POLIO GLOBAL ERADICATION INITIATIVE

Report of the Seventeenth Meeting of the Technical Advisory Group on Poliomyelitis Eradication in Pakistan

Islamabad, Pakistan

21–23 January 2025

CONTENTS

ACRONYMS

AFP	Acute flaccid paralysis
AIC	Area In charge
BCU	Big Catch-Up
***b*OPV**	Bivalent oral polio vaccine
CDC	Centers for Disease Control and Prevention
DEOC	District Emergency Operations Center
EMR	Eastern Mediterranean Region
EOC	Emergency Operations Center
EPI	Essential Programme on Immunization
ES	Environmental surveillance
ES+	Positive environmental surveillance sample
FDI	Federal Directorate of Immunization
fIPV	Fractional inactivated polio vaccine
FLW	Frontline worker
GF	Gates Foundation
GPEI	Global Polio Eradication Initiative
H2H	House-to-house
IPV	Inactivated polio vaccine
ISD	Integrated service delivery
KP	Khyber Pakhtunkhwa
LQAS	Lot quality assurance sampling
LPUC	Low performing union council

NEAP	National Emergency Action Plan
NEOC	National Emergency Operations Center
NID	National Immunization Day
NISP	National Immunization Strategic Plan
OPV	Oral polio vaccine
PCM	Post-campaign monitoring
PEI	Polio Eradication Initiative
PEOC	Provincial Emergency Operations Center
PMC	Persistently missed children
RI	Routine immunization
S2S	Site-to-site
SBC	Social behaviour change
SBCC	Social behaviour change communication
SIA	Supplementary immunization activity
SMC	Still missed children
SNID	Subnational Immunization days
Southern KP	Southern Khyber Pakhtunkhwa
TAG	Technical Advisory Group for Afghanistan and Pakistan
UC	Union council
UNICEF	United Nations Children's Fund
WHO	World Health Organization
WPV	Wild Poliovirus

MMP	Migrant and mobile population
MNHSR&C	Ministry of National Health Services, Regulations and Coordination
NA	Not available
WPV1	Wild poliovirus type 1
WUENIC	WHO and UNICEF Estimates of the National Immunization Coverage

ACKNOWLEDGEMENTS

The Technical Advisory Group for Polio Eradication in Afghanistan and Pakistan (TAG) acknowledges the commendable engagement of the Prime Minister of Pakistan, chief ministers, Coordinator to the Prime Minister on National Health Services, Regulations and Coordination, federal and provincial ministers of health and chief secretaries in the national effort to eradicate polio. The TAG also appreciates the extraordinary efforts of the national and provincial Emergency Operations Centers. The TAG acknowledges the commitment of the frontline workers and the law enforcement officers and security personnel who work to protect them and pays tribute to those who have lost their lives while working to ensure a polio-free world.

The TAG also wishes to acknowledge the support of all national and international entities to end poliovirus transmission, including the Regional Reference Laboratory for Polioviruses in Islamabad and the Global Polio Eradication Initiative (GPEI) partners: Rotary International, the World Health Organization United Nations Children's Fund, the US Centers for Disease Control and Prevention , the Gates Foundation and Gavi, the Vaccine Alliance.

The TAG members extend their sincere thanks to the National Emergency Operations Center and Pakistan's Ministry of National Health Services, Regulations and Coordination for facilitating the seventeenth TAG meeting in Islamabad, marking the first time in five years that the meeting has been hosted in the country. The TAG appreciates the partners and donors of GPEI for their unwavering support for polio eradication. The TAG appreciates the support of the Secretariat for organizing the meeting with more than 120 participants, including the Chair and members of the GPEI's Strategy Committee, and for maintaining regular follow up with the countries on the TAG recommendations. The TAG appreciates the participation of GPEI partner representatives from the core team at Afghanistan's NEOC.

EXECUTIVE SUMMARY

The Technical Advisory Group for Polio Eradication in Pakistan (TAG) was convened by the WHO Regional Director for the Eastern Mediterranean from 21 to 23 January 2025 in Islamabad, Pakistan. The TAG meeting came at a critical time for Pakistan, as the country faces a resurgence of wild poliovirus type 1 (WPV1) and a narrowing window to interrupt transmission by the end of 2025. With 73 WPV1 cases reported in 2024 compared to just six in 2023, and an exponential increase in environmental detections across historic poliovirus reservoirs like Karachi, Peshawar, Quetta blocs and beyond, the pressure to demonstrate results has never been greater.

The meeting underscored the urgent need for extraordinary efforts and emergency operational measures to get the programme back on track and restore national and international confidence in the success of the longstanding effort.

The TAG highlighted the need to focus on areas where the virus has re-established transmission or continues to spread, particularly in parts of southern Khyber Pakhtunkhwa, central Pakistan and urban centers that have been historic poliovirus reservoirs. New or modified approaches and continued improvement in the quality of basic programme functions are required to ensure every child is reached, especially in areas where security issues and logistical challenges make standard vaccination campaigns difficult. While progress has been made in certain areas, more needs to be done to ensure uniformly high-quality vaccination campaigns and close gaps where children are being missed.

TAG outlined specific epidemiological milestones that must be achieved by mid-2025 to reverse the widespread poliovirus transmission. These are to:

1	Interrupt polio transmission in the northern corridor (Peshawar bloc), central Pakistan (eastern Balochistan, northern Sindh and southern Punjab), and across Islamabad, Lahore and Rawalpindi.
2	Substantially reduce the presence of the virus in environmental samples in Karachi, Quetta bloc and southern Khyber Pakhtunkhwa.
3	Prevent persistence of transmission in any area that has recently detected or will detect poliovirus.

The next five months (*from February to June 2025)* are considered critical for making progress, with efforts focused on delivering effective vaccination campaigns and addressing challenges in hard-to-reach areas.

To meet these ambitious targets, the quality of vaccination campaigns must improve to reach children who continue to be missed. Missed children repeatedly remains the single largest challenge for the programme. Pakistan's current implementation of the 2–4–6 strategy should continue but should be sharpened to focus intensively on strengthening programme management and accountability, enhancing the quality of supplementary immunization activities (SIAs), and maximizing access to and vaccination of children in all areas.

Significant interventions, innovations and assessments have been introduced under this strategy. However, the improvements have not yet translated into better SIA quality. Ensuring access to all children, particularly in high-risk areas of Khyber Pakhtunkhwa, is essential to getting the programme back on track. Additionally, special attention must be paid to mobile and migrant populations and to achieving and maintaining high-quality immunization efforts in the critical border districts where the virus risks being sustained.

The TAG recommended specific benchmarks of quality and indicators of missed children that the programme must meet to achieve the recommended milestones for reversing poliovirus transmission trends by June 2025.

Despite these challenges, there are significant opportunities for Pakistan to make strong progress in 2025. With committed political and administrative leadership, enhanced security support and especially the Prime Minister's regular stock take, the programme can capitalize on this momentum to build a national movement for the last push.

For enhancement of operational quality and sustainable impact, the programme must continue to focus on improving the management, morale and motivation of frontline workers, expanding routine immunization coverage through the Essential Programme on Immunization, and leveraging the Big Catch-Up campaigns to address gaps in immunization.

INTRODUCTION

The Technical Advisory Group on Eradication of Poliomyelitis in Pakistan (TAG) was convened in Islamabad, Pakistan, from 21 to 23 January 2025, under the auspices of the Regional Director of the World Health Organization (WHO), Eastern Mediterranean Region (EMR) on behalf of EMR Member States and the Global Polio Eradication Initiative (GPEI). The TAG is an independent body that advises and makes recommendations to the relevant authorities in Afghanistan and Pakistan and to the GPEI partners on national polio eradication policies, strategies and operations.

Preamble

The GPEI is facing unprecedented pressure from the international community to meet its targets within the reset timelines in the extended Polio Eradication Strategy. The extended strategy shifts the timeline for interrupting wild poliovirus type 1 (WPV1) transmission by the end of 2025, certify its eradication by the end of 2027; and certifying the elimination of vaccine-derived poliovirus by the end of 2029[1]. There are growing concerns about sustaining international funding without evident progress and a clear roadmap for the interruption of WPV1 in the last two endemic countries. The situation is further complicated by the geopolitical landscape, including the escalating security challenges in Khyber Pakhtunkhwa (KP) and the evolving operational and coordination issues between Afghanistan and Pakistan. Despite these challenges, there is strong engagement and financial support from regional governments in the Eastern Mediterranean, including a US $500 million commitment from the Kingdom of Saudi Arabia to the GPEI.

The TAG was convened at this critical time to ensure that the programme in Pakistan, under its new leadership, sets a positive trajectory for polio eradication in 2025 to restore confidence among regional Member States and international donors, alongside ensuring that GPEI remains on track to achieve a polio-free world within the revised timeline.

The objectives of the meeting were to review the implementation status of the May 2024 TAG recommendations, assess the epidemiology of WPV1 transmission, risks to the national programme operations given the evolving political, security and social dynamics, progress made under the 2–4–6[2] strategy [3], measures taken to improve the quality of vaccination campaigns and review the proposed calendar for supplementary immunization activities (SIAs) for 2025.

Following the discussions, the TAG recommended clear epidemiological milestones and actions and set measurable benchmarks for high quality SIAs to reverse the current epidemiology of WPV1.

Meeting Proceedings

The meeting spanned over three days. The meeting agenda and full list of programme participants are provided in the annexures. The national and provincial programme leadership participated in the meeting. In addition to senior representatives of GPEI partners, including Dr Mike Ryan, Deputy Director General of WHO, Mr Michael McGovern, Chair of the International PolioPlus Committee, Rotary, and chairs of the Global and Regional Certification Commissions attended the meeting. Keynote remarks in the inaugural session were delivered by Dr Malik Mukhtar Ahmad Bharath, Coordinator to the Prime Minister on Health, the Prime Minister's Focal Person for Polio Eradication, Senator Ayesha Raza Farooq and WHO's Regional Director for the Eastern Mediterranean, Dr Hanan Balkhy.

Following a regional update on the shared epidemiology between Pakistan and Afghanistan, detailed presentations were made by the national and provincial Emergency Operations Centers (EOCs). Each presentation was followed by threadbare and frank discussion to understand the situation and thus devise recommendations for improvements, where needed. Three sessions focused on social behaviour change communications (SBCC) activities to address the missed children in Pakistan, the perspective of the programme on cross- border coordination, the Big Catch-Up (BCU) and synergy between the Essential Programme on Immunization (EPI) and Polio Eradication Initiative (PEI).

The TAG presented its conclusions and recommendations on the third day, followed by remarks from the provincial and national programme leadership. The GPEI partners and the donors' representative provided closing remarks. The Prime Minister's Coordinator for Health and Focal Person for Polio Eradication assured the TAG members of the government's full support for the implementation of the recommendations. Similar assurances were pledged by the provincial chief secretaries in their remarks. This report presents a summary of the TAG meeting deliberations, including five closed sessions, totalling 32 hours.

SITUATION ANALYSIS

The epidemiology of WPV1 reflects a marked increase in number of WPV1 cases and percent of the WPV1 positive environmental samples (ES+) since the last TAG meeting held in May 2024. The epidemiological curve, at a lower amplitude, mirrors the resurgence of polio in Pakistan in 2020, as shown in Figure 1. As of 23 January 2025, a total of 73 WPV1 cases and 625 WPV1 ES+ samples were reported by Pakistan in 2024. In 2023, these figures were six and 126, respectively. There are two genetic clusters in circulation; YB3A4A in all provinces and YB3A4B restricted to Sindh province with sporadic detection elsewhere.

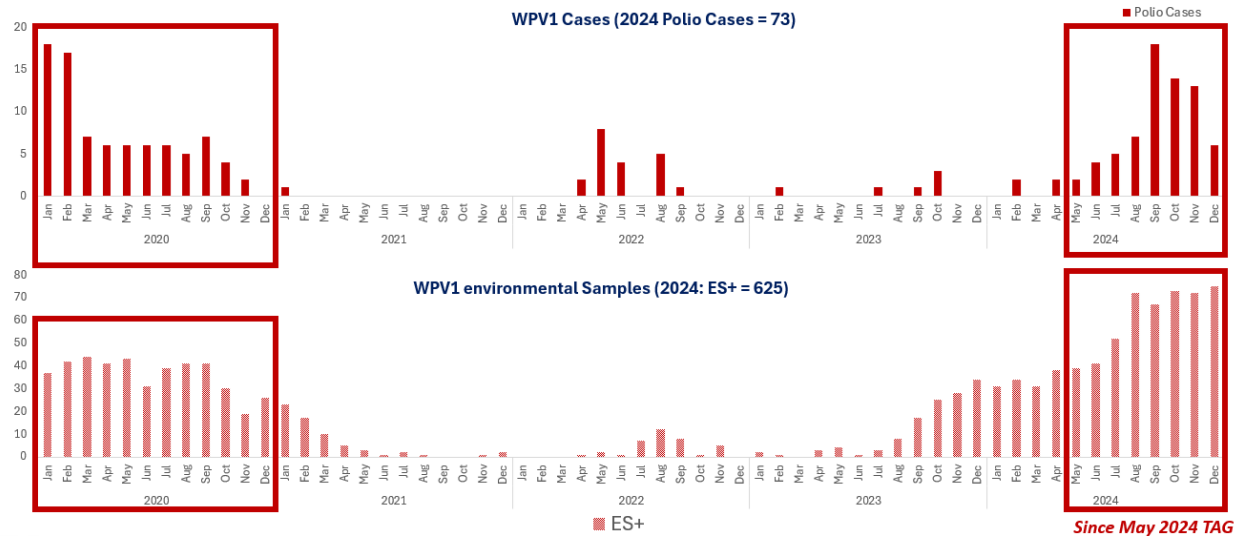

Figure 1: WPV1 Detections in Pakistan by month, 2020-2024

Epidemiological data reflects that there is re-established endemic transmission[4] in three historic core reservoirs namely Karachi, Peshawar and Quetta blocs. Moreover, there is *re-established transmission[5] in 12 districts in the four provinces and in Islamabad.* These include Kohat and three districts in southern KP including DI Khan, Lakki Marwat and Tank; Lahore and Rawalpindi in the central and northern parts of Punjab with Rawalpindi sharing transmission with Islamabad; Kambar and Mirpur Khas the central and northern parts of Sindh; and Dukki, Kila Saifullah and Zhob in Balochistan. There are also frequent WPV1 detections observed in multiple adjoining districts of northern Sindh, southern Punjab and eastern Balochistan, together comprising central Pakistan, as shown in Figure 2.

Afghanistan and Pakistan constitute one epidemiological bloc and share three cross-border epidemiological corridors: northern corridor comprising of eastern provinces of Afghanistan and central KP, southern corridor comprising of southern provinces of Afghanistan and Quetta bloc in Pakistan and central corridor comprising of South-eastern region of Afghanistan and southern KP in Pakistan.

There is shared transmission through the northern and southern corridors, which illustrates the inter-dependence of polio eradication on the two countries and hence the significance of optimal coordination – at national and especially at local level – to end polio.

Among the three cross-border corridors, the northern corridor has seen a 35% reduction in WPV1 detections in 2024 compared to the previous year (88 detections in 2023 versus 57 in 2024) indicating a decrease in intensity of transmission. However, there is frequent reporting of long chain and orphan viruses in the northern corridor, denoting potential gaps in surveillance in population groups on both sides of the border. However, the southern corridor has reported a sharp increase of 600% in WPV1 detections in 2024 compared to the previous year (30 detections

in 2023 versus 180 in 2024). As of 23 January, there is no evidence of cross-border transmission in the central corridor which has had a 472% rise in WPV1 detections in 2024 compared with 2023 (11 detections in 2023 vs 52 in 2024).

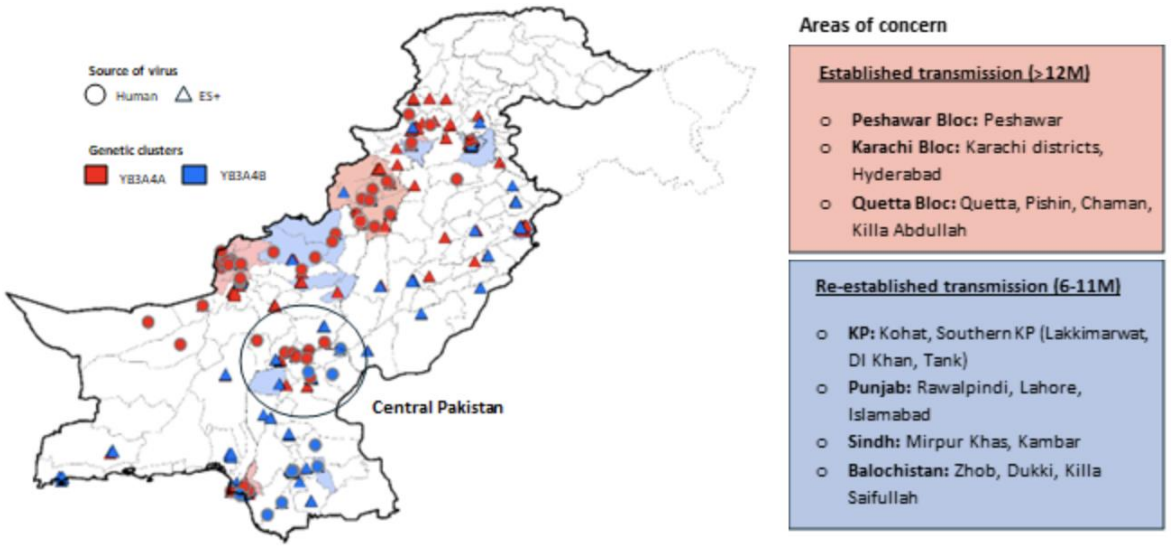

Figure 2: WPV1 Epidemiology in Pakistan Areas of Concern

FINDINGS

Reviewing the progress of the 2–4–6 strategy

A three-phase strategy for revamping efforts towards the interruption of WPV1 transmission across Pakistan was developed in mid-2024, following the previous TAG meeting. The strategy was made an integral component of the National Emergency Action Plan (NEAP) 2024–2025 approved by the National Task Force for Polio Eradication (NTFP), chaired by the Prime Minister of Pakistan, H.E. Mr Shahbaz Sharif.

The 2–4–6 strategy includes a broad range of approaches, activities, goals, and aspirations in four key thematic areas of the programme to reduce the number of missed children. These are leadership and management, performance of frontline workers, reaching all migrant and mobile populations and social and behavioural change communications. Each theme has subareas guiding the programme for developing action plans for a comprehensive roll out of the strategy. The national and provincial presentations showcased progress in implementation under the 2–4–6 strategy.

Numerous activities have been implemented, including measures to improve surveillance. However, the current strategy is difficult to assess due to the absence of established benchmarks, and varying implementation across provinces. Thus, there is a vital need to sharpen the components of the 2–4–6 strategy. This presents an opportunity to organize the current strategy into a framework that includes a results chain, illustrating the logical sequence of events and causal links between each input/activity, the intermediate effect on vaccination coverage, and the ultimate impact, that is, zero WPV1 transmission, as shown in Figure 3.

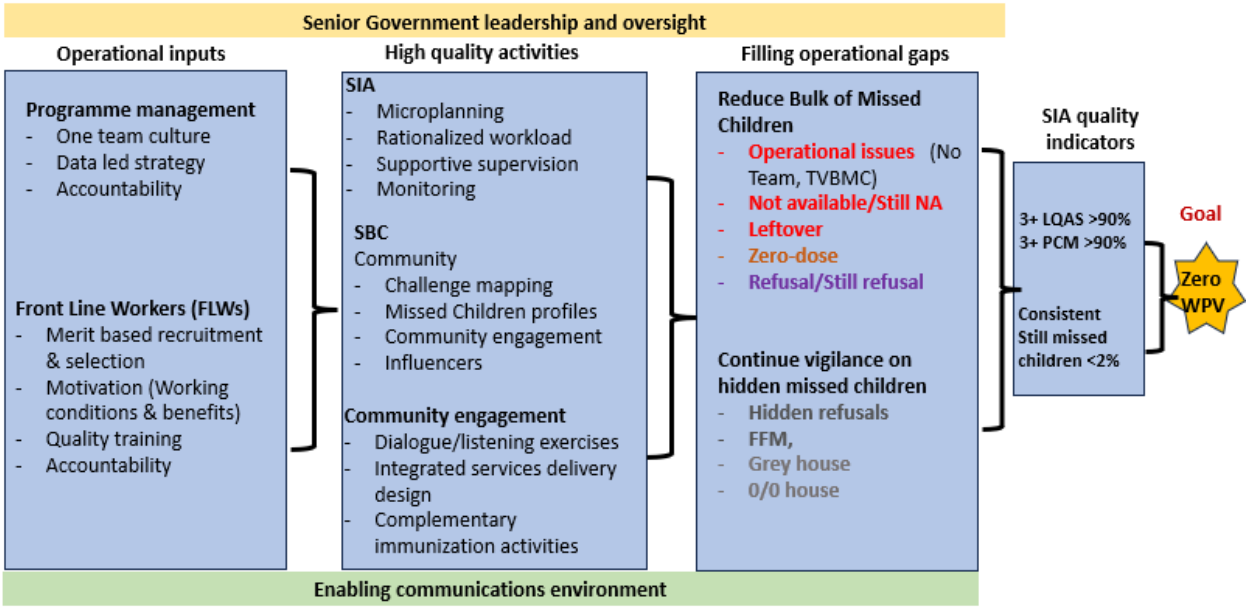

Figure 3. Example of 2-4-6 strategic framework with a results chain

The aim is to ensure that the programme is directing its strategies based on its rich database to guide timely action and fill operational gaps with a focus on areas that are missing children the most. Using benchmarks provides an opportunity for improving operations, optimizing cost-efficiency, and reaching the goal of zero WPV1 by the end of the implementation phase of the framework.

Although the TAG is fully aware of the likely delay in implementing he fourth stage under the second phase of the strategy due to various factors, such as the effect of the December campaign (which had not been assessed at the time of the TAG meeting), and the incomplete implementation of the strategy's components as a package, there is, limited evidence of improvement in programme quality needed for interrupting the virus, under this strategy.

The provincial findings should be reviewed keeping in view the overarching impressions of TAG, which is that the improvement in the quality of campaigns and a significant dent to the epidemiology are not yet evident. The current strategy has not yielded considerable reduction in

missed children. Nonetheless, there are improved diagnoses, understanding and estimates of missed children.

Keeping in view the four key thematic areas of the 2–4–6 strategy, the TAG summarized the wealth of information on types of missed children and programme actions presented by the provinces and the lot quality assurance sampling (LQAS) results of the December 2024 campaign, as shown in Table 1. The key findings from this analysis warrant urgent sharpening of benchmarks to assess the quality and review strategies to address missed children in a comprehensive view.

Table 1: Summary of Findings on the Quality of SIAs in the Provinces (based on LQAS)

Province	Observation	Indicator	Scale of Issue	Activities	Findings/Observations
Sindh	**Recorded SMC**	Not Available	2% (~5,000 children)	No specific approach	• TAG commends systematic efforts to identify and immunize missed children. • Efforts to quantify unrecorded/hidden missed children suggest this is not a significant issue. • Further field work and analysis needed: - Are you focusing effort on the areas with most return? - What additional activities are needed? - Where else could children be missed?
		Refusal	0.46% (~1,150 children)	Lots of effort and focus	
	Team Operational Failure	Team missed house or child	60% (~147,000 children)	No specific approach	
	Potential Unrecorded SMC	Zero/zero houses	<0.1% (<250 children)	Lots of effort and activities for small return?	
		Locked houses	<0.1% (<250 children)		
		Fake finger marking	<0.1% (<250 children)		
Khyber Pakhtunkhwa	**Recorded SMC**	Not Available	1.4% (~1,500 children)	No specific approach	• TAG recognizes the severe challenge of leftover children in Southern KP. • Continued efforts are needed to chip away at this cohort. • Overt refusal, zero/zero houses and fake finger marking appear minor contributors to missed children. • All programme resources (Operations and SBC) should be targeted at major categories of missed children. **Calculations for KP exclude the 318,216 leftover children which were in areas which did not conduct LQAS in the December 2024 campaign.*
		Leftover	4.9% (~5,500 children)	Significant efforts but limited returns (access, coverage)	
		Refusal	0.31% (~350 children)	Lots of effort and focus	
	Team Operational Failure	Team missed house or child	73% (~81,500 children)	No specific approach	
	Potential Unrecorded SMC	Zero/zero houses	0.02% (<25 children)	Lots of effort and activities for little return	
		Fake finger marking	0.004% (<5 children)		
Balochistan	**Recorded SMC**	Not Available	2.3% (~1,500 children)	No specific approach	• Similar findings regarding refusal and hidden/ unrecorded missed children with small numbers. • And less attention to NA and children missed because of operational issues. • Need to explore causes and types of NA/'No Team' to assess the realistic scale of available NA and operational
		Refusal	0.2% (~120 children)	Lots of effort and focus	
	Team Operational Failure	Team missed house or child	72.0% (~43,000 children)	No specific approach	
	Potential Unrecorded SMC	Zero/zero houses	0.08% (~50 children)	Lots of effort and activities	

		Fake finger marking	0.007% (<5 children)	for small return?	issues which can be improved through Operations/SBC integration.
Punjab	**Recorded SMC**	Not Available	2.2% (~9,000 children)	Excellent innovation: digitize data and track all NA children	• Focus on refusal and hidden/ unrecorded missed children with small numbers. • Less attention to children missed because of operational issues. • Punjab is using digitization to systematically record and track NA children round after round which was recommended by TAG.
		Refusal	0.002% (~10 children)	Lots of effort and focus	
	Team Operational Failure	Team missed house or child	48% (~187,000 children)	No specific approach	
	Potential Unrecorded SMC	Zero/zero houses	0.03% (~120 children)	Lots of effort and activities for small return?	

Sindh

Polio eradication efforts are facing several significant challenges in Sindh, particularly in Kambar, Karachi, Mirpur Khas and northern Sindh. Karachi bloc comprising of Hyderabad and Karachi districts has recently re-established endemic transmission, while Kambar and Mirpur Khas districts have seen re-established transmission by January 2025. Districts of northern Sindh are contributing to the ongoing transmission in central Pakistan.

The TAG noted that the district improvement plans are either not being implemented, or the progress was not shared with the forum. Additionally, there are no specific approaches in place to address the two largest categories of missed children: children missed despite teams' visits to homes (approximately 147 000 children) and Not Available (NA) children (approximately 5000 children). Furthermore, the strategy for migrant and mobile populations, including groups such as brick kiln workers and farmers, has not been comprehensively implemented. This gap is particularly evident in northern Sindh where tailored activities for these populations are missing.

Sindh continues to conduct the most sophisticated social profiling of still missed children (SMC) and influencer mapping and utilizes risk-based prioritization to shape activities for refusals. However, a key concern is the focus of the SBCC strategies, which are overly concentrated on refusals, leaving other broader critical integrated approaches neglected. The TAG also noted Sindh's efforts on FLWs management, however, there is an apparent disconnect between what was presented in the TAG meeting and what was reported in the SBCC field assessment at the end of 2024.

Objective and detailed information on performance awards and accountability is focused on district scorecards which is a strong indicator to track determinants of campaign quality, as opposed to relying on unrealistic expectations of zero refusals or zero missed children. However, more data is needed to demonstrate that robust accountability systems are in place at all levels that do not lead to a working environment of fear and lack of transparency. Whilst there was

some evidence of programme efforts to improve training, management, and motivation of FLWs, it was not clear if this was being fully implemented across the province.

As indicated by the LQAS results in Karachi bloc, the quality of SIAs has been inconsistent, with no significant decline in missed children. In northern Sindh, there is a disconnect between the high LQAS pass rates and the ongoing re-established transmission, pointing to the need to reassure quality of monitoring, LQAS and validation of the results.

Khyber Pakhtunkhwa

KP is facing several critical issues that threaten the progress towards polio eradication, particularly in southern KP, Peshawar bloc comprising of Khyber and Peshawar districts, and Kohat. Peshawar bloc continues to experience endemic transmission, while southern KP and Kohat have re-established transmission.

Southern KP represents the greatest risk to polio eradication in 2025. The programme is unable to fully implement the 3+2 campaign modality, with only 63% of union councils (UCs) following this modality. Additionally, there has been a concerning increase in the number of leftover children in southern KP and other districts, such as Kurram. An estimated 500 000 children are missed across the province in each campaign and in southern KP the number of leftover children increased from 103 976 children in September 2024 to 174 435 children in December 2024, highlighting the scale of the challenge.

In Peshawar bloc and other areas of KP, there has been a decline in LQAS pass rates, especially in Khyber district where LQAS pass rates dropped significantly from 82% in October to only 33% in December campaigns, most likely reflecting the increasing number of missed children due to rising insecurity and access barriers and altered vaccination modalities in security-compromised areas like Bara, Jamrud and Tirah tehsils, further complicating immunization efforts.

Moreover, there are no specific strategies in place for addressing the key reason for missed children, due to operational failure (approximately 81 500 missed children). Kurram district has not had any campaigns since September 2024, depriving 122 000 children of vaccination due to ongoing insecurity in the district. This situation is particularly concerning given that Khyber and Kurram districts border Afghanistan's East and South-east regions, areas also facing significant polio transmission risks.

Balochistan

In Balochistan, Quetta bloc, Zhob division and districts adjoining Sindh and Punjab in Central Pakistan continue to face significant challenges. Quetta bloc remains an area of endemic transmission, while possible re-established transmission is a concern in Zhob Division and in districts neighboring Sindh and Punjab. Despite some recent improvements in the quality of SIAs in Quetta bloc, the overall quality of SIAs in Quetta bloc and the rest of Balochistan has been

suboptimal. This inconsistent, and often inadequate, level of operational quality remains a major hurdle to achieving full immunization coverage in the province.

Additionally, there has been a disproportionately higher focus on addressing the small number of missed children due to refusals, and hidden or unrecorded children, rather than on other critical categories of missed children. Specific approaches are lacking for the largest group of missed children due to operational failure, such as when teams missed a house or a child (approximately 43 000 children in December 2024). This group represents a significant proportion of the missed children in Balochistan and requires targeted strategies to ensure that they are not left behind in immunization campaigns.

Punjab

In Punjab, there is now re-established transmission in the large urban centers of Lahore and the twin cities of Islamabad and Rawalpindi, with Rawalpindi sharing transmission risks with neighboring areas. This ongoing transmission poses a major challenge in controlling the spread of the virus.

As the most populous province, the largest number of NA children after each campaign are reported in Punjab. The province has taken a strong initiative to digitize data on all NA children and has demonstrated effective tracking in each round to ensure that the children do not remain unvaccinated.

In Lahore, there has been a concerning decrease in the quality of SIAs, undermining the effectiveness of immunization campaigns. Whereas in Rawalpindi, there is a disconnect between the LQAS results and the epidemiology. This gap suggests that current immunization strategies may not be adequately addressing the underlying transmission dynamics. These issues highlight the need for targeted interventions to improve SIA quality and realign immunization efforts with the transmission patterns in Punjab.

Central Pakistan

Multiple districts in Central Pakistan[6], which include adjoining districts of eastern Balochistan, northern Sindh and southern Punjab, have reported repeated detections of WPV1 from human and environmental samples of both genetic clusters. Additionally, Kambar district has re-established transmission, with a few other districts having breakthrough transmission. This points to the possibility of widespread immunity gaps and poses the risk of re-established transmission in central Pakistan. The persistent detection of the virus in both human cases and environmental samples underscores the urgent need for targeted interventions to close this immunity gap and prevent further transmission.

Cross Cutting Areas

Programme management

The new leadership has strategically prioritized improvements in coordination, transparency, and performance across all levels of the programme. The NEAP 2024–2025 include principles for establishing the right eradication culture and narrates actions for fostering these principles. But these principles need to be effectively implemented across provinces, districts, UCs and in communities.

The programme has recently adopted anti-harassment guidelines for the polio programme in Pakistan, an important step to create a safe environment for workers in the programme, especially women on the frontlines. There are also ongoing systematic efforts made to listen to female FLWs and hear their recommendations for improving working conditions and their ability to reach more children with oral polio vaccine (OPV).

With a significant field presence for the polio programme, district administrations and partners are managing an increasingly complex set of human resource challenges, such as ensuring accountability, fair and transparent hiring practices, and ensuring the different cadres of frontline workers are matched to the emerging needs of the programme. The programme still must take additional measures to ensure accountability and enhance management and motivation among staff, most critically among the FLWs.

Social Behaviour Change Communications

Review of the SBCC strategy reflects that it recognizes the critical importance of integrating SBCC and operations to maximize programme quality and SIA reach. There is a positive focus on FLWs for training, interpersonal communication, maintaining morale and joint delivery at the doorstep. These efforts focus on capacitating the three most important cadres working at the household levels in communities: the Area-in-Charge (AIC), the vaccinator, and the community mobilizer who collectively form the -golden triangle.

Other key components of the SBCC strategy include utilizing social information for SIA microplanning, continuous inter-campaign community engagement essential for creating and maintaining an enabling environment, and most importantly, a strong focus on missed children and not just refusals. TAG noted that the major allocation of SBCC resources is often directed towards marginal gains in unrecorded missed children and refusal conversion. The programme uses a range of community engagement strategies. However, contribution to SIA quality is not consistently assessed using a standard monitoring framework. The same applies to complementary vaccination activities, health camps and integrated service delivery (ISD).

Cross-border Coordination

There is compelling epidemiological data on the transmission of WPV1 across the northern and southern cross-border corridors necessitating agile cross-border coordination. There is shared transmission of multiple lineages of the YB3A4A cluster circulating in both countries, in addition

to a sporadic detection of the YB3A4B cluster, linked to Pakistan, in western Afghanistan. The SIA schedule and epidemiological data are shared between both countries. However, both programmes need to focus efforts on active coordination, in addition to information sharing, to develop joint local analyses of operational data, identify and tackle the programmatic gaps in coverage and vaccine delivery, particularly in bordering districts.

Essential Programme on Immunization and the Big Catch-Up

A high-level committee on EPI has been established to improve the programme and ensure synergy between EPI and PEI. The committee is chaired by the Prime Minister's Coordinator on Health with representatives from the national and provincial polio teams. There are critical areas with persistently low routine immunization (RI), which remain a major source of vulnerability and fragility for polio eradication in Pakistan. These include the high-risk UCs of Balochistan, central Pakistan, Karachi and southern KP. The same areas have a high incidence of measles and other vaccine-preventable diseases (VPDs). Moreover, the chronic shortages of EPI vaccinators, particularly females, is an enduring challenge. The BCU is an opportunity to reach the unreached children. Data from the first round completed in (Q4 2024) indicates the need for substantial coverage improvements in subsequent rounds (45% Inactivated Polio Vaccine (IPV)1 and 30% IPV2 among 24-59 months of age). The basis of target setting and thus measuring BCU progress was unclear.

2025 SIAs schedule

The current polio epidemiology reflects widespread transmission of WPV1 across Pakistan, despite implementing four SIAs in the past six months, including one national immunization days (NID) and two large scale subnational immunization days (SNIDs). In view of this, the proposed scope of SIAs by the country in the current low transmission season (two NIDs in February and April and one SNID in May with 60% scope) may not be sufficient to reverse the current transmission pattern. There is also a need for a rapid ramp up in the quality of campaigns, access to all children in the insecure areas and synchronization of SIAs with Afghanistan, given shared transmission dynamics.

RECOMMENDATIONS

Given the pattern of intense WPV1 transmission and the challenging operating environment and risks to the national programme, the TAG noted that the next six months (January to June 2025) provide a limited window of opportunity for the programme to get back on track. Therefore, the following national, provincial, and cross-cutting recommendations, programmatic benchmarks and epidemiological milestones are imperative to enhance the quality of SIAs and reverse the current epidemiological trends.

National level

To reverse the epidemiological situation and get the programme on track to eradication, there is an urgent need for sharpening of the 2–4–6 strategy to strengthen programme management and accountability, review the efficiency and cost-effectiveness of the programme, including the workforce, and extraordinary efforts and emergency operational measures to improve the quality of SIAs and improve access to children in security-compromised areas.

Access to all children, especially in KP, is essential to get the programme back on track. Strategies most likely to reduce the number of missed children and benchmarks to assess SIA quality improvements need to be sharpened.

The focus on MMPs and assuring quality in border districts remains critical to address areas where the virus may be sustained.

The programme should develop measurable performance quality benchmarks before the next SIA. The five broad benchmarks recommended to be incorporated by the programme are to:

- Fully synchronize all SIAs across provinces without staggering to ensure reaching all children with full access to vaccination teams.
- Develop innovative approaches to track and vaccinate all still missed children in historic reservoirs. Implement digitalization of data on all still missed children, based on the experience in Punjab, to track and assure vaccination of these children, starting with historic reservoirs and southern KP districts.
- Continue to prioritize FLWs. Processes should be streamlined for their recruitment, training, working conditions and workload. Attention should be given to training quality and measurement of the impact of the training should be linked with the FLW's performance. To strengthen efforts for addressing grievances of FLWs, establish an ombudsperson system at the provincial level, which operates independently with FLWs and reaches out to the district and provincial leadership to ensure that FLWs' issues are heard and acted upon.
- Validate microplans before each campaign and microplans should have a specific section for validation of migrant and mobile populations targets to ensure that children in these communities are consistently vaccinated.
- Validate LQAS and post-campaign monitoring (PCM) data for missed children. The programme should increase the scope of LQAS and PCM passing at or above 90% consistently.
- Systematically identify and track Low Performing Union Councils (LPUCs) and address chronic performance gaps.
- Continue to reduce the rate of missed children through validated reporting.

To reverse WPV1 transmission trends, the TAG recommends the following epidemiological milestones **by June 2025**:

- Interrupting transmission in the northern corridor (Peshawar bloc).
- Interrupting transmission in Punjab/Islamabad (Lahore, Rawalpindi, and Islamabad).
- Interrupting transmission in central Pakistan (eastern Balochistan, northern Sindh and southern Punjab,).
- Decreasing the frequency of ES+ detections and number of persistent active lineages in southern KP and Karachi and Quetta blocs. and
- Preventing the persistence of transmission in any district that newly detects WPV1.

Sindh

Responding to the epidemiological developments since the last TAG, the programme in Sindh should ensure two specific mechanisms: a high-level provincial oversight mechanism to interrupt re-established transmission in Mirpur Khas and Kambar districts by June 2025 for comprehensive implementation of strategy developed based on results of thorough and transparent investigation; and establishing a central Pakistan strategy and operational team (*see central Pakistan recommendation*).

Among the programme strategies, priority should be given to having a substantial breakthrough on campaign quality in terms of its uniformity and consistency through all SIAs in 2025 in Karachi bloc. This requires expansion of the programme's thrust beyond the focus on refusals and unrecorded or hidden children. To do this, the programme should quantify the scale of operational failures and develop specific approaches, if needed. In this regard, further fieldwork and analysis of missed children related data is needed for assessing whether the programme focuses efforts on the areas with most return and ascertain whether additional activities are needed and where else children could be missed. The programme should develop an approach for reducing NA children.

For overall improvement in SIAs quality, the programme should conduct dialogues with field managerial staff (AICs, UC, Tehsil and district level supervisors) to generate insights and ideas, and expand and ensure quality and completeness of the MMP strategy with tailored approaches for each category including migrants from bordering districts, Afghan nationals subject to repatriation, farm labor, brick kilns, etc.

Khyber Pakhtunkhwa

Southern KP: Given the continuing intense circulation of WPV1 in southern KP, every effort needs to be made to regain the 3+2 modality across all seven districts. The new initiative endorsed by the Prime Minister's Office, General Head Quarters and Chief Secretary of Khyber Pakhtunkhwa to implement a community-led low signature strategy in inaccessible UCs should be accelerated**,** independently monitored, and continually assessed. If these efforts do not result in access and coverage needed for eradication by mid-year, the solution lies with Pakistan and may entail involvement of neutral intermediaries and augmented security and military support, keeping in view the best practices worldwide for such intricately challenging places. The non-SIAs strategies should be deployed as supplemental approaches. These should include EPI strengthening as a

top priority, in addition to properly designed and well-delivered health camps and ISD in security-compromised areas to foster community acceptance and prevent paralytic polio.

Peshawar bloc and rest of Khyber Pakhtunkhwa: The programme should set a target of interrupting transmission in Peshawar and Khyber by June 2025. District Peshawar team should develop a focused agenda on failing UCs informed by listening exercises with AICs, FLWs and community mobilizers. Access in Khyber needs to be provided across the district to ensure 3+2 campaign modality. Similarly, full access to the programme should be urgently restored in Kurram district and the programme should have plans ready to immediately commence immunization activities once access is granted. There should be a thorough and transparent investigation of re-established transmission in Kohat district, and a specific provincial oversight mechanism should be instituted to interrupt transmission in Kohat by the end of June 2025.

Balochistan

There should be urgent measures to rapidly ramp up the SIA quality to achieve LQAS pass rates above 90% in both Quetta bloc and the rest of Balochistan, given the massive immunity gap reflected by the widespread circulation in the sparsely populated province. The provincial leadership should ensure that all new programme initiatives are designed to be easily measurable, showing impact on programme progress. In Quetta bloc, the need to ensure continuous SBC capability cannot be overemphasized for sustained community engagement and build trust in a challenging context. The province should have a high-level provincial oversight mechanism to interrupt re-established transmission in Dukki, Kila Saifullah and Zhob districts by June 2025. This should be based on the comprehensive implementation of a strategy developed following a thorough and transparent investigation. Balochistan programme should actively participate in the proposed central Pakistan mechanisms of coordination and joint activities with other provinces.

Punjab

A provincial oversight mechanism should have an emergency strategy for SIA quality improvement in Lahore following a thorough and transparent investigation to understand issues therein and have an informed plan. This should aim at improving the LQAS pass rate to reach above 90% in Lahore and eliminating any persistent LPUCs by addressing performance gaps across the three upcoming consecutive SIAs.

A joint programme review involving Islamabad and Rawalpindi should be conducted on a priority basis to identify and map areas with shared transmission and moving populations between the two cities. A deep dive of surveillance data should be carried out to understand the causes of low notification of AFP cases within seven days in Lahore and Rawalpindi, and corrective action plans should be developed accordingly. Surveillance improvement plans should include engagement of all private sector healthcare providers. Punjab province should join the joint effort to set up a central Pakistan approach.

Central Pakistan

Given the worsening epidemiological profile in central Pakistan's districts (re-established transmission in Kambar and reporting of frequent inter-related viruses in other districts and polio cases), recommendations from the previous TAG meeting held in May 2024 remain the same, but with more urgency. The previous recommendation is reproduced: The NEOC should designate a team to assist the PEOC coordinators in timely coordination of surveillance, risk assessments and SIAs activities across the three provinces. It is important to continue the Surge Team Outreach Plus approach and Nomad immunization across the districts of Central Pakistan.

Cross Cutting Areas

Programme Management

The programme in Pakistan should drive to zero polio, and for this, the NEOC and PEOCs must accelerate efforts to continue to create a *One Team* culture across different levels of the programme, strengthen staff morale and FLW motivation, and promote inclusive decision-making. All of these should happen simultaneously. There are three key recommendations in this regard:

- Rapid independent assessments should be carried out for management practices and culture, team cohesion, decision-making, performance management and staff morale in all PEOCs and District Emergency Operations Centers (DEOCs) of priority districts.
- Thorough surveys should be conducted to measure and track the principles for fostering eradication culture in the NEAP 2024–2025.
- Semi-annual polio team *One Team* surveys should be instituted to measure key principles' culture set out in the NEAP 2024–2025.

All activities identified by the Gender Working Group should be supported for full implementation to motivate female frontline workers as part of ongoing listening exercises and feedback from the field. The TAG reiterates that an overall review of the human resource needs of the programme in priority areas is critical to ensure that the various cadres of frontline workers are positioned to drive the programme forward in getting to zero polio.

Social Behaviour Change Communications

The integrated action plan for SBCC and operations activities should be further developed and strengthened for joint micro-planning before each SIA, joint development and delivery of FLWs' training, and training impact assessment.

There should be a robust surveillance and intelligence gathering mechanism for continuously listening to and gathering information from FLWs and communities to understand their concerns, develop timely response measures and gather valuable information on how to improve vaccination at the doorstep.

The SBCC profiling data should be optimized to support reduction in major groups of missed children (NA/still NA and no team/team missed children). SBCC activities should be evaluated for their impact on SIA quality (community perceptions/SIA acceptance) in key hot spots.

The programme should also design methods and mechanisms for assessing the effect of inter-campaign activities. There should be standardized health camp and ISD activities, meeting at least

a minimum standard of quality, and regular iterative assessment of impact on community attitudes and OPV, SIA uptake and coverage.

Cross Border Coordination

The TAG recommendations from May 2024 remain valid and merit even more urgent consideration given the expanded WPV1 transmission, especially across the southern corridor. There is early, but fragile, progress in the northern corridor. There is an increasing need to assure quality of programme in districts on both sides of the border, given the evolving environment posing challenges to cross-border coordination. Therefore, the national and provincial authorities should create an enabling environment for diligent review and focus on bordering districts coupled with regular local level exchange of information and meetings on agreed thematic areas, including SBCC. The national leadership on both sides should maintain close engagement and ensure the agreed plans and frameworks are implemented synchronously, given that successful polio eradication in both countries is interdependent.

Essential Programme on Immunization and the Big Catch-Up

EPI and PEI should agree on goals, scope, and benchmarks for RI improvements in 2025 and ensure coordination, joint planning, and implementation. The National Immunization Strategic Plan (NISP), currently under development, should include PEI-EPI Synergy with clear goals and accountabilities. Emergency measures to improve RI in key poliovirus transmission areas should be a core part of the PEI and EPI programmes in 2025. Immediate priority should be given to high-risk UCs of Balochistan, central Pakistan, Karachi bloc and southern KP. Lessons learned in the first round of the BCU should be used for improvement in all components of BCU in subsequent rounds. Before the next rounds, there should be a careful review of the target setting and its validation, especially considering the risk of over-estimation of coverage in WHO and UNICEF Estimates of the National Immunization Coverage (WUENIC).

Opportunities to rapidly improve IPV coverage through EPI should be maximized. EPI and PEI should aim to achieve IPV1 and IPV2 coverage rates of at least 90% and 70%, respectively, through improved implementation of the BCU rounds. All components of Polio program (EOCs, human resources, microplans, monitoring tools, administrative support, and political commitment) should be fully engaged to boost the quality of BCU activities. The interval should be carefully planned through systematic engagement of PEI and EPI assets.

The co-administration of OPV in the upcoming nationwide measles vaccination campaign should be planned and implemented jointly.

Pakistan's immunization programme should introduce Hexavalent in EPI after the approval of the National Immunization Technical Advisory Group (NITAG) based on discussions on programmatic implications and cost impacts on the country. Hexavalent vaccine introduction may be started in priority areas in case of budget constraints.

2025 SIAs Schedule

The TAG endorses the schedule of OPV SIAs as proposed until June 2025, with a few caveats. The TAG recommends expanding the scope of the May round to an NID. Expanding the scope of the SIA should not divert attention from achieving quality benchmarks in priority areas. The SIAs should also be synchronized with Afghanistan. Pakistan should implement NIDs in February, April, and May 2025.

Lastly, the programme should be reviewed in June 2025 to assess the trajectory of progress and need for urgent course correction.

CONCLUSIONS

There is re-establishment of endemic transmission in the three historic core reservoirs (Karachi, Peshawar, and Quetta blocs). There is also persistent transmission in central Pakistan, southern KP and other districts.

The 2–4–6 strategy is comprehensive and based on lessons learned and best practices. However, there is no results chain logical framework or established benchmarks to measure the trajectory of progress towards interruption transmission.

National and provincial presentations reflected the implementation of many important interventions, innovations, and assessments under the 2–4–6 strategy to control polio outbreaks and interrupt circulation. However, the 2–4 phases are not yet complete, and the interventions have not led to evident improvements in quality of recent SIAs yet.

The programme has important opportunities to make strong progress in 2025. Despite imperative challenges, the programme must capitalize on the commitment of the political and administrative leadership, law enforcement agencies and the PM's regular stock takes to generate momentum for building a national public mobilization for the last push to eradicate polio. Improved management, coordination, morale and motivation, targeted improvements in EPI and BCU, and full support of the GPEI will be critical adjuvants for reaching the goal of zero polio.

The programme has a narrowing window to demonstrate credible progress and interrupt transmission as this is vital for restoring national and international confidence and sustaining international financing and political support.

ANNEXURES

Annex 1 - Questions to the TAG

National level

1. **On SIA Calendar**

Question: Pakistan proposes to conduct three SIAs in the first half of 2025. Considering the dates for the month of Ramadan and official holidays, the proposition is to conduct an NID from 3-9 February, an NID from 14-20 April, followed by an SNID from 19-25 May, with the scope to be determined closer to date based on evolving epidemiology. Pakistan also proposes to conduct two *f*IPV rounds; in selected UCs (n=75) of Karachi from 20-27 February targeting approximately 900,00 children, followed by a round in selected UCs (n=111) of Quetta bloc from 10-17 March targeting approximately 600,000 children. Does this calendar of SIAs cover the current risk?

Response: Considering the widespread transmission of WPV1 across Pakistan, the TAG recommends the programme to implement three consecutive NIDs in the first half of 2025, on the same proposed dates in February, April and May. The TAG then recommends reassessing the epidemiological situation in June, while tentatively planning for three SNIDs in the second half of the year.

It would be imperative for the programme to improve SIA operations in the context of 2–4–6 strategy and ensure synchronization across the country and with Afghanistan. The implementation modality in southern KP needs to be addressed in close coordination with law enforcement agencies as was recommended in the last TAG meeting.

Regarding *f*IPV campaigns in Karachi and Quetta bloc, the TAG recommends the programme to conduct them as planned, in addition to implementing a second round of *f*IPV in Karachi within six months of the first round.

2. **On Choice of Antigen**

Question: Several WPV1 cases in 2024 showed evidence of receiving OPV vaccine, yet they were infected by poliovirus, and their serology did not reflect full immunity. How should the programme respond to this? Does the TAG see any superior effect of mOPV1 compared to *b*OPV or consider the role of expanding the use of IPV/fIPV as a potential solution? Is there any potential benefit in using a mix of antigens (*b*OPV, mOPV1, IPV) to enhance immunity?

Response: It is not unusual to observe poliovirus infections in children who have received multiple doses of OPV, given the current stage of the programme. Several factors could contribute to a lack of seroconversion, such as malnutrition, inadequate sanitation, improper vaccine administration or challenges related to maintaining the cold chain. Additionally, waning immunity from previous doses could also play a role. Therefore, sustaining high levels of OPV coverage always is critical, especially in high-risk geographies and among vulnerable populations.

The programme may consider the use of IPV/*f*IPV for priority populations, such as mobile and migrant populations, children in WPV1 transmission areas with persistently low RI coverage and high number of zero-dose children, bordering districts, and to a lesser extent, districts with prolonged WPV1 transmission. However, the quality and timing of IPV/*f*IPV campaigns are critical. The programme must ensure that children missed by both routine immunization and polio SIAs are reached and not missed again, and that these activities do not compromise the quality of OPV SIAs.
At this stage, the TAG does not recommend the use of mOPV1. Additionally, there are significant supply and demand considerations in substituting *b*OPV with mOPV1 or scaling up IPV/*f*IPV campaigns.

3. **On Older Age Group Vaccination:**

Question: Of 65 WPV1 cases in 2024, 10 (15%) are over the age of five years. Does TAG recommend enhancement of target age for specific pockets or population groups during the door-to-door vaccination? Any advice on shifting age for specific populations?

Response: The TAG recognizes that children over the age of five years are contributing to the transmission of poliovirus. However, the primary drivers of transmission remain children under five years of age. Therefore, the programme should continue to focus on and enhance the quality of SIAs targeting children under five-years-old. Ensuring high immunity levels within this cohort remains the most critical intervention to reverse the current epidemiologic trend.

4. **On Community Fatigue:**

Question: What specific SBCC approaches, or messaging can help convince a parent, who believes their child is fully protected with four routine OPV doses and two IPV doses, that additional vaccination is still necessary to protect both their child and the community, and does not constitute any public health threat to the community, particularly in the context of community fatigue?

Response: There are two fronts for addressing vaccine refusal from a parent who believes their child is fully protected: one at the community/household level and the other through routine vaccine providers.

At the community/household level, it is crucial to emphasize that despite a child receiving four routine OPV doses and two IPV doses, additional OPV doses are still necessary to ensure full immunity. This is especially important in areas with ongoing transmission or low immunity. The programme should stress the importance of protecting not just individual children, but entire communities at large. Additionally, explaining the difference between polio and smallpox vaccines can help clarify that there is no limit to how many doses against poliovirus a child can safely receive, further reassuring parents of the need for continued vaccination. The messaging should address community fatigue by focusing on the shared goal of protecting future

generations and finally eradicating polio, ensuring no child is left behind, can help families understand the need for ongoing participation in SIAs.

Moreover, while trusted community influencers—such as religious leaders and elders—are already engaged, it is important to provide them with targeted messages based on community concerns identified through social listening or other feedback mechanisms. Influencers should be briefed on the necessity of additional OPV doses for every child under five years, even if they have received routine vaccinations, in the content of widespread WPV1 detection across the country and the eventual goal of eradication. This will help influencers address doubts and misconceptions effectively.

At the routine vaccine provider level, the EPI programme can reinforce the message by ensuring healthcare workers communicate the need for every child under five years to receive OPV doses during every door-to-door vaccination campaign. Providers can highlight that while routine immunization is crucial, SIAs provide an extra layer of protection to keep children fully immune and prevent any gaps in immunity due to challenges like malnutrition or delayed vaccinations.

5. **On Incentives for FLWs:**

Question: Given the limited options for providing additional financial incentives, what SBCC strategies can the programme implement to ensure that FLWs remain motivated to correctly vaccinate children and report gaps for timely action? How can SBCC help enhance FLW motivation and foster a sense of ownership in the programme?

Response: To keep frontline workers motivated, it is important to address their concerns and show that their feedback is valued. Here are some key SBCC strategies to support this:

- **Address grievances effectively:** Establish an ombudsperson system at the provincial level or create local FLW representatives who can liaise with district and provincial leadership to ensure that FLWs' issues are heard and acted upon.
- **Improve working conditions:** Ensure training venues are fully equipped, with basic facilities like washrooms, and that FLWs have the resources they need to perform their tasks effectively.
- **Ensure fair hiring processes:** Provide transparency and fairness in the recruitment and selection of FLWs to ensure they feel valued and fairly treated.
- **Timely payments:** Ensure that FLWs are paid on time to reduce frustration and maintain morale.
- **Enhance supportive supervision:** Improve the quality of supportive supervision, ensuring it is constructive, regular, and focused on building FLWs' capacity and commitment to the programme.

These actions, alongside clear and consistent messaging that FLWs are crucial to the programme’s success, can help increase motivation and foster a stronger sense of ownership.

6. **On Hexavalent Use:**

Question: Given the ongoing efforts to strengthen immunization coverage in Pakistan, particularly considering the underutilization of IPV during routine immunization sessions due to the challenge of multiple injections, could TAG provide advice on the importance of prioritizing the introduction of the hexavalent vaccine?

Response: TAG recommends that the National Immunization Technical Advisory Group (NITAG) for Pakistan considers discussing the potential switch from Penta+IPV to Hexavalent vaccine at an upcoming NITAG meeting. This discussion should assess the programmatic and economic implications of such a switch, including any cost impacts on the country. Additionally, it could be beneficial to consult with the NITAG chair, who is also a TAG member, to gain further insight and guidance on this issue.

In case of budget constraints, the TAG recommends that the EPI programme should introduce the Hexavalent in priority areas.

Khyber Pakhtunkhwa

7. **On Coverage in southern KP:**

Question: Given the prevailing situation in southern KP, what level of access and coverage is required to effectively eradicate poliovirus in this area?

Response: Consistently high levels of coverage, more than 95%, should be achieved to reliably achieve and sustain interruption of transmission. Achieving high vaccination coverage through access to all children in southern KP is critical to stopping transmission and preventing any reintroduction and persistence of the virus and eradicating it.

8. **On alternative approaches in underserved populations in southern KP:**

Question: Given the challenges of consistent access in pockets of southern KP, what alternative approaches can be implemented to achieve quick immunity gains in historically resistant and underserved populations?

Response: While there is not a single and quick solution, TAG emphasizes the importance of the following interventions for quick immunity gains in areas of southern KP where access continues to be an issue for the programme:

- **Ongoing community engagement:** Continuously engage with and maintain respectful dialogue with community leaders to build trust and foster cooperation.
- **Operational improvements:** Ensure maximum reach of vaccination among communities that accept vaccination activities. The large numbers of missed children due to operational failures must be addressed. This includes hiring suitable FLWs, equipping them with interpersonal

communication skills, updating and validating microplans, and providing supportive supervision.

- **Targeted ISD strategies:** Optimize the quality of ISD strategies tailored to the specific needs of inaccessible populations.
- **Improved EPI service delivery:** Enhance routine immunization services to increase accessibility and coverage and deliver tailored messages to enhance vaccine acceptance among inaccessible populations.

9. **On conducting epidemiological investigations in security-compromised areas:**

Question: How can the programme conduct epidemiological studies or investigations in security-compromised areas where traditional methods are not possible?

Response: In security-compromised areas in southern KP, or elsewhere, the following approaches can be used to conduct epidemiological studies or investigations:

- **AFP case management:** Bring WPV1, AFP, or hot cases from security-compromised areas to safer locations for validation by senior surveillance officers.
- **Use of technology:** Leverage technology such as telephone interviews to gather data remotely.
- **Sensitive surveillance:** Ensure very sensitive surveillance zones around security-compromised areas to maximize early detection of cases.
- **Community-based surveillance:** Strengthen community-based surveillance by training community informants to supplement traditional epidemiological investigations.
- **Partner collaboration:** Identify and collaborate with new partners while educating and sensitizing security personnel and other key stakeholders in these areas.

These measures can help overcome the barriers posed by security concerns and ensure effective and timely collection of important epidemiological information for WPV1, AFP and hot cases.

10. **On prioritization of polio eradication amidst challenging circumstances in southern KP:**

Question: In southern KP, where security challenges are significant, there is often a comparison between the sacrifices made by security personnel (which affect entire families) versus saving [few] children from disability. How can the programme address this challenge through SBCC?

Response: To address this challenge, the programme should emphasize the interconnectedness of health and security in safeguarding the future of communities. Tailored messaging should highlight that poliovirus, likewise, affects children and their entire families. By vaccinating every child, we prevent lifelong disability and reduce the burden on families, communities, and security forces, leading to positive long-term socio-economic outcomes. Engaging trusted community leaders to foster understanding and empathy is crucial for building a collaborative approach. Additionally, recognizing the sacrifices made by security personnel and illustrating how

vaccination contributes to long-term community stability can help shift the narrative toward a collective effort for the well-being of all.

Polio eradication and other health and civic services are not the cause of the unfortunate incidents. These services are being delivered in a challenging context in which security personnel are being attacked by militants leading to tragic of loss of lives. Polio and other health services should be delivered in ways that meet urgent community needs and build stronger linkages with the affected communities.

11. **On IPV campaign in Peshawar:**
Question: Given the large population (new birth cohorts) and the significant daily population influx in Peshawar, should IPV campaigns be included in the SIAs schedule?

Response: Peshawar has relatively better RI coverage, and in collaboration with EPI, any existing gaps should be addressed. Nonetheless, if there are specific vulnerable populations, such as mobile and migrant populations or those in high-risk zones or union councils, the programme may consider incorporating IPV/*f*IPV campaigns. It is essential that the quality and timing of these campaigns be carefully managed. The programme must ensure that IPV/fIPV campaigns are well coordinated to avoid disrupting scheduled OPV SIAs, and that children missed by both routine immunization and polio SIAs are reached and not missed again.

Balochistan

12. **On frequency of SIAs in various risk zones in Balochistan:**
Question: Can the TAG provide guidance on the recommended frequency of SIAs in outbreak versus low-risk districts in Balochistan?

Response: In line with the advice provided at the national level, Balochistan must ensure high-quality SIAs in February, April and May 2025 across the province. After the reassessment in June, and depending on any changes in the epidemiological situation, further recommendations regarding the frequency of SIAs based on risk can be made.

13. **On concern in border areas in Quetta bloc and Balochistan:**
Question: Given the concerns regarding campaign modality in Afghanistan, particularly in the South region, what advice does the TAG have for the Balochistan team?

Response: There is an increasing need to ensure the quality of the programme in bordering districts require a diligent review and focus. In Balochistan, urgent measures should be taken to improve the quality of SIAs to achieve more than 90% LQAS pass rates across the province, irrespective of the situation across the border. And in Quetta bloc, maintaining strong SBCC capabilities is essential to sustain community engagement and build trust, especially in the present challenging context.

Moreover, TAG emphasizes the urgency of implementing its previous recommendations from May 2024 on cross-border coordination. The programme in Balochistan must maintain close engagement with their counterparts and cross-border focal points in the South region of Afghanistan, ensuring that agreed plans and frameworks are implemented timely and effectively, with ongoing local-level exchanges of information.

14. **On discontinuing CBV in Quetta bloc:**
Question: The discontinuation of CBV at this crucial point may risk eradication efforts. Does the TAG advise on the discontinuation of CBV Strategy in Quetta bloc at this stage?

Response: The programme in Balochistan is implementing a wide range of new initiatives based on the 2–4–6 strategy. However, operational challenges are increasingly contributing to missed children in Quetta bloc and the rest of Balochistan, and therefore, driving the current epidemiological situation in the province.

The TAG encourages the team in Balochistan to unify their human resource structures and approaches with the rest of provinces, in keeping with the spirit of the 2–4–6 strategy implementation. The TAG has recommended that the NEOC conducts a comprehensive review of the human resource needs in priority areas to ensure that the various cadres of frontline workers are effectively positioned to drive the programme toward zero polio. Strong programme management, coordination and a motivated workforce remain the top priority at this critical phase of the programme.

Sindh

15. **On hardcore refusals in Karachi:**
Question: What new approaches can be implemented to address the issue of hardcore refusals in Karachi?
Response: The TAG has noted that a range of community engagement strategies are being implemented across the country, but the contribution of these strategies to SIA quality has not been consistently assessed using a standardized monitoring framework and are unclear. Moreover, there is a need to focus on overall missed children in SIAs, rather than only refusals, because a significant portion of SBCC resources is being allocated to marginal gains in unrecorded missed children and refusal conversions, which are not leading to the desired outcomes yet.

To address the issue of hardcore refusals in Karachi, the TAG recommends:

- Better understanding of the underlying reasons for hard refusals in areas where they are clustered.
- Deeper influencers' mapping in such areas.
- Finding a separate category of more senior staff to engage with these communities instead of putting pressure on the FLW to convert the refusals.

16. **On revitalizing central Pakistan strategy:**

Question: How can the central Pakistan strategy be revitalized considering the current epidemiological situation and SIA data?

Response: In May 2024, the TAG recommended that "the NEOC should designate a team to assist the PEOC Coordinators in the timely coordination of surveillance, risk assessments, and SIA activities across the three provinces". This recommendation remains valid and should be implemented with urgency. A comprehensive strategy and an operational plan should be developed for central Pakistan to better coordinate responses. This should include the expansion of successful initiatives, such as Surge Team Outreach Plus and Nomad Vaccination Initiative in Punjab, across central Pakistan to improve overall programme impact.

Annex 2 - 2025 TAG Meeting Agenda

Day One Tuesday, 21 January 2025	
Time	**Session**
8:45-9:15	**Welcome and Registration**
9:15-10:00	**Recitation of Holy Quran** **Introduction of Participants** **Opening Remarks** Chair of the Technical Advisory Group Coordinator to the Prime Minister on Health, MoNHSRC WHO Representative Pakistan UNICEF Representative Regional **Director** WHO EMRO Prime Minister's Focal Person for Polio Eradication **Meeting Objectives** **Group Photo**
10:15 – 11:15	**Regional Review of WPV Epidemiology in Afghanistan and Pakistan** *Presentation 30 minutes, Discussion 30 minutes*
11:15 – 12:15	**Review of Pakistan Polio Eradication Program** ○ **Follow up on previous TAG recommendations.** ○ **Surveillance** ○ **Quality of SIAs** ○ **Migrant and mobile populations** ○ **Districts that border Afghanistan** ○ **Characterization of missed children** *Presentation 30 minutes, Discussion 30 minutes*
12:15 – 13:15	**Review of Polio Programme in Balochistan** *20 minutes Presentation, Discussion 40 minutes*
14:15 – 15:15	**Review of Polio Programme in Sindh** *Presentation 20 minutes, Discussion 40 minutes*
15:30 – 17:00	**Review of Polio Programme in Khyber Pakhtunkhwa** *Presentation 30 minutes, Discussion 60 minutes*
Day Two 22 January 2025	
09:00 – 10:00	**Review of Polio Programme in Punjab** *Presentation 20 minutes, Discussion 40 minutes*
10:00-11:00	**Update on SBCC Interventions to Address Missed Children in Pakistan** *Presentation 20 minutes, Discussion 40 minutes*
11:30-12:00	**Cross-Border Coordination: Pakistan Perspective**
12:00-13:00	**Big Catch-Up and PEI-EPI Synergy**
Day Three 23 January 2025	
17:00-17:50	**Recommendations of the Technical Advisory Group**

17:50-18:10	Comments by Chief Secretary Punjab, Sindh, Khyber Pakhtunkhwa, Balochistan
18:40-19:30	**Closing Remarks** Partners: CDC, GF, UNICEF, Rotary International, GAVI, Donor Representative, Chair of the Strategic Committee Regional Director WHO EMRO Prime Minister's Focal Person for Polio Eradication Coordinator to the Prime Minister on Health, MNHSRC Chair of the Technical Advisory Group ***Vote of Thanks***

Annex 3 - List of Participants

Technical Advisory Group

Dr Jean-Marc Olivé, Chair
Dr Chris Wolff, Member
Dr Sebastian Taylor, Member
Dr Fatima Mir, Member
Dr Sussan Mahmoudi, Member
Dr Mohammad-Mehdi Gouya, Member
Dr Muhammad Khalid Shafi, Member

Pakistan

Ministry of National Health Services on Regulations & Coordination

Dr Malik Mukhtar Ahmad Bharath, Coordinator to Prime Minister – MoNHSRC, Pakistan
Senator Ms Ayesha Raza Farooq, Prime Minister's Focal Person for Polio Eradication - NEOC, Pakistan
Mr Nadeem Mahbub, Secretary - MoNHSRC, Pakistan
Dr Zafar Iqbal Channa, Director Technical - FDI, Pakistan
Dr Shabana Saleem, Director General Health - FDI, Pakistan
Dr Huma Nayab, FDI, Pakistan
Dr Kifayat Ullah, FDI, Pakistan

General Head Quarters (GHQ)

Brig. Dr Aqeel Ahmed, Director Research & Support - GHQ, Pakistan
Brig. (R). Nasar Hayat, Principal Liaison Officer - GHQ, Pakistan
Brig. (R). Bashir Ahmed, Technical Focal Person - GHQ, Pakistan

National Emergency Operations Center (NEOC)

Mr. Muhammad Anwar Ul Haq, National Coordinator, NEOC, Pakistan
Dr Muhammed Ahmed Soghaier, Polio Team Lead – WHO, NEOC, Pakistan
Ms. Melissa Grace Corkum, National Polio Team Lead – UNICEF, NEOC, Pakistan
Ms. Yodit Sahlemariam, Deputy Polio Team Leader – UNICEF, NEOC, Pakistan
Dr Rana Muhammad Safdar, Senior Advisor – CDC, NEOC, Pakistan
Dr Altaf Hussain Bosan, National Technical Focal Point – GF, NEOC, Pakistan
Mr. Aziz Memon, Rotary Foundation Trustee / National Chair - NEOC, Pakistan
Brig. Abul Hassan, National Security Advisor - NEOC, Pakistan
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Dr Mumtaz Ali Laghari, Deputy NSTOP Coordinator - NEOC, Pakistan
Mr Fawad Alam, Senior Data Analyst – CDC, NEOC, Pakistan
Dr Nadeem Shah, Control Room Team Lead / National Cross-Border Focal Point - NEOC, Pakistan
Ms. Julianne Birungi, Senior Social Behaviour Change and Communication Manager - NEOC, Pakistan

Dr Nada Taqi, Technical Officer – WHO, NEOC, Pakistan
Mr. Asif Javed Khan, Technical Officer HRMP / IHR – WHO, NEOC, Pakistan
Mr. Hasnat Malik, Operations Officer - NEOC, Pakistan

Provincial Emergency Operations Center (PEOC) – Khyber Pakhtunkhwa

Mr. Abdul Basit, EOC Coordinator - PEOC Khyber Pakhtunkhwa
Mr. Muhammad Zeeshan Khan, Deputy EOC Coordinator, PEOC Khyber Pakhtunkhwa
Mr. Eid Nawaz, Deputy Coordinator South KP - PEOC Khyber Pakhtunkhwa
Dr Sarfraz Khan Afridi, Provincial Polio Team Lead WHO, PEOC Khyber Pakhtunkhwa
Dr Imtiaz Ali Shah, Provincial TFP - PEOC Khyber Pakhtunkhwa
Mr. Inuwa Barau Yau, Provincial Polio Team Lead UNICEF - PEOC Khyber Pakhtunkhwa
Dr Hafizullah Khan, Provincial NSTOP Team Lead, PEOC Khyber Pakhtunkhwa

Provincial Emergency Operations Center (PEOC) – Balochistan

Mr. Inam ul Haq, EOC Coordinator - PEOC Balochistan
Dr Najeeb Ullah Khan, Provincial TFP - PEOC Balochistan
Dr Jahanzaib Khan, Provincial Polio Team Lead WHO - PEOC Balochistan
Mr. Shahpur Suleman, Provincial Polio Team Lead UNICEF - PEOC Balochistan
Dr Aftab Kakar, Provincial NSTOP Team Lead - PEOC Balochistan
Dr Abdul Aziz, Senior Field Support Officer CDC - PEOC Balochistan

Provincial Emergency Operations Center (PEOC) – Punjab

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Ms. Fatima Faraz, Provincial Polio Team Lead UNICEF - PEOC Punjab
Ms. Rashida Bano, Provincial TFP - PEOC Punjab

Provincial Emergency Operations Center (PEOC) – Sindh

Mr. Irshad Ali Sodhar, EOC Coordinator - PEOC Sindh
Dr Ahmad Ali Shaikh, Provincial TFP - PEOC Sindh
Dr Asif Ali Zardari, Provincial Polio Team Lead WHO - PEOC Sindh
Dr Azeem Rahai, OIC Team Lead UNICEF - PEOC Sindh
Dr Shumaila Rasool, Provincial NSTOP Team Lead - PEOC Sindh

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Dr Farooq Ahmed Noor, DG Health – AJK
Dr Syed Sadiq Shah, Manager EPI - Gilgit Baltistan
Dr Mehreen Baloch, ADC - Islamabad

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Dr Raul Bonifacio, Senior Technical Officer – WHO Pakistan
Mr. Jahangir Ahmed Khan, IT Specialist – WHO Pakistan
Ms. Salma Tahira, Admin Assistant – WHO Pakistan
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UNICEF Pakistan Country Office

Mr. Abdullah Fadil, UNICEF Representative - Pakistan

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Dr Mandeep Rathee, National Polio Team Leader WHO – Afghanistan
Dr Shamsher Ali Khan, National Polio Team Leader UNICEF – Afghanistan
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Dr Hamidreza Setayesh, Senior Program Officer Afghanistan - GF
Dr Khushhal Zaman Khan, Deputy Team Leader WHO – Afghanistan
Ms. Naureen Naqvi, SBC Manager UNICEF – Afghanistan
Dr Sajjad Rasool, WHO Medical Officer South Region – Afghanistan
Dr Adnan Akbar Khan, WHO Medical Officer Southeast Region - Afghanistan

GPEI Partnership

Strategy Committee (SC)

Mr. Steven Lauwerier, Director, Polio Eradication UNICEF HQ
Dr Arshad Quddus, Coordinator WHO HQ
Dr Jay Wegner, Director Polio GF
Ms. Suchita Guntakatta, Deputy Director Polio GF
Dr Carol Pandak, Rotary PolioPlus Director
Mr. Mike McGovern, Rotary IPPC Chair
Ms. Omotayo Bolu, Chief Polio Eradication Branch CDC
Mr. Stephen Sosler, Head of Vaccine Programmes GAVI
Ms. Kathleen Clark, Senior Programme Manager of Polio Vaccine Programmes GAVI
Ms. Gillian Harris, Donor Representative
Dr Andrew Kennedy, Unit Head GPEI Executive Management WHO HQ
Ms. Jennifer Gatto, Programme Officer Polio UNICEF HQ

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Dr David Salisbury, Chair - Global Certification Commission

Regional Certification Commission

Dr Yagob Al-Mazrou, Chair - Regional Certification Commission

World Health Organization (WHO)

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Mr. Michael Reza Farzi, Executive Officer - WHO HQ
Dr Hamid Jafari, Director Polio - WHO EMR
Dr Fazal Ather, Team leader - WHO EMR
Dr Hemant Shukla, Coordinator - WHO EMR
Dr Salmaan Sharif, Scientist - WHO EMR
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Mr. Michael Galaway, Deputy Director Polio - GF
Dr Jeff Partridge, Senior Program Officer Pakistan - GF

USAID

Dr Ellyn Ogden, Polio Lead - USAID
Ms. Judy Chang, Director Health - USAID


MEETING OF THE TECHNICAL ADVISORY GROUP
POLIO
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every last child
MEETING OF THE TECHNICAL ADVISORY GROUP
ON POLIO ERADICATION IN PAKISTAN
POLIO

TAG is the principal advisory group for polio eradication for both Afghanistan and Pakistan. TAG is an independent body charged with advising and making recommendations to the Polio Eradication Programme in Pakistan, and Global Polio Eradication Initiative (GPEI) partners on polio eradication programme policies, strategies and operations. It is convened by the Regional Director WHO/EMR on behalf of EMR Member States and the GPEI partnership.


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