

# Meeting of the Technical Advisory Group on Polio Eradication in Pakistan

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Islamabad, Pakistan  
30 November – 1 December 2017

# Acronyms

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AFP	Acute Flaccid Paralysis
bOPV	Bivalent Oral Polio Vaccine
CBV	Community-Based Vaccination
CDC	Centers for Disease Control and Prevention
cVDPV2	Circulating Vaccine Derived Polio Virus Type 2
DPCR	District Polio Control Room
ES	Environmental Sample
EOC	Emergency Operating Centers
EV	Enterovirus
FATA	Federally Administered Tribal Areas
FCVs	Female Community Vaccinators
GB	Gilgit Baltistan
GPEI	Global Polio Eradication Initiative
HRMP	High-Risk Mobile Populations
IPV	Inactivated Poliovirus Vaccine
KP	Khyber Pakhtunkhwa
LEAs	Law Enforcing Agents
LPUCs	Low Performing Union Councils
LQAS	Lot Quality Assurance Sampling
mOPV	Monovalent Oral Polio Vaccine
NEOC	National Emergency Operation Center
NID	National Immunization Day
NGO	Non-Governmental Organization
NPAFP	Non-Polio Acute Flaccid Paralysis
PCM	Post Campaign Monitoring
PC1	Planning Commission 1
PEOC	Provincial Emergency Operation Center
RI	Routine Immunization
RSP	Religious Support Persons
SIA	Supplementary Immunization Activity
SOP	Standard Operating Procedure
TAG	Technical Advisory Group
UNICEF	United Nations Children's Fund
VDPV	Vaccine Derived Polio Virus
WHO	World Health Organization
WPV	Wild Polio Virus

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TAG commends the exceptional levels of commitment, creativity and resilience displayed by the [Afghanistan/Pakistan] Programme, often under extremely challenging conditions, and encourages all programme leaders and partners to recognise the unique opportunity in the present circumstances, as we enter the final phase of eradication. TAG believes that, given insight from other countries that have interrupted transmission, the Programme is in a very strong position to make the necessary final assault against the virus but notes that what is now needed is to hold steady, focusing on maximising the quality of core, basic eradication activities, avoiding either complacency or panic in strategy, management and decision-making.

## Executive Summary

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The Technical Advisory Group (TAG) on Polio Eradication in Pakistan met for the second time in 2017, in Islamabad from 30 November - 1 December. Significant progress has been made towards the interruption of poliovirus transmission in the country with only 5 Wild Polio Virus (WPV) Type 1 cases reported in 2017 – a historic low<sup>1</sup>. This has been made possible with the highest level of Government commitment, led by the Prime Minister, and implementation of all activities with a one-team, one-family approach.

However, transmission persists in Karachi and across the trans-boundary northern and southern corridors of Pakistan and Afghanistan. The northern corridor extends from Nangarhar to the Twin Cities (Islamabad and Rawalpindi) and the southern corridor reaches from Kandahar to Quetta Block. Continued transmission in these core reservoirs remains the obstacle to achieving polio eradication in Pakistan and Afghanistan, the region, and globally.

The Pakistan TAG met with the objective of conducting an expert review of the current epidemiological situation and developing recommendations specific to the country and each of its provinces. The TAG identified several risks to the Pakistan polio programme, in addition to the threat of ongoing transmission in the core reservoirs and across shared borders.

In the high-risk Union Councils in Tier 1 districts, inconsistent quality of SIAs coupled with high population movement is enabling continued virus transmission and geographic spread. This is most concerning in Killa Abdallah district of Balochistan. The TAG is also concerned about the reversal of gains made in Karachi. Considering the economic and cultural significance of Karachi for Pakistan and the region, continued circulation in Karachi has the potential to reseed infections in polio-free districts. This can already be seen from trends in environmental surveillance.

The TAG concluded that the challenges to consistently reaching children in these areas are primarily due to insufficient oversight and accountability for the campaigns coupled with, and exacerbated by, serious difficulties in the programme's ability to connect with some communities. The latter has created gaps in fully addressing resistance in the highest risk districts and has led to silent refusals, and ultimately to continued wild poliovirus circulation.

Given the above, Deputy Commissioner Reviews in these areas should focus on ensuring high quality campaigns and most importantly transparency in reporting challenges, in addition to acknowledgement of good performance. This must be supported by granular UC and sub-UC data

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<sup>1</sup> 1<sup>st</sup> January – 1<sup>st</sup> December 2017 – Up to end of 2017, 3 additional cases were reported

analyses in Tier 1 districts that enable the programme to quickly identify gaps, determine the most effective interventions and guide urgent programme corrections and improvements.

High quality campaign delivery operations must be complemented by a well-developed communication infrastructure. Community engagement is a proven approach to overcoming community resistance to vaccination rather than short term, reactive, punitive measures, which have been demonstrated on numerous occasions as ultimately counterproductive.

Other key transmission zones must remain vigilant in achieving high quality campaigns and swiftly responding to positive environmental samples. This is particularly important in the northern corridor, which includes Peshawar and the twin cities of Islamabad and Rawalpindi, as well as other areas of Balochistan, such as Pishin, Quetta and interior districts with documented chronic underperformance.

The transmission corridors, spanning contiguous areas of Pakistan and Afghanistan, underline the importance of effective program coordination and collaboration between the Pakistan and Afghanistan programmes. The TAG commends the synchronization of SIA calendars for 2018 and encourages deep coordination on campaign, surveillance, and communications components of the two programmes.

The programme also faces some emergent risks and opportunities in 2018. Foremost, the Government of Pakistan must be mindful of the upcoming elections and political transition and take action to mitigate disruption to the implementation of activities. There is also opportunity for the programme in the increased funding and attention given to EPI in the provinces, particularly if efforts and resources are focused on addressing the significant health workforce gaps in the Tier 1 polio districts.

The TAG recognizes that the Government of Pakistan and its partners have made notable progress towards interrupting poliovirus transmission through great effort and determination. The low transmission season in the first months of 2018 represents an important opportunity that should not be missed – to wipe out the remaining chains of poliovirus circulation and secure a polio-free Pakistan. The TAG believes that this is technically and programmatically feasible, but will require additional efforts and focus to address some very challenging remaining obstacles to reaching all children, particularly in the high-risk UCs of Killa Abdallah and Karachi, as well as other UCs in Tier 1 districts. It will require a culture of transparency that identifies problems and urgently takes corrective actions that result in all children in these areas being repeatedly immunized until poliovirus circulation is no longer detected. Failure to do this will almost certainly lead to continued transmission beyond 2018.

## Introduction

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The Technical Advisory Group (TAG) on Polio Eradication in Pakistan met for the second time in 2017, in Islamabad from 30 - 1 December. The meeting was chaired by Dr Jean-Marc Olivé, attended by six TAG members and supported by the Pakistan Polio Eradication Team led by Senator Ayesha Raza Farooq, the Prime Minister's Focal Person for Polio Eradication.

Local and international partners and donors participated<sup>2</sup>. The TAG chair started by welcoming Mr Chris Wolff and Dr Tahir Masood, polio experts who have worked for the polio programme and are returning to support as new TAG members. TAG welcomed Afghanistan NEOC representative's participation in the meeting to facilitate a common reservoir approach. In addition, the TAG acknowledged and greatly appreciated efforts by Afghanistan and Pakistan to fully coordinate dates of NIDs and SNIDs.

The meeting commenced with an opening speech from Mr Naveed Kamran Baloch, the Secretary Minister of National Health Services Regulation and Coordination, Islamic Republic of Pakistan.

Since the last TAG meeting in March 2017, significant progress has been made towards interruption of poliovirus transmission in the country. Five WPV1 cases had been reported in 2017 between 1 January - 1 December, an all-time low, compared to 19 WPV1 cases reported during the same time period last year.

Programmatically and operationally, there have been continual improvements made in AFP and environmental surveillance in Pakistan, including detailed investigations of every AFP case and positive environmental sample, and expansion of supplementary surveillance. Monthly campaigns were conducted in Tier 1, 2, and 3 districts and at least five campaigns were conducted in Tier 4 districts. Missed children and High-Risk Mobile Populations (HRMP) in core reservoirs continue to be a focus.

The Government's commitment and oversight remained strong at all levels, from the National Task Force (NTF) and the Prime Minister's Focus Group (PMFG), through to the network of EOCs and Deputy Commissioners leading polio activities in their respective districts.

This TAG meeting took place at the start of the low transmission season 2017-2018 with polio cases at a historic low but transmission still continuing in core reservoir areas and outbreaks in a number of non-endemic areas. The meeting provided an opportunity to acquire an expert review and recommendations on the current situation.

Panel 1 below shows questions put to the TAG by the Government of Pakistan and Global Polio Eradication Initiative partners, during the meeting. Panel 2 lists major programmatic milestones since October 2016, and Panel 3 details the status of implementation of recommendations made at the last TAG meeting.

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<sup>2</sup> Annex 1 – List of Participants

**Panel 1: Questions put to the TAG by the Government of Pakistan and Global Polio Eradication Initiative partners**

- *Are the strategies and approaches defined in the NEAP sufficient to achieve interruption within this low season?* - TAG reaffirms the appropriateness of the 2017-18 NEAP and urges full implementation.
- *Are there any immediately implementable new recommendations for the remaining Low Season?* – No, focus should remain on comprehensive implementation of the NEAP.
- *Can any further innovations be of help?* – No, focus should remain on comprehensive implementation of the NEAP.
- *Does the TAG endorse the 2017/18 NEAP SIAs schedule?* - The SIA schedule, as synchronized with Afghanistan, is appropriate for the low transmission season 2017-18.
- *How do we cope with the challenge of community fatigue without compromising quality?* - “Fatigue” should not be over-used as an explanation either for poor quality SIAs or falling acceptance among eligible households; the key response where fatigue does manifest, is that ‘the job is not yet finished’, and that any slips or gaps at this stage may be fatal to the whole national programme. Fully implement the existing communications strategies, focusing on the main themes of community ownership and engagement.
- *Does the TAG see the role of IPV in closing/sustaining population immunity in core reservoirs during the first half of 2018?* - IPV has a potential role in core reservoirs but reducing number of children missed through NIDs/SNIDs is the priority. If IPV is used, country plans (EPI and PEI) need further refinement and discussion with the global programme on:
  - Vaccine supply and injection devices
  - If a fractional IPV campaign is considered, ensuring all equipment required is registered
  - Additional measures to be taken to secure quality operations

**Panel 2: Major programmatic milestones since October 2016**

**October–December 2016**

- National Polio Management Team meeting held in October
- 76 dedicated district and divisional surveillance officers hired, trained and deployed
- Laboratory and surveillance team joint review of all environmental surveillance sites conducted
- Environmental surveillance network expanded to Nowshera, Charsadda, Bannu, Kohat, Mardan, Khuzdar, Loralai, Zhob, Dadu, Kambar, Sanghar, Sargodha, and Bahawalpur districts, rationalized/increased sites located in Karachi, Pishin, Faisalabad, Quetta, and Peshawar
- Round 1 sero-survey conducted in Pishin, Karachi, Peshawar (Town 3&4) and Larkana

**January – March 2017**

- National Polio Management Team meeting held in January
- Response to type 2 events in Balochistan completed
- Routine immunization assessment in Tier 1 districts (Khyber agency, Peshawar, Killa Abdullah and Quetta districts completed
- Sero-surveys conducted in Quetta, Killa Abdullah, Karachi, Peshawar (Towns 1&2), and Sukkur
- National and Provincial Certification Committee Meetings held
- Phase 1 containment activities completed
- Combined IPV/bOPV campaigns held in Tier 1&2 districts targeting 3.9 million children between 4 and 23 months

**March – November 2017**

- NEAP 2017- 2018 finalized
- Revamped micro plan and SIA tools implemented
- HRMP analysis conducted

- Micro plan monitoring tool implemented
- Routine Immunization survey conducted
- 50,737 people were orientated on surveillance strategies (CBV teams, frontline healthcare providers and doctors), since March 2017
- National EOC teams were deployed to core reservoirs for extended support (Karachi, Quetta and Peshawar)

### Panel 3: Status of implementations of the last TAG recommendations

#### Balochistan

- **Quetta Block to build on recent gains (*Killa Abdullah and Pishin need to further raise their performance*)**
  - One DC in Quetta Block transferred since the last TAG
  - Overall, PCM and LQAS lots passed maintained at >90% in most of the campaigns (14/15 PCMs and 15/26 times) in Quetta Block from January – September 2017
  - The proportion of teams with female CHWs increased from 81% in January to 86% in September 2017 in Quetta Block
  - 7 large mobilization seminars/meetings conducted in Killa Abdullah with more than 400 religious/political/tribal leaders sensitized with the help of the administration
  - Awareness raising meeting at girls high school in Chaman (~150 students and female teachers sensitized)
- **Use information available on Still Missed and Persistently Missed Children to identify and address potential clustering**
  - Reduction of still missed against the target from 6% in January 2017 to 3% in September 2017
  - Regular validation of micro census by program staff and third party
  - Regular validation of refusals and NA children (both covered and still missed) and sharing of findings with the UCs
  - Tribe wise analysis of refusals done
  - Tracking of NT children from market survey being implemented in Quetta District since October 2017
- **Maintain specific focus on HRMP, tracking and vaccinating all HRMP children**
  - An exercise to track, map and vaccinate HRMP population completed in Quetta, Pishin, Killa Abdullah, Zhob, Shirani, Killa Saifullah and Mastung districts
  - Overall vaccination of HRMP was good (91% in Zhob division)
  - Newly settled HRMPs vaccinated and immediately added in the micro plan (May - September 2017, 18,908 new HRMPs)
- **Increase field validation of micro plans, particularly in Tier 4 areas**
  - In addition to the district level validation, external validation of micro plans by Federal and Provincial teams initiated (20 districts since September 2017)
- **Ensure that Tier 3&4 areas have a rapid and robust response to any polio event**
  - Investigation of Loralai WPV1 environmental isolation done
  - Case/event response in 10 districts due to Lakki Marwat case, Qambar/Loralai environmental WPV1 isolation
  - Detailed investigation of all “urgent” AFP cases
- **Coordinate closely with Afghanistan programme**
  - Weekly teleconference with Southern Afghanistan
  - Monthly face-to-face meeting at Friendship gate
  - 1 meeting in Islamabad coordinated by the NEOCs
  - Regular sharing of data on straddling villages, HRMP movements across the border and AFP cases (including cross notifications)
  - Balochistan contribution to the Southern Corridor Action Plan completed and shared with Southern Afghanistan

#### Federally Administered Area (FATA)

- **Sustain current gains.**
  - No polio case has since then been reported despite a significant improvement in AFP surveillance
  - Consistent quality SIAs

- **Continue exploring ways to gain access to children living in the security compromised areas of FATA.**
  - All FATA has been reached for campaigns; though reach has been inconsistent in some small pockets
- **Verify the status of “vacated” areas.**
  - Ensure that returnees are systematically tracked and vaccinated
  - Consider vaccinating children under five years of age with IPV
  - Further map informal border crossings with Afghanistan and develop plans to vaccinate children at these points, or in their communities
    - 22 UCs still vacated
    - All returnees, including children and adults, have been tracked and covered with OPV/IPV (At NWA Ghulam Khan 15,815 - all age groups were administered OPV and 2,851 children aged 4-59 months with IPV).
    - Special campaigns have been conducted for high-risk population (at SWA Wana 1,113 children aged 0-23 months vaccinated with OPV;940 children aged 4-23 months with IPV during July 2017)
    - PTPs have been strengthened at strategic points
    - Migrating population has been covered in the campaigns.
- **Continue efforts to increase the number of local females in vaccination teams**
  - Female participation in teams has incrementally increased from 15% to 21% (from 557 to 902)
  - Administration in NWA, SWA, had sent out cautions against female engagement (FDA identified 211 females but none could be deployed. CTC mobilized 457, hired 140 but could retain only 44)
  - Proportion of female monitors increased from 2% to 26% (21/80)
- **Enhance monitoring in security-compromised areas, as feasible**
  - LQAS conducted in Khaisray, Jani khail, Sintanga
  - Monitoring (UC and tehsil monitors) of Kamnagara, Shaktoi belt, 4 Gomal Zam/Dam UCs conducted
  - No of LQAS lots replaced due to security concerns reduced from 15 to 10% in (February - October campaign)
  - 27/54 LQAS lots conducted in security compromised areas
- **Review monitoring data and map areas where PEI supervision and monitoring activities were not consistently possible. Develop a “security compromised areas map” that clearly highlights the different access levels in FATA.**
  - Security compromised areas map for external monitoring has been developed
- **Ensure local coordination mechanisms are in place across the border with Afghanistan**
  - Coordination with Eastern and South Eastern Afghanistan enhanced
  - Coordination with KP and Baluchistan improved but needs to be strengthened further

**Sindh  
Karachi**

- **Focus on T1, strengthen CBV performance**
  - CBVs standardized (training, registration, data collection and review)
  - Fresh micro census and new tools implemented in all FCV areas
  - Daily workload reduced, number of FCVs and supervisors increased by 10%
  - Full time FCV coordinator and CBV focal person (international staff)
  - Additional HR in FCV since September 2017: 4 PEOs, 3 DHCSO, 3 DSOs, 11 UCCOs, 4 Master Trainers
  - Validation and revision of target population in CHW areas
  - Enhanced accountability based on field observations
  - Targeted and focused CE and SM activities
- **Increase MT performance**
  - 341 AIC 15 recruited under MTAP II initiative in 62 MT UCs in Karachi, operational since August 2017
  - Remaining MT UCs: tailor made trainings, better supervision
  - HR increased (19 UCPOs, 17 UCCOs) for better supervision and monitoring
- **Address high number of refusals/still missed**

- Prioritized the SMCs – PMCs and incorporated into MPs for follow up: special focus on clusters
- 3,480 community engagement sessions held in high-risk settings (Jan-Oct)
- EOC-DPCR led PMC conversion activities post-campaign, on average 76% vaccinated
- 30 major KHI hospitals support SIAs through advocacy and polio booths at hospital
- Provision of IEC material with official endorsement (AKUH, PPA, PMA)
- School vaccination initiative: 50,474 covered in Central district alone

- **Reduce SNIDs targets**

- SNID target reduced from 2.2M to 1.8M (188 to 166 UCs), i.e. in all CBV and MTAP II areas

#### ***South Sindh (Sujawal, Thatta, Badin)***

- **Increase number of females in vaccination teams**

- 772 teams and 205 supervisors recruited in 32 UCs as special mobile teams (SMT) working 11 days per campaign. Operational since April 2017.
- > 95% teams with at least one female

- **Ensure adequate HR**

- All management posts filled from both government and partners

#### ***North Sindh***

- **Increase female workers**

- Special mobile teams introduced in all ex-FCV areas in September 2017 (382 teams, 94 supervisors); 97.2% of teams with at least one female

- **Maintain quality, protect gains**

- DTFs/DPCRs remain proactive: performance indicators sustained
- Data re-validation of still missed children coverage post campaign
- Focus on HRMP

#### **Khyber Pakhtunkhwa**

##### ***Greater Peshawar***

- **Ensure that persistently missed children (PMC) are mapped and vaccinated.**

- **In non-CBV areas, target trainings to address issues identified in preceding rounds, and improve monitoring and supervision**

- PMC: Being mapped and vaccinated
- Female involvement: remained 92.5%
- PCM: remained above 93% with fluctuating results in Nowshera and Swabi and deterioration in Mardan (Sep 88%)
- LQAS: Improved from 78% (Jan-Mar) to 91% (Apr-Sep)

##### ***Northern KP***

- **Maintain focus on these remote areas to ensure the basic elements for quality campaigns are in place, including local females in teams, and supportive supervision.**

- Female involvement: Slightly improved from 62.3% (Jan-Mar) to 63.3% (Apr-Nov)
- PCM: Slightly improved from 92% (Jan-Mar) to 93% (Apr-Sep)
- LQAS: Improved from 52% (Jan-Mar) to 82% (Apr-Sep)

##### ***South KP***

- **Address the issue of refusals through coordinated efforts of social mobilization and community engagement, coupled with good planning and execution in operations**

- Still refusals decreased from 9.8% (998 in Apr) to 6% (655 in Oct)
- IPV campaign coverage was 312,016 (93%)
- IPV LQAS was 97% (35/36 lots passed)

#### ***Address Surveillance gaps highlighted in:***

##### ***Kohistan:***

- Orientation on AFP surveillance = 140 Persons
- Reduction in Silent UCs = 21 to 15 (29% reduction)
- AFP case reporting increased from 11 to 21 (point-in-time comparison, 48% inclining trend)
- NPAFP rate improved from 4.6 to 6.8
- Stool Adequacy and Notification within 7 days <80%

**Swat:**

- Orientation on AFP surveillance = 882 Persons
- Reduction in Silent UCs = 16 to 3 (81% reduction)
- AFP case reporting increased from 42 to 112 (point-in-time comparison, 63% inclining trend)
- NPAFP rate improved from 5.4 to 13.6
- Stool Adequacy improved from 72% to 96%
- Notification within 7 days improved from 57% to 84%

**South KP:**

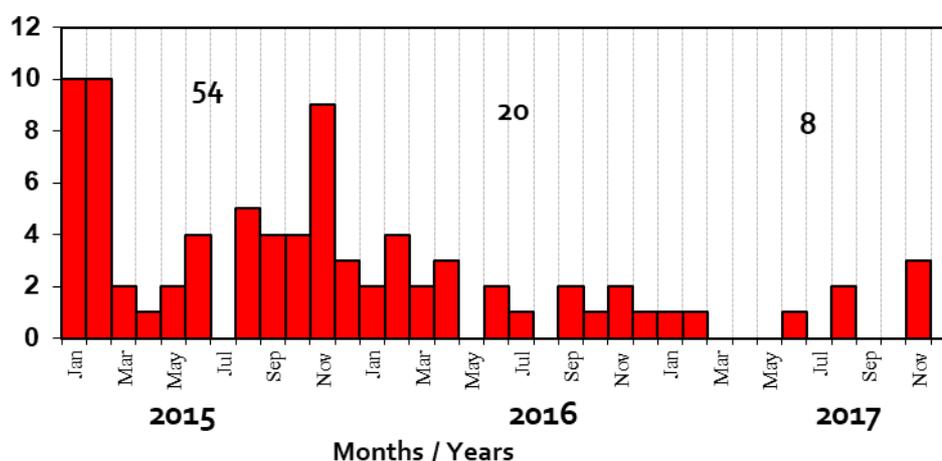
- Orientation on AFP surveillance = 2,096 Persons
- NPAFP rate >6 in all South KP districts
- Silent UCs decreased from 14 to 7 (50% reduction)
- Stool Adequacy <80% in 4/7 districts (D.I Khan, Tank, Hangu and Lakki Marwat)
- Notification within 7 days <80% in all Southern districts except Kohat

# Progress

## Pakistan Program

Pakistan continues to progress in 2017. At the date of the TAG only 5 WPV1 cases were reported. Even with the 3 additional WPV1 cases reported in December, the year 2017 with 8 cases represents the lowest number in the history of the programme<sup>3</sup>. This compares to 20 cases in 2016 and 54 in 2015 (see Figure 1). The most recent WPV1 cases are from Zhob District, Balochistan, with date of paralysis onset 15 November 2017, and Karachi with date of onset 9 November 2017.

Figure 1: Distribution of Wild Polio Virus Type 1 (WPV1) cases by month, 2015 – 2017



During 2017, the core reservoir areas reported only 2 of the 5 cases – 1 in Quetta block in June 2017 and 1 in Karachi in August 2017. Other cases were reported from Lodhran district of Punjab, and Diamir district of Gilgit Baltistan (GB), both in February 2017. More recently, 1 case was reported in August 2017 from Lakki Marwat district of Khyber Pakhtunkhwa (KP) (see Figure 2).

Programmatic progress was made possible with the highest level of Government commitment, led by the Prime Minister and with the support of all frontline workers, partners and Law Enforcing Agents (LEAs).

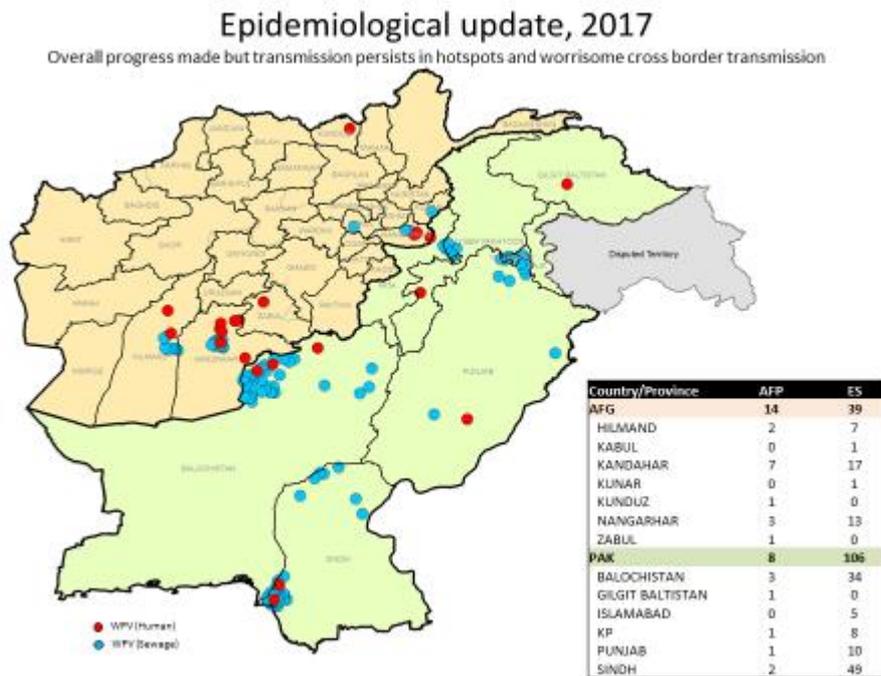
Despite the progress, evidence indicates transmission persisting in hotspots:

- In the southern corridor, remaining challenges in Killa Abdulla and proximity to transmission in hot spots of Southern Afghanistan are of great concern;
- In the northern corridor, Peshawar, for the first time this year, experienced negative ES samples for three consecutive months (July to September). However, samples were positive again in the last three months of the year. Poliovirus is circulating at both ends of the northern corridor: from Nangarhar in Afghanistan (last positive ES in December) to the Twin Cities of Rawalpindi and Islamabad in Pakistan (last positive ES in October).

<sup>3</sup> Case count at January 1<sup>st</sup> – December 1<sup>st</sup> 2017 – 3 additional WPV1 cases with date of onset in 2017 were subsequently reported

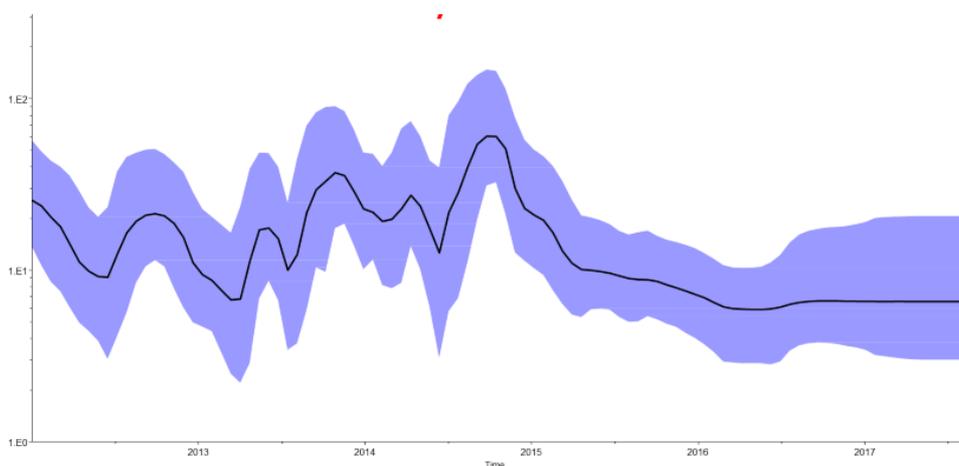
- Karachi is again a hotspot and re-established virus circulation threatens gains made, even among healthy children with a positive history of vaccination.

Figure 2: WPV1 cases and environmental sample positives, Pakistan and Afghanistan 2017



Although the number of circulating genetic clusters has decreased from 7 in 2014 to 4 in 2017, the decline in genetic diversity of poliovirus in Pakistan has plateaued over the past 12 months possibly indicating a decrease in the overall impact of current efforts to stop transmission across the epidemiological block. The detection of each positive environmental sample or case has triggered a rapid investigation and additional campaigns if determined to be necessary to boost immunity (see Figure 3).

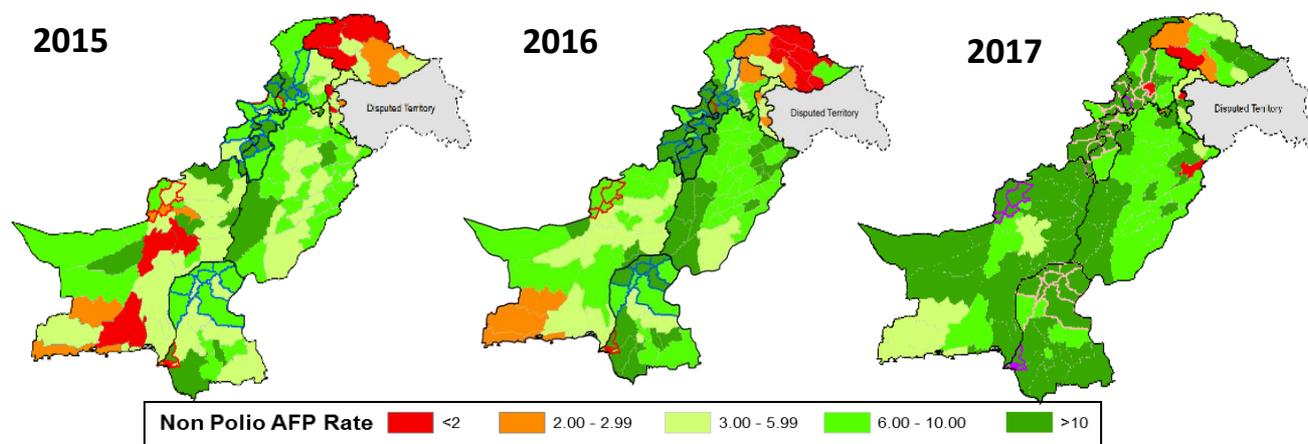
Figure 3: Genetic diversity trends, AFP cases, January 2012 –November 2017



AFP surveillance sensitivity in the country has continued to improve (Figure 4). The major investment made by the country in improving surveillance across the board is paying dividends. With declining WPV cases, improving and expanding supplementary surveillance has enabled the

Pakistan programme to enhance its capacity to understand the current situation and ensure no polio virus is missed.

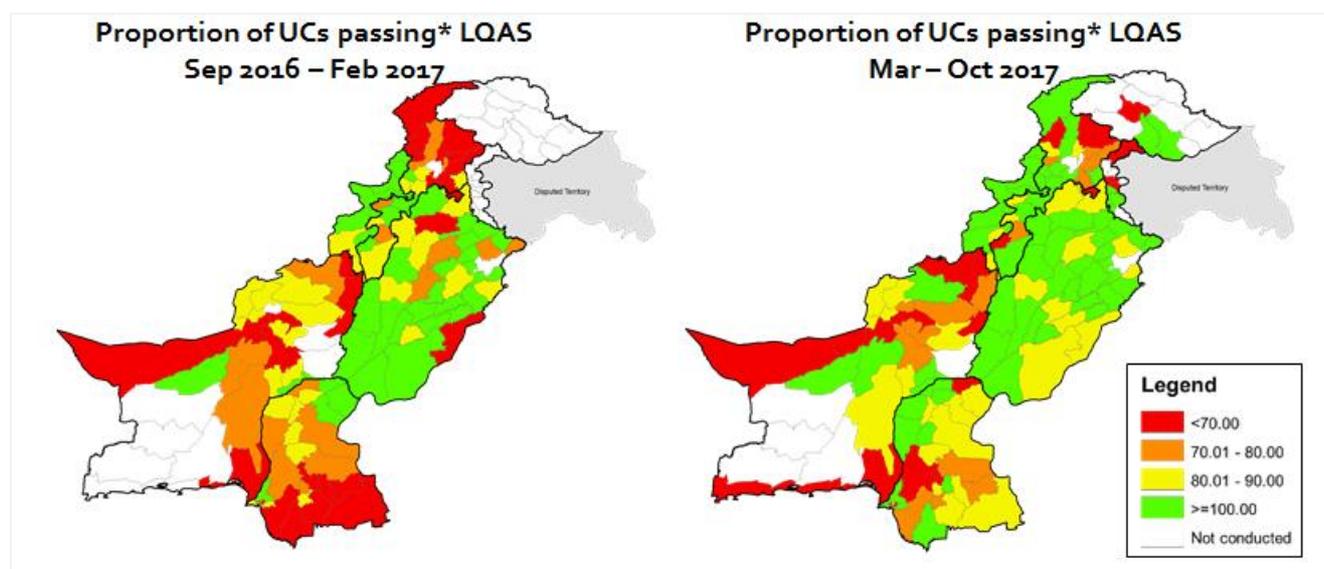
Figure 4: Non-polio AFP rates, 2015 – 2017



Combining all surveillance and immunity data, it is clear that the second and third quarters of 2017 were especially difficult for Karachi. In addition, there are lingering concerns in Killa Abdullah and Islamabad which must be addressed.

Since the last TAG meeting, all Supplementary Immunization Activities (SIAs) were implemented as per the NEAP with monthly SIAs conducted in Tier 1, 2, and 3 districts, and at least five campaigns conducted in Tier 4 districts. LQAS data indicates high performance in parts of Karachi, and in some districts in North Sindh, Punjab, Central KP and FATA, while, suboptimal performance is clearly observed in South Sindh, North KP, and Balochistan in the last 8 months, compared to the low season in 2016-2017 (see Figure 5). Performance remains below NEAP targets in many districts (Figure 3).

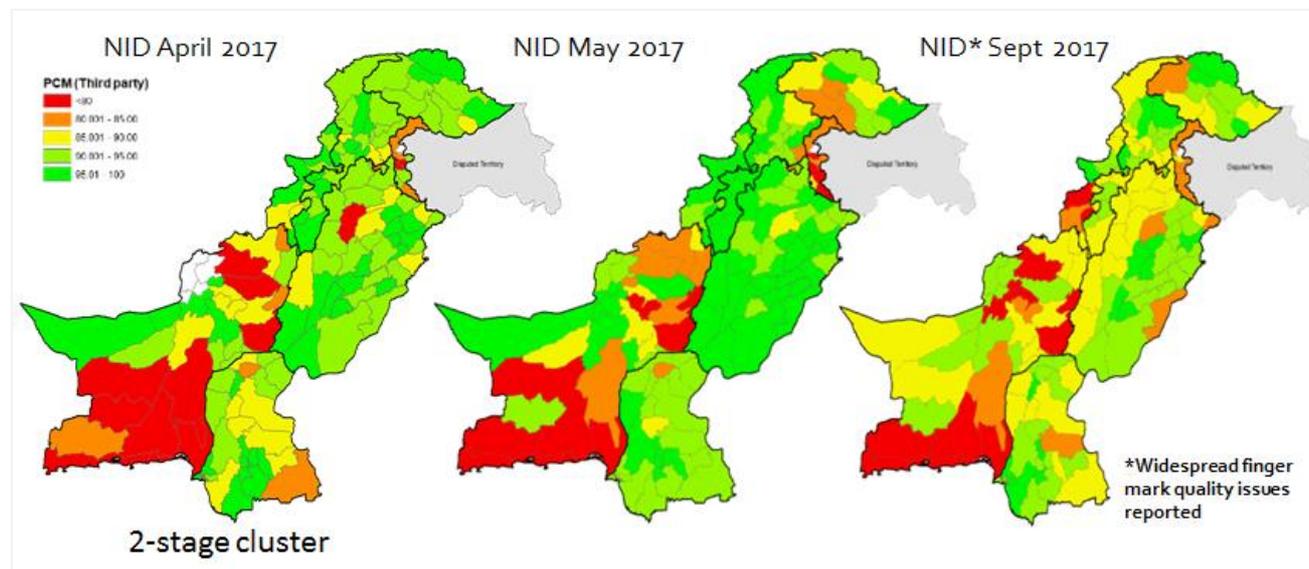
Figure 5: Proportion of UCs passing LQAS, September 2016 – October 2017



During the last three NIDs, performance according to PCM was >90% in most districts, throughout the provinces (see Figure 6). Clusters of underperforming districts were regularly observed in Interior Sindh, AJK, areas of Western Punjab, and areas in Balochistan outside the Quetta block. To

address some of the challenges in Quetta block the programme has transitioned fully to ‘one CBV’ model across the block since the last TAG in March 2017, resulting in operational harmonization and improved campaign performance. It is of concern that PCM results during the September NID have been affected by widespread finger marking quality issues.

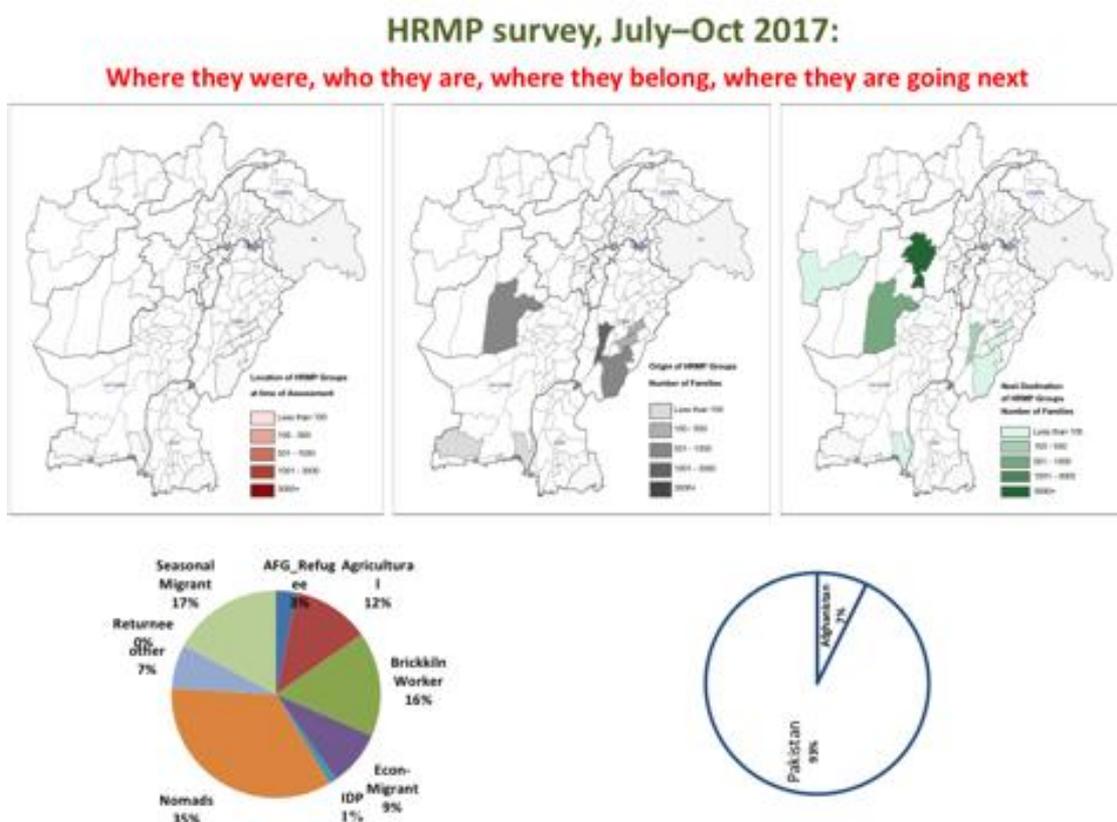
Figure 6: Third-Party Post Campaign Monitoring (PCM) April 2017 – September 2017



There continues to be a collective, strong focus on missed children, with efforts to enhance community acceptance, increase the field work-force of Religious Support Persons (RSPs), Medical Officers and other community influencers to reach and support the vaccination of every last child. A key focus for the programme will be to work with District Polio Control Rooms (DPCRs) in high-refusal areas, focusing on targeted community engagement, utilizing the appropriate influencers, community leaders to address the concerns of refusal families.

As per the TAG and NEAP recommendations to identify risk from High-Risk Mobile Populations (HRMP), an assessment was conducted to detect settlements at a point in time, determine which districts the groups consider to be their origin or home districts and their next destination (see Figure 7). The pie-charts below show the self-reported nationality and the types of HRMP groups (as per the programme’s definitions). These areas were then targeted with special HRMP focused SIAs.

Figure 7: Results from HRMP settlement analysis (July – October, 2017)

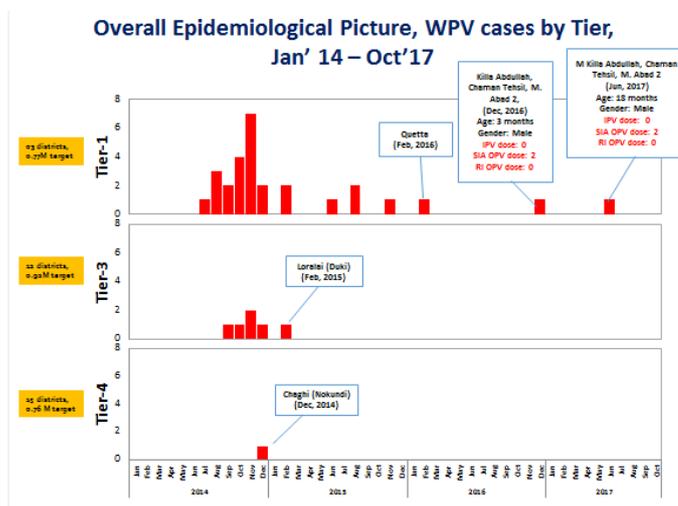


## Balochistan

Overall there has been a 90% reduction of polio cases in Balochistan between 2014 and 2016. The last WPV1 case from a Tier 4 district was reported in 2014, and the last case reported from a Tier 3 district was in 2015. Quetta district has not had a case in 21 months, however, Killa Abdullah remains a challenge with the last two WPV1 cases reported in Balochistan (December 2016 and June 2017) being from the district. The last VDPV2 was reported from UC Baleli B in Quetta in December 2016. (See Figure 8).

Environmental sampling in Balochistan shows an increase in positive samples by 15% compared to November 2016. In Killa Abdullah, up to October, 59% of the samples were positive in 2017. Loralai has had two positive samples (September and October 2017) since the site became operational in December 2016. The ES data has been pivotal in helping the programme understand the transmission dynamics of WPV in Balochistan and in supporting programme efforts to address these gaps. In Killa Abdullah, there's

Figure 8: Overall Epidemiological picture of WPV1 cases by Tier in Balochistan, January 2014 – October 2017



clear evidence of persistent local circulation compounded by highly intertwined transmission with South Afghanistan. This is corroborated by independent monitoring reports, AFP surveillance data (at least 3 cases have been detected in the previous 12 months) and serosurveys. In Quetta, and Pishin, the evidence suggests better population immunity but high vulnerability to re-infection from circulation across the southern corridor.

The Non-Polio AFP (NPAFP) rate remains at 12.5 per 100,000 in 2017, compared to 7.7 in 2016. Stool Adequacy is at 88%, Enterovirus (EV) isolation at 21%, and notification within seven days is at 80% indicating a sensitive surveillance system. Silent Tehsils declined from 15 to 13.

Post campaign results indicate marginal improvement in LQAS and PCM results especially in Quetta and Pishin. Killa Abdullah remains a concern with a disconnect between LQAS and PCM results. Performance remains suboptimal in Zhob division and districts of Mastung, Noshki and Khuzdar. The number of Low Performing Union Councils (LPUCs) also increased by 10% since the April NID. An overall increase in proportion of 7+ doses in Balochistan from 80% to 82% since 2016 shows an improving immunity profile, however, there is a decrease by 4% of 7+ doses in Tier 1 districts (see Table 1). Recording of missed children increased by 44,000 since March 2017 in Quetta block, however, the number of children still missed remains high (Figure 9). A refusal cluster of still missed children remains in Chaman tehsil of Killa Abdullah district.

Figure 9: Quetta Block Recorded & Still Missed children

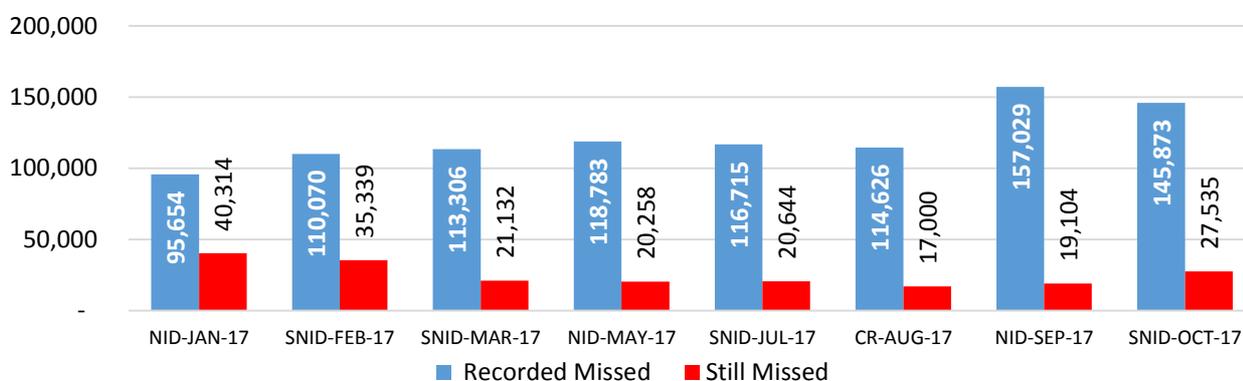


Table 1: Non Polio AFP cases, aged 6 to 59 months

DISTRICT	2015		2016		2017	
	0 %	7+ %	0 %	7+ %	0 %	7+ %
<b>Quetta Block</b>	<b>3.0</b>	60.6	<b>1.3</b>	83.3	<b>1.0</b>	86.0
QUETTA	0.0	90.0	0.0	86.0	<b>2.0</b>	90.2
PISHIN	<b>11.1</b>	66.7	0.0	71.4	0.0	94.4
KABDULAH	0.0	35.7	<b>4.8</b>	85.7	0.0	74.2

The number of guest children recorded has fluctuated between 38,000 and 44,000 since March 2017.

Since the last TAG, Balochistan team has been building on the recent gains in Quetta block. The proportion of female CHWs have increased from 81% in January 2017 to 86% in September 2017. Seven large mobilization seminars were conducted with more than 400 religious, political and tribal leaders. HRMPs continue to be a specific focus with an exercise in place to track, map and vaccinate children in HRMP settlements in several high-risk districts. Rapid investigations and appropriate event responses were conducted in Loralai, Lakki Marwat, and Qambar following polio event notification.

## Federally Administered Tribal Areas (FATA)

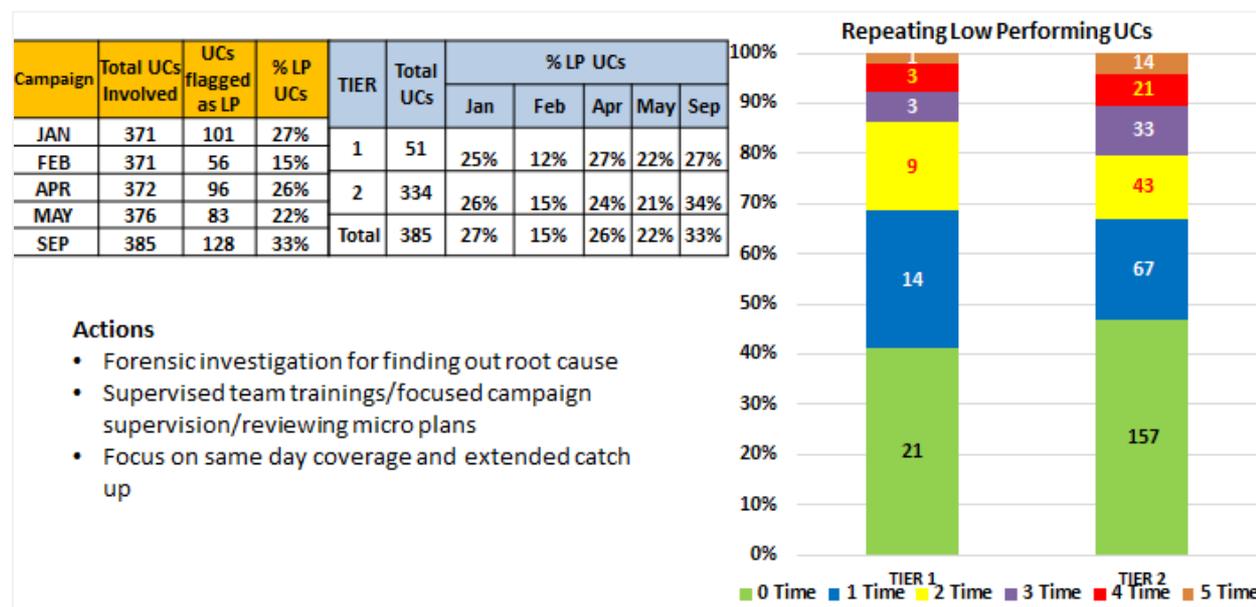
The last WPV1 case in FATA was reported from South Waziristan in July 2016. There are no environmental surveillance sites in FATA.

FATA has consistently shown improvements in SIA performance as seen from administrative and post campaign monitoring results. From January to October 2017, the proportion of LQAS passing in Tier 1 districts was greater than 90%, whereas the proportion of LQAS passing in FR-DI Khan and FR Tank, both Tier 2 districts, was below 90%. However, challenges in security compromised areas have required persistent replacement of lots and LQAS pass rates have to be considered in this context. Triangulation of LQAS with other monitoring data is central to programme monitoring but in these circumstances becomes even more critical.

In October, still missed children against the target (<0.75%) were 0.81% and 0.93% in Tier 1 and Tier 2 districts, respectively. According to PCM results, during the October campaign, vaccinated but not finger marked was the most significant reason (almost 50%) for not vaccinated.

The proportion of LPUCs in the province has also increased from 26% to 33% from April to September 2017 (see Figure 10).

Figure 10: Low performing UCs in Fata, and actions taken 2017



The annualized NPAFP rate for 2017 remains >10 in most of the province and stool adequacy is above 80% in all districts except FR Tank, Orakzai and FR Kohat. The overall immunity profile shows improvement in all FATA areas between 2015 and 2017, with the proportion of 7+ doses increasing from 78% to 90% in 2017.

Since the last TAG in March 2017, the province has made significant improvements in AFP surveillance and all of FATA was reached for campaigns, despite security compromised areas. Efforts to increase the number of local females in vaccination teams are ongoing and though cultural and other difficulties in the province have meant these improvements have been slight. The importance of female vaccinators for reaching children in their houses is recognized and work to increase their numbers will continue.

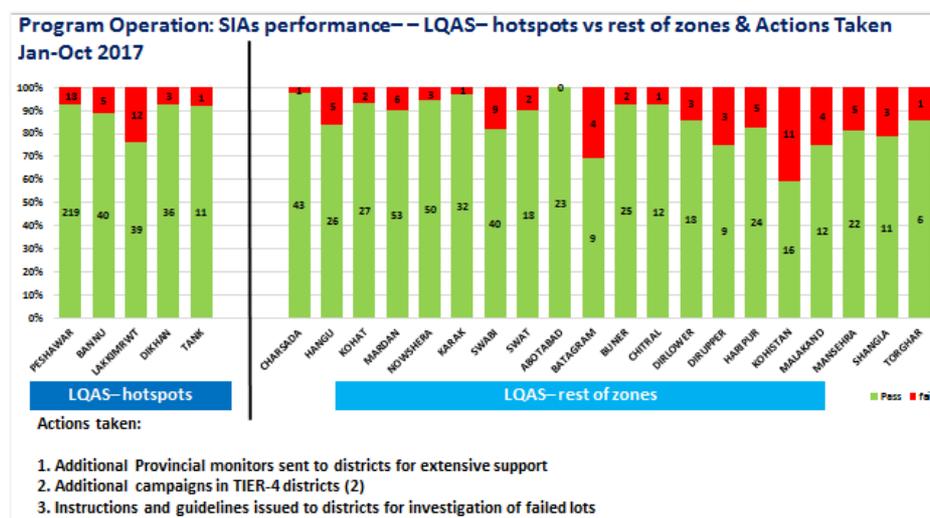
## Khyber Pakhtunkhwa (KP)

Since January 2017, KP reported 1 WPV1 case, on 28 August from Lakki Marwat, a Tier 2 district in Bannu division. This case is closely matched with a positive sample from the environmental site Multan in Punjab, November 2016.

Positive isolates were again reported in October 2017, despite several months of negative environmental samples in Shaheen Muslim town. The program in KP has continued to maintain a high state of alert with genetic analysis confirming ongoing local transmission of R4B5C5A and B genetic virus clusters in the northern corridor, and recently 3 WPV1 cases were reported in Nangarhar district, Afghanistan, from October to December 2017.

SIA performance in KP has improved since the January 2017 NID, however, performance has not been consistent with PCM results indicating compromised quality (10/25 districts across the province did not reach 90% coverage rate in the September 2017 NID). LQAS results from January to October 2017 indicate sub-optimal performance in hot spots Bannu and Lakki Marwat and 11 other districts, with a pass rate per district below 90% as per NEAP standards (see Figure 11).

Figure 11: SIA performance in hotspots vs. other zones, January – October 2017





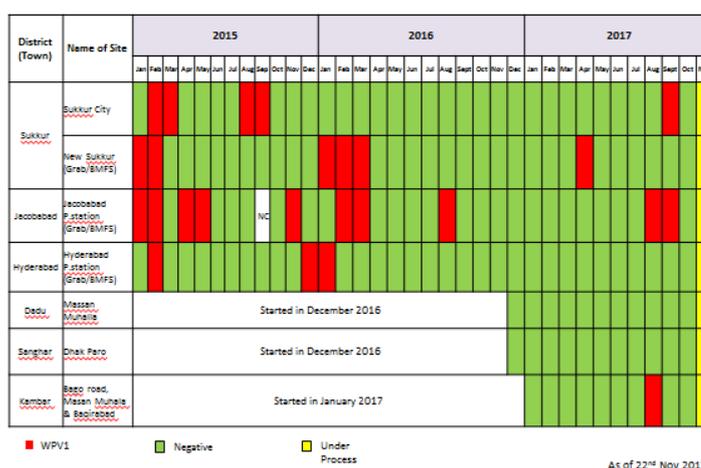
September and October campaigns in Karachi indicate an increase in the pass rate reaching 86% after a decline in May (67%), and a declining trend is noticed in South and North Sindh.

Still missed children from Mobile Teams areas remained at 3.3% in October and 5% in CBV areas in Karachi, in comparison to Interior Sindh that had a rate of 0.8%.

NP AFP rates have exceeded 6 per 100 000 in all Tiers of the province with the highest rate of 13.4 in Tier 2 districts and the lowest of 8.0 in Tier 1 districts. In all Tiers notification within seven days remains above 80%, similarly the stool adequacy rate is 89%; however, EV isolation consistently remains suboptimal and is as low as 2% in Tier 4 districts. Since 2016, there has been a decline in population immunity by 2% in 7+ doses in Karachi and an increase in zero dose during 2017 after significant progress in between 2015 and 2016, North Sindh has remained consistent and South Sindh has increased by 5%. (See Table 2)

Figure 13: Environmental sample isolates in Sindh, 2015 - 2017

Current epidemiology: Environmental Sample Isolates, Sindh, 2015-17



As of 22<sup>nd</sup> Nov 2017

Table 2: Non Polio AFP cases, aged 6 to 59 months

DISTRICT	2015		2016		2017	
	0 %	7+ %	0 %	7+ %	0 %	7+ %
<b>KARACHI</b>	<b>2.1</b>	89.0	<b>0.3</b>	92.8	<b>0.8</b>	90.3
KHIBALDIA	0.0	100.0	0.0	100.0	0.0	80.0
KHIBINQASIM	0.0	100.0	0.0	94.7	0.0	87.5
KHIGADAP	<b>5.3</b>	89.5	<b>4.0</b>	84.0	<b>2.8</b>	86.1
KHIGIQBAL	<b>8.3</b>	83.3	0.0	94.4	0.0	93.8
KHIGULBERG	0.0	80.0	0.0	93.8	0.0	100.0
KHIJAMSHEED	0.0	100.0	0.0	86.7	0.0	94.4
KHIKAMARI	0.0	83.3	0.0	93.3	0.0	95.2
KHIKORANGI	0.0	77.8	0.0	87.5	0.0	95.5
KHILANDHI	0.0	100.0	0.0	100.0	0.0	83.8
KHILAYARI	0.0	85.7	0.0	100.0	<b>5.9</b>	88.2
KHILIAQAT	0.0	85.7	0.0	75.0	0.0	82.4
KHIMALIR	0.0	100.0	0.0	100.0	0.0	100.0
KHINNAZIM	0.0	71.4	0.0	100.0	0.0	92.9
KHINORTH	0.0	92.3	0.0	100.0	0.0	84.0
KHIORANGI	0.0	90.0	0.0	88.5	0.0	95.5
KHISADDAR	0.0	83.3	0.0	100.0	0.0	94.7
KHISHAHFAISAL	0.0	100.0	0.0	100.0	0.0	100.0
KHISITE	<b>25.0</b>	75.0	0.0	72.7	<b>5.6</b>	94.4

Since the last TAG in March 2017, Sindh has been focusing on strengthening CBV performance in Tier 1 districts, including standardizing CBV training, data collection and review, reducing the daily workload, and increasing the number of Female Community Vaccinators (FCVs) and supervisors. Sindh has also been addressing the high number of refusals and still missed children in Karachi with 830 community engagement sessions since September in high-risk settings and provision of IEC materials with official endorsements. South and North Sindh have also been able to increase the proportion of teams with at least 1 female to >95%.

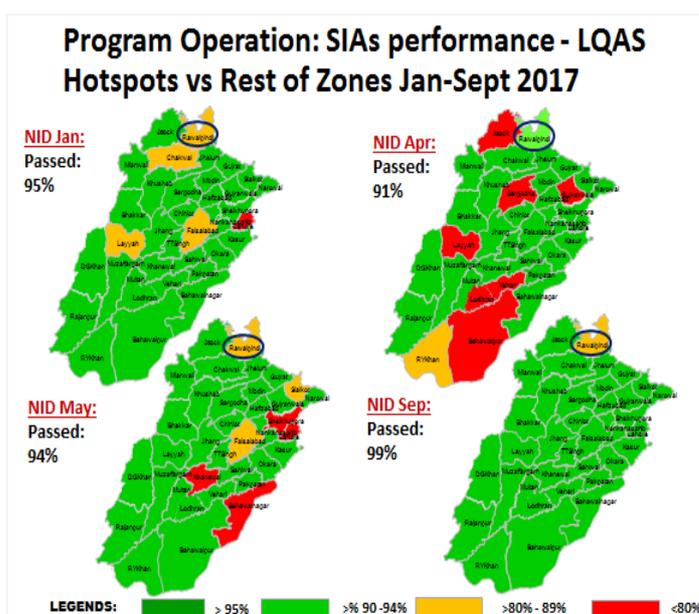
Sindh has been working to enhance communication and social mobilization strategies, with evidence-based action plans to reduce misconception refusals, enhancing capacity of District Polio Control Rooms (DPCRs) and further utilization of Religious Support Persons (RSPs), medical professionals and community leaders as key influencers to support vaccination.

## Punjab

In 2017, Punjab reported 1 WPV1 case from the Tier 4 district of Lodhran in January.

Environmental sampling has been consistently positive in Rawalpindi, with evidence of local transmission and exportation. Genetic analysis has indicated that the October environmental sample in Rawalpindi closely matched (99.2%) with the Nangarhar circulation. A positive environmental sample in Rawalpindi in July 2017 that closely matched (99.8%) with the Multan isolate in November 2016 gave evidence to persistent circulation in Rawalpindi and Islamabad between November 2016 and August 2017. The Lodhran W PV1 case reported in January 2017 was also 2.2% divergent from the DG Khan ES positive in May, 2016<sup>4</sup>.

Figure 14: SIA Performance in Punjab, January- September 2017



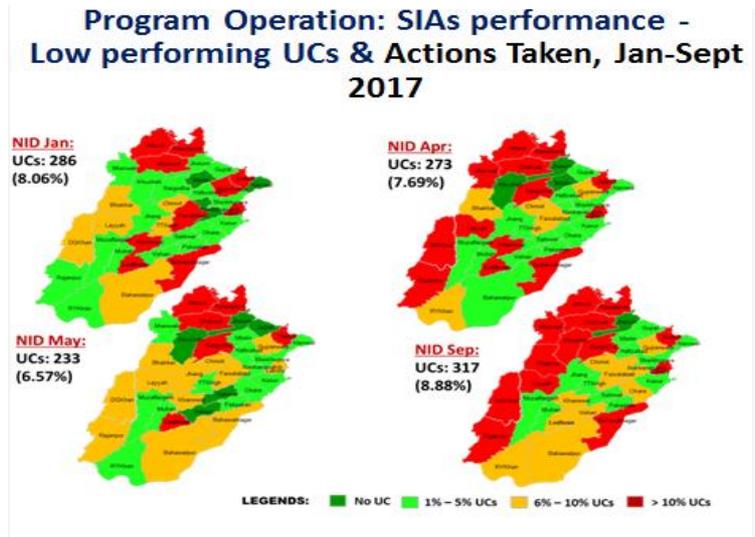
PCM data indicates consistency in SIA coverage, with 93% coverage in April, 95% in May and 91% in September 2017. LQAS results indicate overall good performance, with estimates over 90%, however, they also highlight fluctuating performance in Rawalpindi with the last two campaigns' coverage between 80-89%. (See Figure 14)

<sup>4</sup> In genetic sequencing, genetic diversions of 1.5% or more from the closest match indicate that the virus is a long chain and the circulation has been missed. This poses a challenge for AFP surveillance and needs urgent attention and further investigation.

Still missed children were estimated at 0.3% for the September campaign and the proportion of LPUCs increased from 7.7% in April 2017 to 8.9% in September (see Figure 15).

NPAFP rates have exceeded targets in all Tiers of the province with the highest rate of 14.3 per 100 000 in Tier 2 districts, and the lowest rate of 9 in Tier 3 districts. In all Tiers, notification within seven days remains above the target; similarly stool adequacy is consistently 89%, above the target of 80%. There are no silent Tehsils in Sindh for reporting AFP case.

Figure 15: SIA performance indicting LPUCs, January to September, 2017



Since the last TAG in March 2017, Punjab has been working to ensure that DPCRs are fully functional and HR issues are addressed. Moreover, the Islamabad-Rawalpindi Task Force has been initiated however, the meeting have not yet been held regularly.

# Key Findings

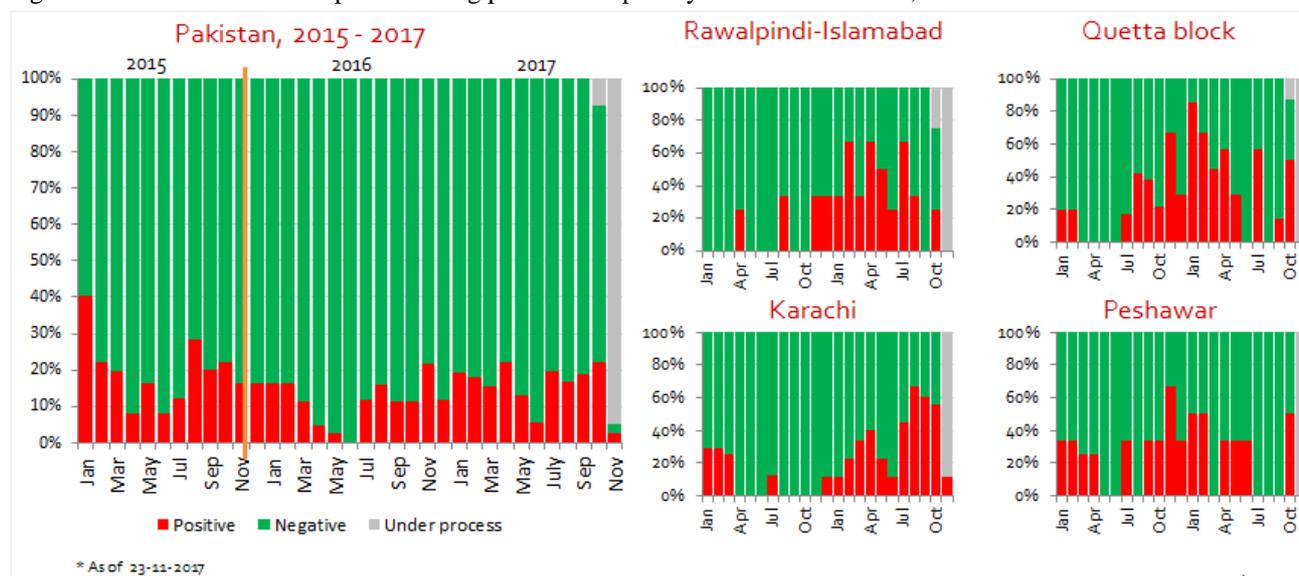
## Pakistan

The TAG recognizes the high level of government and partner commitment that have created an enabling environment for the programme and its frontline workers. The “one-team under one roof” approach and commitment to the common goal of polio eradication has resulted in significant programme progress and a historical low of WPV1 cases. The TAG commends the implementation of the last TAG recommendations, including the HRMP assessment which will help to inform programme operations, ensuring all HRMPs are reached and vaccinated during every campaign.

The TAG has analyzed the overall national and subnational situation and concluded that local transmission still persists in key hotspots including Quetta Block and the southern corridor, core reservoirs of Karachi, and the northern corridor of Pakistan and Afghanistan.

Subnational analyses indicate an overall reduction of WPV1 cases but there are clear indications of concern from the environmental surveillance data, the SIA performance data and the population immunity profiles. Quetta Block and Karachi consistently return with positive environmental samples (See Figure 16). Re-establishment of circulation in Karachi poses an ongoing risk to vulnerable areas across Pakistan and to the shared corridors with Afghanistan.

Figure 16: Environmental sample indicating positive samples by month for Pakistan, 2015 – 2017.



## Balochistan

The TAG takes note of the recent improvements of the SIA quality in Quetta Block and the incredible achievement of expanding the female presence in teams to 86%. The recent Chaman Tehsil refusal analysis is an example of the granular data that the programme and all provinces should use to focus on localized issues and gaps, and initiate appropriate action.

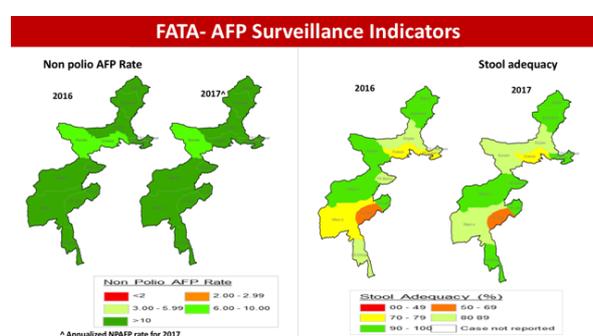
Persistent circulation of WPV1 indicated via environmental surveillance (42% positive samples this year) coupled with persistently low performance in Killa Abdullah district and Quetta Block pose a risk for the programme, with 10% of NPAFP cases recorded as having 3 or less doses of OPV.

Furthermore, the TAG is concerned about two consecutive positive environmental samples in Loralai and urges Balochistan to take note of the relatively high number of missed children across the province. The TAG is also concerned about reports of false finger marking and suggestions of a coordinated effort of falsification between the community and some health and community workers and supervisors. An overall good start of the southern corridor plan needs to be continued and improved with close coordination and action with Afghanistan.

## Federally Administered Tribal Areas (FATA)

The TAG commends the remarkable improvements in the FATA programme over the last two years, particularly the gains made in the AFP surveillance (see Figure 15). This has been made possible through the efforts of LEAs which enabled access to conduct polio activities in security-compromised areas. Increasing the proportion of female frontline workers backed by a strong divisional task force under the oversight of the Governor of FATA remain key to success.

Figure 17: FATA surveillance indicators



The TAG conveys its concerns over the persistently replaced LQAS lots due to security challenges, and is cognizant that programme gaps could be missed if areas are left unmonitored. The relatively high proportion of missed children due to “team visited but not vaccinated” indicates missed opportunities in children and warrants attention. The TAG is also concerned that 33% of all UCs are low performing, an increasing trend over the past few months.

## Khyber Pakhtunkhwa

The TAG notes the significant progress the Khyber Pakhtunkhwa team has made since the last TAG. However, the recent and only case in KP in 2017 comes from Lakki Marwat which urges the Province to maintain a continued focus on vaccination of children in key areas with a history of outbreaks. Peshawar has a history of serving as a core reservoir and cannot afford reestablishment of virus transmission, particularly as the city experienced 3 consecutive positive ES during the last three months of the year. Current northern corridor transmission with Nangarhar at the western end and the Twin Cities at the eastern end puts Peshawar in a fragile position. ‘No team visited’ is an issue indicating persistently missed children and ultimately a cohort of susceptible children for virus circulation.

In extension to the northern corridor, the TAG has concerns about population movement between north KP and Afghanistan and consequently, the potential missed populations in common areas along the border.

## Sindh

The TAG appreciates the steps taken to enhance and sustain government support, especially the Chief Minister's oversight and leadership, with involvement of all cadres of the government structure. The TAG welcomes the decision to increase local human resources in high-risk areas and urges special attention in the deployment of local people with common linguistic and cultural background.

The TAG is concerned about the situation in Karachi indicating reemergence of the virus, establishment of circulation and delayed response activities. The TAG analyzed the situation in the backdrop of the heterogeneity of population in Karachi and zero dose NPAPF cases from refusal families. Karachi's status as a major hub for population movement and the historic pattern of persistent transmission and contribution to reseeding marks the city as a major risk for the upcoming low season. The TAG is also concerned about the current situation in Interior Sindh due to introduction of different cluster lineages and suboptimal SIA performance in parts of Central Sindh.

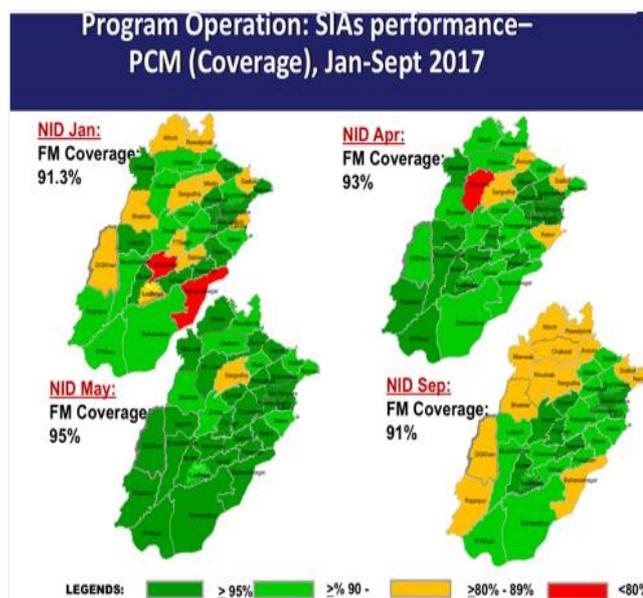
## Punjab

TAG recognizes that the immunity profile of Punjab appears to be strong and that the quality of activities is high (see Figure 18). With a broad and strong immunity base, Punjab has been able to avert risks posed during the high transmission season.

However, the TAG remains concerned about the periodic appearances of poliovirus in environment sampling, indicative of potential immunity gaps in HRMPs. The virus may also pose a risk to the population in South Punjab due to operational issues in some areas. Government oversight and influence will remain the key to success in Punjab.

TAG is concerned about the infrequent Provincial Task Force meetings and that Deputy Commissioners were not chairing the evening meetings. Consequently, the risk associated with low performance and lack of follow up remains high.

Figure 18: Punjab SIA performance



## Twin Cities (Islamabad and Rawalpindi)

TAG recognizes that the recent epidemiological picture from the northern corridor is a reminder that poliovirus transmission has reached the eastern part of Pakistan including the Twin Cities of Islamabad and Rawalpindi. To respond to these challenges, the Twin City Task Force has been instigated; however, the infrequency of meetings remains a concern.

TAG recognizes that CDA remains the weak link of the programme and efforts need to be focused here to prevent establishment and circulation of the virus.

## Surveillance

The TAG commends the improvement in quality and sensitivity of both AFP and environmental surveillance. TAG takes note of decreasing number of cases so far in 2017 with increasing surveillance sensitivity. However, as highlighted by recent surveillance reviews, there is a decline in AFP surveillance quality in some districts especially in KP due to the high turnover of staff which is concerning.

## Communication

TAG acknowledges the fact that the communication infrastructure within the programme is well developed, commends the robust one-team approach and underlines that communication is integral to delivery of quality operations. (See Figure 19)

The TAG also commends the current upsurge in district-level government oversight of planning and execution of communication activities in high-risk areas.

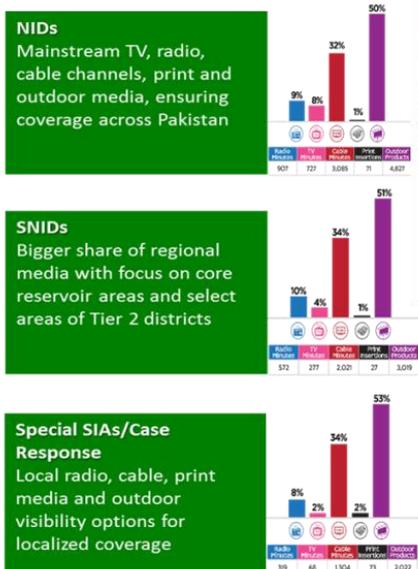
However, the TAG re-emphasizes that an understanding of the social context of clusters of missed children remains pivotal in vaccinating every child, especially among HRMPs. The TAG is observant of the fact that the media environment remains fluid and requires regulated focus and rigour, with the backdrop of upcoming elections.

Figure 19: NEAP 2017/2018 Communications Strategy

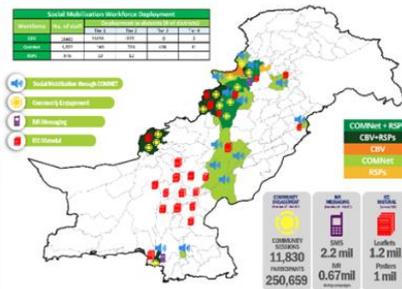
# NEAP 2017/18: Program communications

## Strategies achieving high awareness of campaigns

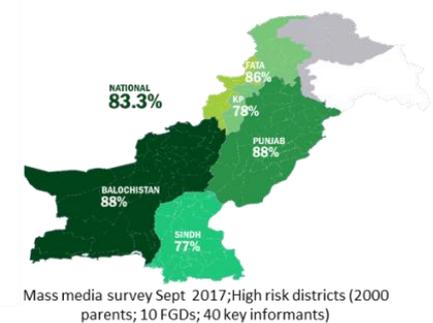
### Mass media coverage 2017



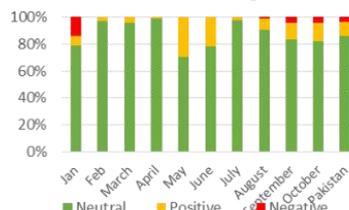
### Targeted Social Mobilization 2017



### Awareness of Campaigns, Sept 2017



### Media Monitoring, 2017



### New IPC Module/Training, Sept 2017



## **Routine Immunization**

The TAG recognizes the opportunities for increased synergies between EPI and the polio eradication effort, particularly with the implementation of the National Immunization Support Project (NISP). The polio Tier 1 areas point to populations where EPI and the NISP should focus. Case investigation and other polio data demonstrate that provincial EPI programmes are often failing to provide regular immunization services to these populations. Focus of both programmes on these areas offers synergies to address these long-standing gaps.

## Recommendations

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The Pakistan programme has taken major strides towards interrupting poliovirus circulation with the lowest number of cases ever reported. However, poliovirus cases continue to be reported and detected in a concerning number of areas scattered across the country. This wide range of geographies is a less-than-ideal scenario for the programme aiming to achieve its goal of interrupting all chains of transmission. It requires simultaneous focus on multiple transmission zones (Karachi, Peshawar and Quetta Block) while maintaining high quality in other areas. It also requires granular and focused analyses to determine the most effective strategies in areas with persistent virus transmission and an ability to identify key gaps and taking rapid corrective actions. NEOC must provide ongoing oversight and enhanced support to PEOCs to facilitate focused data analysis and utilization.

Polio is an issue of reservoirs, not countries. The virus is harnessing trans-border movement across shared corridors of Afghanistan and Pakistan and finding safe havens in low immunity cohorts. The TAG urges the Pakistan programme to strengthen and deepen coordination with Afghanistan, implement the southern corridor plan and initiate the northern corridor plan in order to ensure a strong immunity profile across borders. The HRMP analysis needs to expand further to identify and track key population movements across the corridors and reservoirs.

As the country enters a year of political transition, TAG reiterates the non-political role of the EOCs and expects the current setup to remain in place with focus on the common goal of eradication.

Technical guidance is vital for the programme. As global partners deploy human resources to support the Pakistan programme, their entry and stay in the country remains a challenge due to outstanding issues with visa issuance and NOC clearance. The TAG advises Pakistan to resolve these administration issues no later than by the end of 2017, to ensure that timely support can be maintained. Furthermore, the programme in the current situation requires ongoing support from the Government of Pakistan and the GPEI to ensure adequate resources for the implementation of the NEAP are maintained.

The TAG recommends that community (geographic and ethnic, stationary and mobile) remains at the center of the programme efforts and long-term solutions are implemented to overcome community resistance to vaccination and address issues that lead to poor campaign quality. Involvement of the community in key practices (such as acting as influencers, mobilisers, educators and vaccinators) will ensure engagement and commitment in the final stages of polio eradication. The communication strategy needs to be customized and targeted as per need, acknowledging the good work and encouraging transparency in reporting. The TAG encourages persuasive approaches to tackling chronic refusals and strongly discourages forced vaccination, which can have a long-term negative impact.

## Corridors

As two of the last three endemic countries in the world, Pakistan and Afghanistan must continue close coordination and collaboration. The current transmission of WPV1 in the southern and northern corridors indicates mutual challenges and large-scale continuous population movement

allowing virus transmission across the borders. Implementation of the southern corridor action plan should remain a focus, including strengthening coordination with Afghanistan and developing standardized quality indicators to track performance and progress. Identifying potential HRMPs responsible for harboring and transmitting poliovirus across shared borders should be a priority. The current expansion of the northern corridor to eastern parts of Pakistan (Twin Cities) warrants urgent planning and action with Afghanistan, during the first quarter of 2018. The plan needs to include districts of eastern Afghanistan, Khyber Agency, Peshawar, northern KP and the Twin Cities of Islamabad and Rawalpindi. Again, the use of standardized quality indicators to track performance and timelines is strongly advised by the TAG.

## **Provincial Recommendations**

### **Balochistan**

- Quetta Block, with particular focus on Killa Abdullah, needs to remain the first priority for Balochistan. This should include UC analysis and monitoring of progress in high-risk areas, focusing on:
  - SIA performance;
  - Microplanning;
  - Clusters of missed children and refusals;
  - Accountability for performance.
- Quetta Block needs to devote particular attention to multiple reports of falsification of immunization between communities and polio personnel. These should be investigated and acted upon with the highest urgency.
- Balochistan needs to ensure that the Provincial Task Force chaired by Chief Minister and/or the Chief Secretary meets monthly to address the remaining challenges in the Quetta Block, particularly Killa Abdullah. This should include identifying the interventions to address these challenges, documenting their impact, and taking corrective action.
- The TAG requests a specific and detailed update on each UC in Quetta Block at the next meeting in 2018. While the focus remains on Quetta Block, interior Balochistan and areas with security problems should also be monitored. Balochistan should ensure proper monitoring (jointly with Afghanistan) of the southern corridor plan, using standardized indicators to measure performance.

### **FATA**

- FATA should remain vigilant against the backdrop of transmission in northern and central corridors.
- Close focus needs to remain on Khyber and North & South Waziristan.
- Additional focus should be on bordering areas with Afghanistan, including Mohmand and Bajour as part of the northern corridor plan, and on ‘vacated areas’ within the agencies.
- FATA should conduct assessment in Q1 of 2018 to identify potential ES sites with the aim of opening appropriate sites.

### **Khyber Pakhtunkhwa**

- Peshawar should be the first priority for KP. Remaining quality challenges in Peshawar should be urgently addressed.
- In addition, efforts should be made to ensuring high quality of activities (micro plans, missed children, etc.), oversight and strengthening support to northern and southern KP (Bannu, Lakki Marwat, Tank).
- KP should develop a northern corridor action plan with Afghanistan including analysis of security-challenged areas and analysis of HRMP.

## **Sindh**

- Karachi:
  - Review and update the existing Karachi Action Plan to address the operational gaps and clusters of chronically missed children including community resistance.
    - Conduct an investigation of catchment zones from positive environmental samples.
    - Continue to update risk analyses at UC level.
    - Disaggregate missed /refusal children data geographically and culturally.
  - Align duration of campaigns in Karachi across various SIA modalities (CHW, FCV, MTAP, mobile teams).
  - Determine the impact of initiatives implemented in Tier 1 districts, specifically in the known high-risk areas (work load rationalization, hiring government-accountable persons and UCMOs).
- Interior Sindh:
  - Enhance government oversight in Central Sindh.
  - Continue focusing on improving campaign quality and reaching HRMP and persistently missed children.

## **Punjab**

- Improve and maintain high quality of SIA campaigns, especially in south Punjab and Rawalpindi.
- Urgently conduct a Provincial Task Force meeting and meet regularly during the low transmission season (at least quarterly).
- Continue investigating catchment zones from positive environmental samples to determine potential sources of positive isolates.
- Continue to ensure that HRMP populations are included and updated in micro plans.

## **Twin Cities (Islamabad and Rawalpindi)**

- TAG recommends the Twin City Task Force to meet in each pre and post campaign phase and appoint a technical focal point to oversee Twin City operations.
- Improve and maintain high quality SIA campaigns, especially in CDA-Islamabad and Rawalpindi.

## Surveillance

- Address AFP surveillance gaps identified by recent Federal and Provincial surveillance reviews and ensure the maintenance of high quality of AFP surveillance, considering the recent re-establishment of transmission in Karachi and the continued isolation of WPV from environmental sites in other hotspots.
- Maintain the annual ES site quality review plan and continue the implementation of the sample collection monitoring.
- Ensure careful exploration of potential environmental surveillance sites in Khyber, South Waziristan and Bajour Agency, keeping in mind the requirements needed for a useful ES site. Sites may be temporarily operationalized for up to 6 months in order to review potential yield in case the evaluation of sites is equivocal.

## Routine Immunization

- TAG recommends that the “zero dose” data identified by PEI be systematically shared with EPI in order for EPI to take actions to cover these children through the routine vaccination network.
- TAG recommends provincial routine immunization programmes to prioritize the use of PC1 to establish functional EPI centres and allocate newly recruited staff, who are locally acceptable, trained and managed, in the core polio reservoirs.

## Communication

- Deputy Commissioner reviews should focus on acknowledgement of good work and transparency in reporting and create an atmosphere where problems are shared and discussed openly so they can be addressed. Problems are ‘good’ when they are known, as they provide an opportunity for response and improvement but become ‘bad’ when hidden as they are not addressed and can grow.
- TAG encourages persuasive approaches to tackling chronic refusals and strongly discourages forced vaccination, which has been demonstrated to have a long-term negative impact.
- To better understand reasons for missed children, select very high-risk clusters in Karachi, Killa Abdullah and Peshawar should conduct Focus Group Discussions over the next three rounds, analyze findings to formulate strategies to respond, and measure effectiveness in terms of reduced missed children including ‘not available’ and refusal children.
  - It is recommended to break down ‘misperceptions’ as a reason for refusal for targeted communication response.
- Generate increased social data around High-Risk Mobile Populations to ensure targeted communication strategies to complement Northern/Southern Corridor Action Plan.

## SIA schedule

The TAG endorses the SIA schedule of three NIDs and three SNIDs between December 2017 and May 2018, and commends the synchronization efforts with Afghanistan (see Figure 18 and 19).

Figure 18: SIA Schedule Pakistan and Afghanistan, December 2017 – May 2018

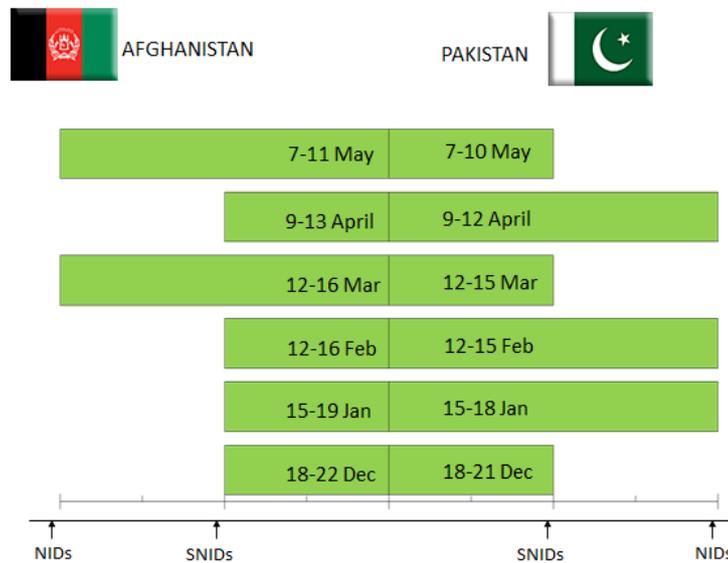
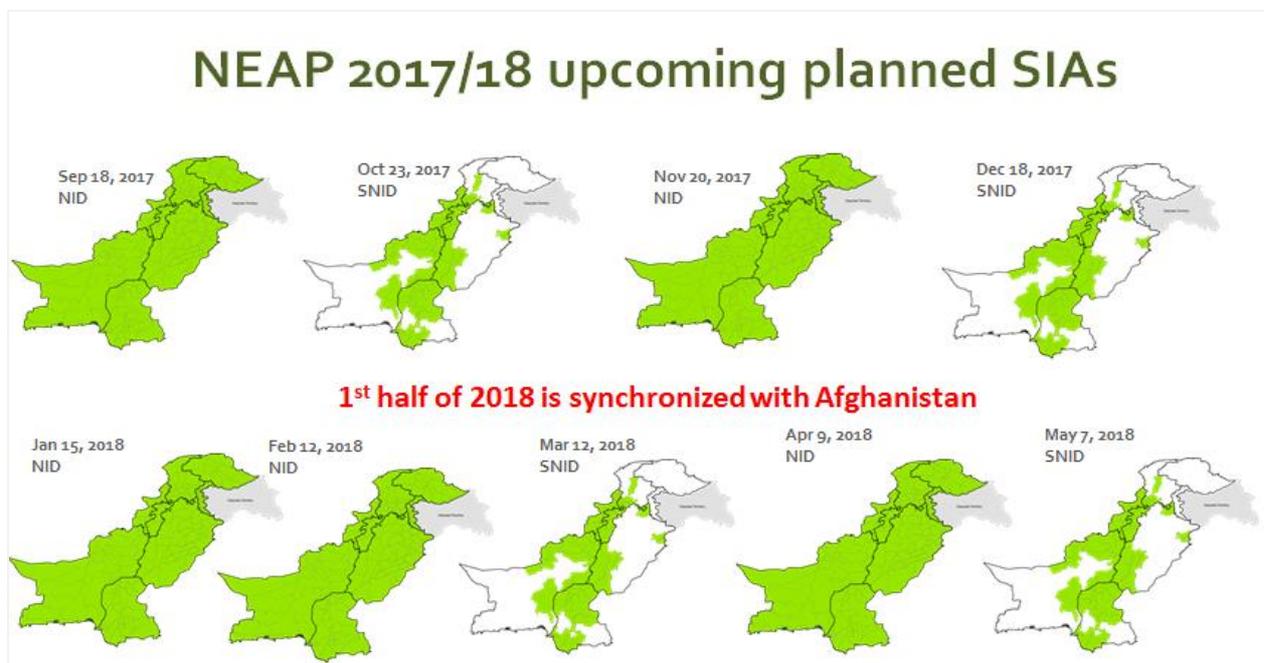


Figure 19: Pakistan NEAP 2017/2018 SIAs



## Conclusions

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The TAG concludes that:

1. The Pakistan programme has made great progress towards the interruption of poliovirus transmission thanks to sustained political and partner commitment, and the implementation of clear cut strategies.
2. The southern transmission corridor, particularly Quetta Block and Killa Abdullah, and Karachi, and the northern corridor including Peshawar and the Twin Cities remain the greatest risk to polio eradication in Pakistan & Afghanistan.
3. Microscopic focus is needed in areas with inadequate performance, identifying risks and initiating prompt and sustainable response.

The low transmission season in the first months of 2018 represents an important opportunity that should not be missed – to wipe out the remaining chains of poliovirus circulation and secure a polio-free Pakistan. The TAG believes that this is technically and programmatically feasible, but will require additional efforts and focus to address some very challenging remaining obstacles to reaching all children. It will require a culture of transparency that identifies problems and urgently takes corrective actions resulting in all children in these areas being repeatedly immunized, until poliovirus circulation is no longer detected. Failure to do this will almost certainly lead to continued transmission beyond 2018.

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