surveillance quality was variable, noting a failure to meet one or both

**Figure 82. AFP surveillance indicators at first administrative level, for AFP cases with onset 25 February 2014–24 February 2015, 71 selected WHO African, Eastern Mediterranean, and European Region countries**



Source: CDC

Data as of 3 March 2015

indicators in major areas. The countries of major concern are the countries close to polio-endemic countries: (Afghanistan, Nigeria, and Pakistan), polio outbreak countries (Cameroon, Equatorial Guinea, Iraq, and

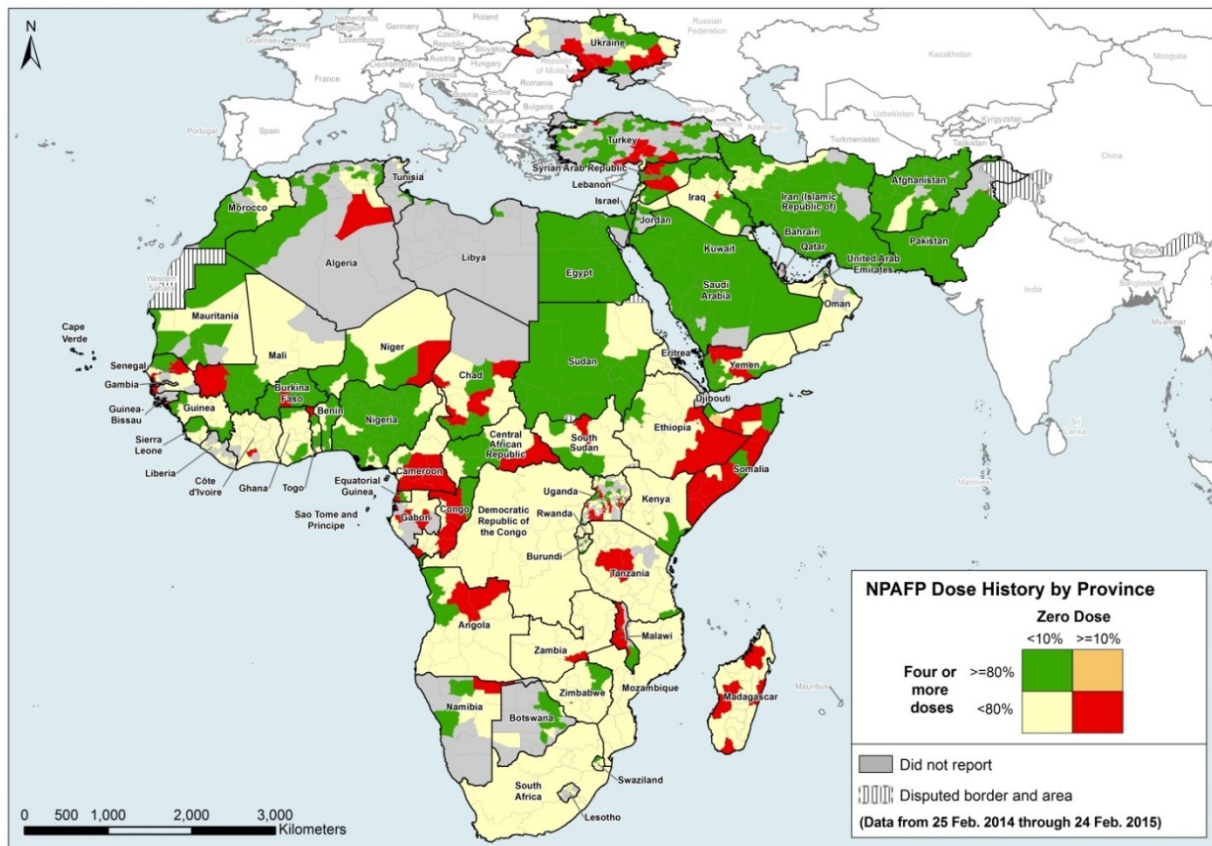
Somalia), and Ebola-affected countries in West Africa (Guinea, Liberia, and Sierra Leone). Additionally, indicators may be met in areas that nonetheless have substantial weaknesses in case detection.

**IMMUNIZATION STATUS**

Figure 83 presents immunization status indicators at a sub-national level for 69 countries. The immunization status of children was assessed using dose history for children aged 6–35 months with NPAFP over the previous 12 months and looked at the proportion of children with no history of OPV doses (zero-dose) and the proportion with ≥4 OPV doses. Despite SIAs in this period in most of these countries, a high number of countries have numerous sub-national areas in which <80% of children have ≥4 OPV doses, and many of those areas have ≥10% of children with zero-dose history. Most of the same countries with limited sub-national indicators of surveillance exhibit substantial weaknesses in population immunity and ongoing risk for further spread of WPV, particularly in Central Africa, the HoA, and the Ebola-affected countries in Western Africa.

Validity and interpretation of data is of concern when dose history is missing for ≥20% of NPAFP cases, as in thirteen countries in AFR (30% [13 of 44]): Benin (25% [19 of 76]), Botswana (27% [3 of 11]), CAR (26 % [10 of 38]), Equatorial Guinea (20% [4 of 20]), Ethiopia (27 % [88 of 325]), Guinea-Bissau (50% [1 of 2]), Madagascar (22 % [37 of 165]), Malawi (92 % [24 of 26]), Mozambique (23% [31 of 132]), Senegal (29% [24 of 82]), South Africa (23% [39 of 167]), Togo (23% [13 of 57]); and two countries in EMR (9% [2 of 22]): Morocco (30% [11 of 37]), Qatar (33% [1 of 3]).

**Figure 83. Immunization status at first administrative level, for children 6-35 months of age with NPAFP onset 25 February 2014–24 February 2015, 69 selected WHO African, Eastern Mediterranean, and European Region countries\***



Source: CDC

Data as of 3 March 2015

## HIGH-RISK PRIORITY COUNTRIES

In September 2014, GPEI repeated a cross-agency review of vulnerability and factors affecting risk for exposure (Risk Assessment Task Team). This risk assessment is revised semi-annually and forms the basis for prioritization of countries for SIAs and other mitigating activities. The outbreak responses in the HoA, Central Africa and Middle East are working to reduce the risk of importation in unaffected countries in the area. Outside of the countries with active transmission on the PHEIC list, countries considered to be at the highest risk for polio outbreaks are the following countries:

Benin, Chad, Congo, CAR, portions of the DRC, Gabon; Ethiopia, Mali, Niger, South Sudan, Syria and Yemen; others at risk include portions of Kenya and Uganda.

Many other countries are considered at potential risk, and are also recommended to undertake national or subnational SIAs as appropriate to mitigate risks. These include, among others, the Philippines and Ukraine. The latter has a worsening immunity gap that was chronically based on low trust in government and the immunization programme, as well as acutely low vaccine supply caused by lack of financing and is further compounded by the current conflict and political crisis. Mitigating this gap in the Ukraine will be problematic but plans are being made to soon conduct intensified catch-up activities in high-risk area and populations using vaccine supported by Canada authorities.

## MITIGATING ACTIVITIES

The global SIA schedule was reviewed in late September 2014, and the partnership supported a high number of SIAs planned for the first half of 2015 in at-risk countries. SIA number/frequency, however, is only one means of attempting to reduce risk. Other priorities in mitigating risk, such as improving SIA quality and enhancing surveillance, are being reviewed by the GPEI partnership with collaboration with the regional offices, particularly the African Regional Office.

## VACCINE SUPPLY AND MANAGEMENT

### VACCINE SUPPLY

#### INTRODUCTION

Vaccine supply and management is one of two core functional areas where UNICEF is the lead agency for GPEI. We outline below the current status, progress and challenges in this area since the last IMB meeting in September 2014 and our priorities for the next 3-6 months.

**Objective 1 activities:** Demand for OPV continues to remain high in 2015 and is expected to continue at around the same levels into 2016. Based on the approved SIA calendar until the end of 2015, supplies will likely be sufficient to meet the demand without drawing on respective buffers for tOPV and bOPV (see Figure 84). Potential periodic delivery delays from suppliers could challenge the availability for on-time deliveries for campaigns.

**IPV use in SIAs:** Approximately 8 million doses of IPV have been supplied to the three endemic countries and Cameroon for conducting SIAs. At the end of February 2015, more than 4 million doses have been used. Recently, the Strategy Committee has further approved 1.5 million doses of IPV for use in polio SIAs.

**Objective 2 activities:** As GPEI plans for the global switch from tOPV to bOPV in early 2016, UNICEF is working with industry to ensure production and supply of both products to meet the demand through April 2016 and of bOPV for its introduction in routine immunization as well as for continued campaigns after the

global switch. We also note challenges with global IPV supplies for routine immunization programmes in the run-up to the global switch.

In addition, UNICEF has also started new initiatives to support endemic and outbreak countries to better manage and report on vaccines supplied and utilized.

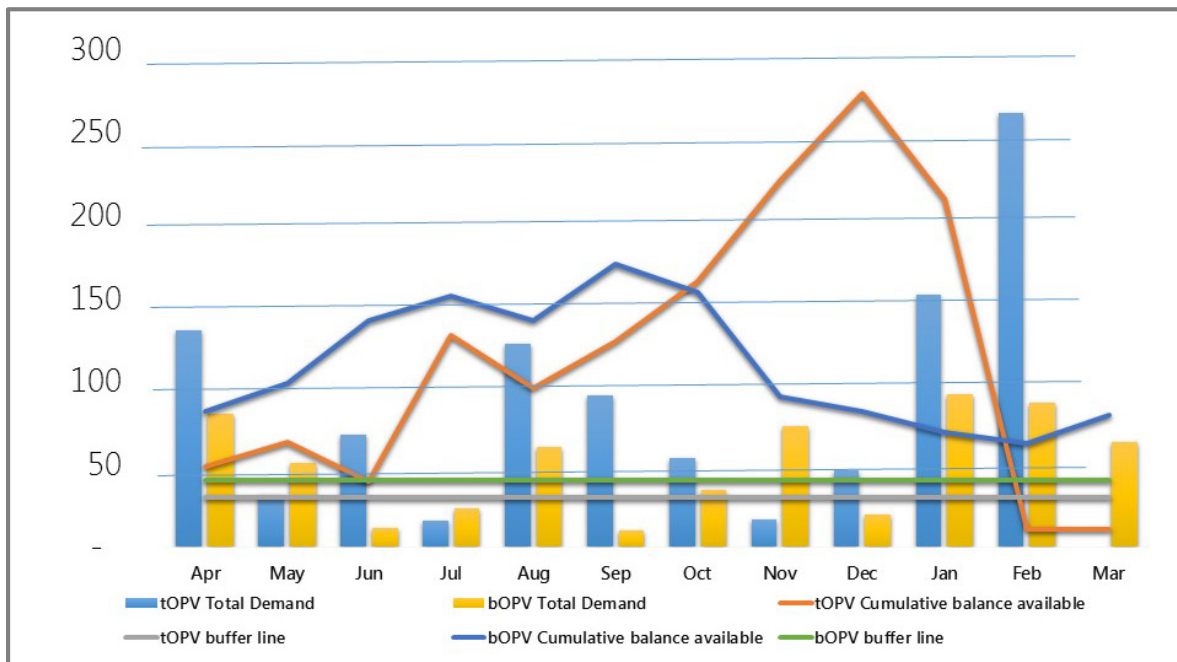
### OPV SIA: SUPPLY AND DEMAND FOR 2014 – Q1 2015

During 2014, UNICEF delivered 1.7 billion doses of OPV, an increase of 42% (0.5 billion doses) in demand compared to 2012 tender awards. From Q2 2014 to Q4 2014, considerable stock levels were building up with suppliers ensuring sufficient availability to meet all demand, including outbreak response, changes in product type, and demand increases. This required close monitoring and management across suppliers to ensure that constraints in storage capacity did not lead to production stops.

During Q1 2015, significant unplanned OPV demand from Pakistan in the first half of 2015, as well as requests for changes in types of vaccines for the first half of 2015 from both Pakistan and Nigeria. An additional constraint for 2015 was caused by a 140 million dose reduction in availability from one of two manufacturers having OPV licensed in Pakistan. Although this did not affect overall availability for Q1 2015, UNICEF expects that supplies will remain constrained in the first half of 2015, especially for countries requiring licensure (e.g., Pakistan and Middle East) of WHO pre-qualified products by national regulatory authorities.

To cover the loss of product an additional supply of 180 million doses of OPV has been awarded to an Indian filler, maximizing the capacity of this manufacturer and thereby ensuring supply availability for the programme during the second half of 2015. An additional award of 200 million doses is in progress to ensure supply for the pre-switch activities in Q1 2016 based on projections as of 30 March 2015. The actual and projected demand and supply quantities for OPV are shown in Figure 84.

**Figure 84. OPV monthly demand vs. cumulative balance available: April 2015 to March 2016\* #**



\* The SIA calendar has been approved for 2015. OPV supply required for Q1 2016 SIA demand are estimates and have not yet been confirmed with the manufacturers. # Approximately 100 million doses of bOPV have been included in Q1 2016 demand for routine immunization prior to the tOPV/bOPV switch." Source: UNICEF Supply Division



## IPV

In line with Objective 2 of the GPEI Endgame Strategic Plan, UNICEF is supporting around 100 countries with the procurement of IPV as they plan to introduce the vaccine into their routine immunization programmes by the end of 2015, a prerequisite for the global switch from tOPV to bOPV. Global IPV supply is constrained in 2015 because of the reduction of around 50% (50 million doses) of IPV from a major manufacturer in 2014 and 2015 and an additional reduction by around 21% (8 million doses) from the other awarded supplier. Both manufacturers are experiencing delays and challenges in scaling up the bulk vaccine production. The implications of the reduced supply availability are currently being reviewed by the IMG and 14 countries considered at low risk for polio/VDPV ("Tier 3" and "Tier 4") have been notified about the supply situation requiring them to postpone introduction by some months.

Although not originally forecasted to support Objective 1 of the Endgame Strategic Plan, in 2014, approximately 8 million doses of IPV had been allocated for use in SIAs in the three endemic countries and Cameroon as an enhanced eradication strategy in certain high-risk areas as per GPEI guidance. The Strategy Committee has further approved 1.5 million doses of IPV (600,000 doses for Nigeria and the remaining as global buffer stock) for use in polio SIAs.

## CHALLENGES

- UNICEF foresees constrained supply of OPV through to the switch with three factors potentially stretching supplier capacities: the expected pre-switch SIA activities, the need for sufficient bOPV supply including a buffer to fill up the supply chain for routine requirements in 70+ countries, and the requirement for 100 million doses of mOPV2 in finished product for the mOPV2 stockpile to be available by March 2016. Manufacturing capacity will be fully maximized to mitigate these challenges, but any further increases in demand in 2015 could lead to further supply constraints for Q4 2015 and Q1 2016.
- UNICEF is striving to have sufficient supply of both bOPV and tOPV based on planned activities as the programme heads into the global switch. However, because of the impending cessation of tOPV, a potential challenge will be minimizing financial risk to industry from redundant stocks of tOPV and to the programme from unmet demand/stock outs, should significant changes occur in requirements by product type before the switch.
- The number of pre-qualified 20 dose OPV vials licensed for use in the Pakistan programme and available for global supply remains at two for bOPV and two for tOPV, which further constrains supply allocations for the country.
- UNICEF will also need to manage stock levels and supply timelines from Indian fillers, to ensure full production and avoid undesired supply constraints during the critical period prior to the global switch from tOPV to bOPV.

## PRIORITY AREAS OF FOCUS IN NEXT 3-6 MONTHS

1. Supply planning for the global switch from tOPV to bOPV, including working with bulk producers to ensure sufficient type 2 bulk is available to meet the high tOPV demand from fillers with short lead times prior to the switch.
2. Working with partners and countries to plan a smooth and efficient transition from tOPV to bOPV, including increased monitoring of tOPV vaccine requirements for routine usage to avoid stock outs or excess stocks.
3. Procuring mOPV2 in finished product for the global stockpile in line with Objective 2.
4. Continued efforts to increase the base of licensed suppliers in Pakistan and to work with WHO and countries around licensing requirements for bOPV for routine immunization.

5. Continue working with partners and countries to support IPV introductions in around 100 countries before the end of 2015, including as necessary delaying introductions in lower risk countries to stretch doses.

## VACCINE MANAGEMENT

### CURRENT STATUS AND PROGRESS

In its May 2014 report, the IMB highlighted the importance of in-country vaccine management and tighter inventory control of vaccine stocks supplied for SIA.

In an effort to build capacity in vaccine management, UNICEF has developed training modules on vaccine logistics planning and management during polio SIAs. These modules have been integrated into the STOP training. In January 2015, more than 80 persons in the 45<sup>th</sup> CDC STOP were trained using these modules.

In addition, the Vaccine Supply Task Team of the then Eradication Management Group (EMG), developed a simple SOP for recording and reporting on vaccine stock balances and utilization in polio SIAs. The SOP was vetted by the EMG and circulated in January 2015 to WHO and UNICEF counterparts primarily for application in endemic countries but was also shared with outbreak-affected regions for possible application in outbreak-affected countries.

With input from partners, UNICEF had earlier developed a guidance note on cold chain logistics and vaccine management for polio SIAs. The guidance note has now been updated with this SOP.

The SOP attempts to collect and collate the following pieces of information regarding vaccines used polio SIAs:

- In-country vaccine balance stocks by vaccine type at national and first sub-national levels at the time when a new vaccine request is made to UNICEF Supply Division.
- Monthly vaccine utilization report capturing number of children immunized and number of vaccine doses utilized by type of vaccine for the previous month

We expect that the SOP will help systematically collect information regarding stock balances and vaccine utilization in polio SIAs. Collating this information with the information on doses supplied from UNICEF Supply Division will help GPEI have a better handle on polio vaccine utilization in SIAs in selected countries.

Among the endemic countries, Nigeria has started monthly reporting on vaccine utilization from March 2015 and UNICEF-Pakistan is aiming for monthly reporting beginning April 2015. Afghanistan is reviewing the SOP and will revert on feasibility of its application in the country context.

In January and February 2015, UNICEF Western and Central Africa Regional Office (WCARO) has taken a lead and reduced new vaccine requests for SIA against in-country vaccine stock balances (see following table). In the initial two months alone, because of this exercise, OPV demand has been reduced by 2.5 million doses — 1.6 million doses of bOPV (7% reduction) and 0.9 million doses of tOPV (1% reduction).

### CHALLENGES

Applying the SOP in country programme setting is a new intervention and it will take some time for the information flow to become regular, reliable and complete. For the most part, data on vaccine distribution and utilization is available to the programme but the quality varies. These data are also often not being consistently reviewed and used. It would be critical for country teams to incorporate this information into their



national and subnational EOC dashboards and monitoring indicators to integrate vaccine management into the overall programme.

### PRIORITY AREAS OF FOCUS IN NEXT 3-6 MONTHS

Data collection on vaccine utilization through the SOPs from endemic countries will remain our focus for the next 3-6 months. We anticipate that this work will also help transition to a system for collecting stock balance information on all polio vaccines (OPV and IPV, for SIA or routine immunization) which will be an essential component of country vaccine logistics systems while implementing the global tOPV/bOPV switch.

Building on the guidance note and the SOP, UNICEF is now planning to bring out an e-learning module on SIA vaccine management which will be an online resource accessible to anyone with an internet connection.

**Table: Oral polio vaccine request for SIA from selected countries adjusted against in-country stock balance – January–February 2015**

Type of vaccine / Country	Number of doses needed for next SIA round	Number of doses in stock usable for next SIA round	Number of doses requested and supplied after adjustment	Reduction in demand	Per cent reduction in demand
<b>bOPV</b>	<b>22,345,540</b>	<b>1,642,900</b>	<b>20,743,000</b>	<b>1,602,540</b>	<b>7%</b>
Benin	3,993,593	648,000	3,346,000	647,593	16%
Cameroon	7,630,747	966,900	6,664,000	966,747	13%
Chad	4,270,754	28,000	4,233,000	37,754	1%
Niger	6,450,446	0	6,500,000	-49,554	-1%
<b>tOPV</b>	<b>66,749,661</b>	<b>648,000</b>	<b>65,779,000</b>	<b>970,661</b>	<b>1%</b>
Benin	3,993,593	0	3,994,000	-407	0%
Burkina Faso	7,848,078	0	7,852,000	-3,922	0%
Cameroon	11,598,040	648,000	10,700,000	898,040	8%
Chad	4,270,754	0	4,233,000	37,754	1%
DR Congo	12,000,000	0	12,000,000	0	0%
Ivory coast	8,951,506	0	8,900,000	51,506	1%
Mali	8,386,124	0	8,378,000	8,124	0%
Niger	6,500,000	0	6,500,000	0	0%
Senegal	3,201,566	0	3,222,000	-20,434	-1%
<b>Grand Total</b>	<b>89,095,201</b>	<b>2,290,900</b>	<b>86,522,000</b>	<b>2,573,201</b>	<b>3%</b>

## CONSULTANTS, STAFFING AND CAMPAIGNS IN 2014-2015

### CONSULTANTS

Person-months of GPEI consultants deployed by country, 2014-2015								
Country	2014				2015			
	WHO/STOP	WHO	UNICEF	Rotary	WHO/STOP	WHO	UNICEF	Rotary
Afghanistan	76	18		0	5	2		0
Cameroon	103	96		0	17	0		0
CAR	46	6		0	8	2		0
Congo	29	35		0	3	0		0
Djibouti	21	3		0	1	3		0
Ethiopia	74	38		0	6	3		0
Iraq	0	22		0	0	0		0
Jordan	21	38		0	7	1		0
Kenya	85	39		0	10	0		0
Niger	35	0		0	4	0		0
Nigeria	290	72		0	28	5		0
Pakistan	53	23		0	7	2		0
Somalia	57	4		0	6	0		0
South Sudan	176	11		0	18	0		0
Syria	0	20		0	0	0		0
Turkey	0	12		0	0	0		0
Uganda	27	0		0	6	0		0
Yemen	52	0		0	0*	0		0
<b>Total</b>	<b>1143</b>	<b>436</b>	<b>0</b>	<b>0</b>	<b>126</b>	<b>19</b>	<b>0</b>	<b>0</b>

\* 6 STOPers originally assigned but all being redeployed elsewhere due to security concerns.

## STAFFING 2015

Region	Country	Country Staffing for Polio <sup>1</sup>							
		CDC		Rotary <sup>3</sup>	WHO		UNICEF		STOP <sup>5</sup>
		CDC Staff & NSTOP	Supporting partners <sup>2</sup>		Core <sup>4</sup>	Surge	Core	Surge & Soc Mob	
Endemic	Afghanistan		2	8	146	469	21	4149	5
	Pakistan	36		41	250	1047	68	2328	7
	Nigeria	246	2	25	404	2346	35	10981	25
AFR	Algeria				0	0			0
	Angola			3	73	16	13		3
	Botswana				2	0			0
	Benin			5	5	0		5200	3
	Burkina Faso			16	6	0	3	17200	1
	Burundi				3	0			
	Cameroon			3	9	0	1	14467	16
	Cape Verde				0	0			
	Central African Republic				9	0	11	3500	7
	Chad		4	3	31	49	19	3655	11
	Congo		1	4	9	0	1	8800	3
	Côte d'Ivoire			15	16	0	3	1600	2
	Democratic Republic of the Congo		1	6	84	27	18	35320	13
	Eritrea				7	0			
	Ethiopia			11	74	54		N/A	6
	Equatorial Guinea				3	0	3	135	5
	Gabon		2	5	2	0	2	424	5
	Gambia				2	0			
	Ghana			7	4	0			
	Guinea			3	2	0			
	Guinea-Bissau				3	0	2		
	Kenya	1		7	13	8	5	1920	9
	Liberia			3	6	0			
	Madagascar				9	0			
	Malawi				2	0			
	Mali			6	4	0	3	20000	4
	Mauritania				1	0			
	Mozambique				5	0			
	Namibia				4	0			
	Niger			5	16	2	1	4800	4
	Rwanda				2	0			
	Senegal				3	0	7		
	Sierra Leone				7	0			
South Africa				11	0				
South Sudan				92	0	14	N/A	18	
Swaziland				3	0			1	
Tanzania				9	1				
Togo			3	5	0				
Uganda			3	12	1	3	N/A	6	
Zambia				7	0				
Zimbabwe				3	0				

## Staffing 2015 (continued)

Region	Country	Country Staffing for Polio <sup>1</sup>							
		CDC		Rotary <sup>3</sup>	WHO		UNICEF		STOP <sup>5</sup>
		CDC Staff & NSTOP	Supporting partners <sup>2</sup>		Core <sup>4</sup>	Surge	Core	Surge & Soc Mob	
AMR	Haiti								1
EMR	Djibouti				1		2		1
	Egypt			11	2	1			
	Iran				1		1		
	Iraq						2		
	Jordan		3	6			5		7
	Lebanon			6			3		1
	Somalia				183	35	19	N/A	4
	Sudan			4	67			N/A	
	Syrian Arab Republic					1			
	Yemen				37		4		
EURO	Kyrgyzstan								
	Russian Federation								
	Tajikistan				1				
	Turkey								
	Uzbekistan				2				
SEAR	Bangladesh			21	93		4		
	India			32	1082		18	7309	1
	Indonesia			6	49				
	Myanmar				33				
	Nepal			11	54		4		
WPR	Cambodia								1
	China								
	Lao DR								1
	Papua New Guinea								2
	Phillipines								
	Viet Nam								
<b>All</b>	<b>Total</b>	<b>246</b>	<b>10</b>	<b>279</b>	<b>2963</b>	<b>4057</b>	<b>295</b>	<b>141788</b>	<b>136</b>

1. Does not include staff at other levels

2. CDC secondees to WHO country offices and contractors are also counted as WHO core staff

3. Includes both volunteers and paid staff

4. Includes international and national technical staff

5. Stop Transmission of Polio (STOP) round 45, deployed January-June, 2015

## SIA CAMPAIGNS 2014–2015

Region	Country	2014 Polio Campaigns <sup>1</sup>				2014 Polio Program Costs <sup>2</sup> (USD, millions)	2015 Polio Campaigns <sup>1</sup>				2015 Polio Program Costs <sup>2</sup> (USD, millions)		
		Total No.	NIDs		SNIDs		Total No.	NIDs		SNIDs			
			No.	Target (thousand)	No.			Target (thousand)	No.	Target (thousand)		No.	Target (thousand)
Endemic	Afghanistan		4	33,879	6	28,508		4	35114	7	17557	\$61.39	
	Pakistan		5	171,139	8	135,428		5	172619	12	146726	\$145.38	
	Nigeria		2	117,925	7	192,718		2	117925	6	159199	\$288.02	
AFR	Algeria											\$0.03	
	Angola		2	14,004				1	6294	1	3147	\$12.48	
	Botswana											\$0.24	
	Benin		4	14,035				4	14527	0	0	\$3.47	
	Burkina Faso		4	25,697				2	12345	1	3086	\$3.43	
	Burundi								0			\$0.21	
	Cameroon		10	51,413	2	2,692		4	22734	3	10230	\$10.23	
	Cape Verde		1	53								\$0.04	
	Central African Republic				5	2,610		0	0	6	2551	\$3.01	
	Chad		3	11,189	2	3,769		4	16099	2	4025	\$15.66	
	Congo		4	4,122				3	3120	0	0	\$1.86	
	Côte d'Ivoire		3	23,671				1	7890	1	3945	\$4.59	
	Comoros											\$0.04	
	DR Congo		2	26,089	1	6,463		0	0	3	25751	\$20.67	
	Eritrea							1	575	0	0	\$0.35	
	Ethiopia		1	13,086	4	20,201		1	13287	6	19399	\$16.81	
	Equatorial Guinea		7	1,602				4	455	0	0	\$0.72	
	Gabon		3	1,991				3	981	0	0	\$0.97	
	Gambia		2	833								\$0.12	
	Ghana		2	11,430				0	0	1	2540	\$0.49	
	Guinea							3	8975	0	0	\$2.99	
	Guinea Bissau		2	590				1	0	0	0	\$0.20	
	Kenya		3	25,945	2	13,223		0	0	4	16029	\$8.65	
	Liberia							3	2810	0	0	\$2.19	
	Lesotho											\$0.05	
	Madagascar		1	2,132				2	8699	1	2175	\$1.80	
	Malawi											\$0.26	
	Mali		3	21,564				2	14376	3	10782	\$6.22	
	Mauritius											\$0.02	
	Mauritania		2	1,383				1	639	0	0	\$0.25	
	Mozambique											\$0.73	
	Namibia											\$0.39	
	Niger		3	16,483	2	9,068		3	17434	3	11041	\$10.09	
	Rwanda											\$0.32	
	Senegal		1	2,735				1	3109	0	0	\$1.56	
	Sao Tome and Principe											\$0.01	
	Seychelles											\$0.01	
	Sierra Leone							3	4274	0	0	\$2.63	
	South Africa											\$0.93	
	South Sudan		4	13,172	1	1,926		4	13373	2	2206	\$11.94	
Swaziland											\$0.22		
Tanzania											\$0.98		
Togo		2	3,773								\$0.35		
Uganda							1	9007	2	9007	\$3.02		
Zambia											\$1.04		
Zimbabwe											\$0.49		



## SIA Campaigns 2014—2015 (Continued)

Region	Country	2014 Polio Campaigns <sup>1</sup>				Polio Program Costs <sup>2</sup> (USD, millions)	2015 Polio Campaigns <sup>1</sup>				Polio Program Costs <sup>2</sup> (USD, millions)		
		Total No.	NIDs		SNIDs		Total No.	NIDs		SNIDs			
			No.	Target (thousand)	No.			Target (thousand)	No.	Target (thousand)		No.	Target (thousand)
AMR	Haiti												
EMR	Djibouti	2	250	1	51	\$0.06						\$0.10	
	Egypt	2	25,891			\$2.23	1	12945	1	4272		\$3.00	
	Iran											\$0.03	
	Iraq	5	28,642	3	8,535	\$4.24	2	11457	3	8593		\$12.50	
	Jordan	3	2,784	2	350	\$2.39	0	0	1	186		\$2.00	
	Lebanon	4	2,132			\$4.60	0	0	2	448		\$1.46	
	Libya						0	0	2	636		\$0.50	
	Somalia	5	11,519	7	9,821	\$26.06	5	11715	5	4803		\$22.79	
	Sudan	2	13,955	2	7,256	\$13.88	0	0	2	9247		\$4.72	
	Syria	8	21,101	4	11,647	\$8.96	4	11416	0	0		\$2.53	
	West Bank and Gaza Strip											\$0.05	
Yemen	2	10,353			\$6.28	2	9774	2	4887		\$4.35		
EURO	Armenia					\$0.01						\$0.01	
	Azerbaijan					\$0.03						\$0.01	
	Bosnia					\$0.08						\$0.01	
	Georgia					\$0.03						\$0.01	
	Kazakhstan					\$0.01						\$0.01	
	Moldova					\$0.01						\$0.02	
	Kyrgyzstan					\$0.01						\$0.01	
	Russian Federation												
	Tajikistan	2	2,087			\$0.67	1	808	0	0		\$0.64	
	Turkey	4	2,011			\$1.00	0	0	2	1587		\$0.51	
Ukraine					\$0.04	2	4924	0	0		\$0.05		
Uzbekistan					\$0.03						\$0.03		
SEAR	Bangladesh					\$2.51						\$2.51	
	India	2	362,483	3	273,372	\$46.62	2	360,461	3	249,185		\$42.93	
	Indonesia					\$1.59						\$1.59	
	Myanmar					\$0.81						\$0.81	
	Nepal	1	4,803			\$3.00	0	0	1	3170		\$3.14	
WPR	Cambodia												
	China												
	Philippines												
	Viet Nam												
<b>All</b>	<b>Total</b>	<b>0</b>	<b>122</b>	<b>1,097,946</b>	<b>62</b>	<b>727,639</b>	<b>\$843.61</b>	<b>0</b>	<b>82</b>	<b>930,162</b>	<b>88</b>	<b>736,410</b>	<b>\$753.84</b>

1. Includes National Immunization Days (NIDs), Subnational Immunization Days (SNIDs), Mop ups, and Child Health Days (CHDs)

2. Includes AFP surveillance, Social Mobilization, Technical Assistance, OPV, and Operational Costs. Costs for CHDs and CDC programs not included

## FINANCING

### GLOBAL POLIO ERADICATION INITIATIVE FINANCING SITUATION

#### FUNDING GAP

Against the US\$ 5.5 billion budget for 2013–2018, the best-case funding gap for the entire period is US\$ 451 million (see next table below).

The best case funding gap represents the difference between the total costs budgeted in the endgame plan less a) pledges made at the 2013 vaccine summit, b) pledges made after the summit, and c) projections for donors who have not made publically announced funding commitments but who have historically provided support and have indicated that they will continue to do so.

Table: GPEI Funding Gap as of December 2014

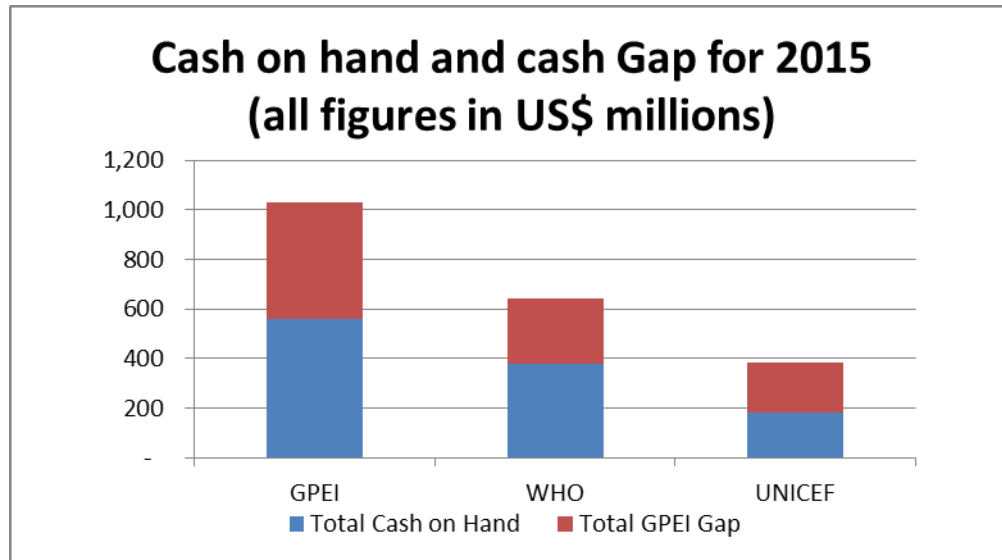
Funding Gap USD millions	2013-2018 Jul-14	2013-2018 Dec-14
<b>Funding Required (FRRs)</b>	\$5,525	\$5,525
Confirmed Funding	\$1,986	\$2,226
Pledged Funding	\$2,698	\$2,488
Projected Funding	\$347	\$360
<b>'Best Case' Funding Gap</b>	<b>\$494</b>	<b>\$451</b>

This level of commitment from donors over the entire period of the plan represents a historic shift in the way the Initiative is funded and has enabled stronger forward planning, more discipline in budget control and a faster response to the major outbreaks of 2013.

Pledged funding does not represent cash available to the Initiative. Changes in political leadership or economic downturns present a risk that pledges will not be honored. In addition, none of the donors who pledged at the Vaccine Summit were in a position to make a full payment of the pledges immediately and the timing of the operationalization of pledges has an impact on programme implementation.

#### CASH GAP

The cash gap represents the GPEI's internal operating position in the near term based on cash available for expenditure. As of February 2015, the Initiative has cash on hand of US\$ 561 million against the total budget of US\$ 1.1 billion for 2015 (see Figure 85).

**Figure 85. GPEI Cash Gap for 2015 as of February 2015**

The majority of cash available to the programme is earmarked for specific segments of the budget, either geographical or activity-based. As of February 2015, in four priority areas, firm commitments from donors have not yet been secured and a cash gap remains:

- Pakistan
- Afghanistan
- IPV Catalytic funding for India
- Surveillance

The cash gap projections for 2015 will be revised in April 2015 to reflect the second half 2015 SIA.

## ROTARY SUPPORT

Rotary continues to draw from its global volunteer network to raise awareness and funds for the Global Polio Eradication Initiative. As a result of these enhanced efforts and in partnership with the BMGF, Rotary committed US\$124 million in funding for polio eradication in 2014 and expects to do the same in 2015. Rotarians continue to advocate with governments to help meet critical funding needs and secure political support, both within the polio-affected countries and in key donor markets. Rotary's advocacy efforts in key donor markets have focused on the US, UK, Canada, Japan, Australia, Germany, and the EU. Rotary presented the Prime Ministers of Australia and Canada with Polio Eradication Champion Awards in recognition of their support for polio eradication activities, held a series of high level partnership meetings with European Union and Commission officials to encourage additional contributions to polio eradication, and hosted an expert roundtable discussion in Germany preceding the G7 meeting.

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