Meeting of the Technical Advisory Group (TAG) on Polio Eradication in Pakistan

Karachi & Islamabad, Pakistan, 8-12 January 2019

Acronyms

AFP	Acute Flaccid Paralysis
bOPV	Bivalent Oral Polio Vaccine
C4E	Communication for Eradication
CBV	Community-Based Vaccination
CDC	Centers for Disease Control and Prevention
CHW	Community Health Workers
cVDPV2	Circulating Vaccine Derived Polio Virus Type 2
CWDP	Central Development Working Party
DC	Deputy Commissioner
DPCR	District Polio Control Room
DPEC	District Polio Eradication Committee
EI	Essential Immunization
ES	Environnemental Sample
EOC	Emergency Operations Centers
EPI	Expanded Programme on Immunization
EV	Entero-Virus
FCVs	Female Community Vaccinators
FGD	Focus Group Discussion
FRR	Financial Resource Requirements
GAVI	Global Alliance for Vaccines
GB	Gilgit Baltistan
GOP	Government of Pakistan
GPEI	Global Polio Eradication Initiative
HRMP	High-Risk Mobile Populations
ICM	Intra-campaign Monitoring
IPV	Inactivated Poliovirus Vaccine
KP	Khyber Pakhtunkhwa
KPTD	Khyber Pakhtunkhwa Tribal Districts
LEAs	Law Enforcing Agents
LPUCs	Low Performing Union Councils
LQAS	Lot Quality Assurance Sampling
mOPV	Monovalent Oral Polio Vaccine
NA	Not Available Children
NA3	Not Available Children Out-of-District
NEAP	National Emergency Action Plan
NEOC	National Emergency Operation Center
NID	National Immunization Day
NGO	Non-Governmental Organization
NPAFP	Non-Polio Acute Flaccid Paralysis
NTF	National Task Force
NPMT	National Polio Management Team
N-STOP	National Stop Transmission of Poliomyelitis
PC1	Planning Commission form 1
PCM	Post Campaign Monitoring
PEI	Polio Eradication Initiative
PEOC	Provincial Emergency Operation Center

PMFG	Prime Minister Focal Group
PMFP	Prime Minister's Focal Person
PTF	Provincial Task Force
PTP	Permanent Transit Points
RADS	Risk Assessment and Decision Support
RRU	Rapid Response Unit
RSP	Religious Support Persons
SIA	Supplementary Immunization Activity
SMT	Special Mobile Team
SNID	Sub-National Immunization Day
SOP	Standard Operating Procedure
TAG	Technical Advisory Group
TPCR	Tehsil Polio Control Room
TPFM	Third Party Field Monitors
TTM	Temporary Tehsil Monitors
TTSP	Temporary Tehsil Support Person
UC	Union Council
UNICEF	United Nations Children's Fund
VDPV	Vaccine Derived Polio Virus
WHO	World Health Organization
WPV	Wild Polio Virus
VBNFM	Vaccinated but not Finger Marked

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Executive Summary

The Technical Advisory Group (TAG) on Polio Eradication met on the 8th to 12th January 2019, in Karachi and Islamabad. The objectives of the meeting were to review the programme's progress and challenges, evaluate the impact of eradication activities on virus transmission and provide further guidance on strategies and activities to attain zero polio. The TAG appreciated the change in format of the technical field consultation meetings, which ensured closer analysis and discussion on specific geographic areas and effective participation and engagement of Commissioners, Deputy Commissioners, provincial EI directors and other partners involved in immunization (GAVI and World Bank).

Pakistan continues its efforts towards polio eradication. In 2018, twelve polio cases were reported, four more than the eight reported in 2017. Karachi and Peshawar are the primary areas of concern and pose an epidemiological risk of continued transmission and exportation. Sustained transmission in Peshawar is worrying and the virus is finding vulnerable pockets in areas with an epidemiological history related to sub-standard operations. Quetta Block with persistent transmission in Southern Afghanistan is under continuous threat of re-establishing transmission.

The TAG recognized the enormous amount of work and effort that has been invested into the programme in Pakistan. The TAG commends the programme for successfully integrating Frontier Regions (FR) from KP Tribal Districts (KPTD) into respective districts of KP. The TAG commends the priority given to polio eradication by the new Government. The Prime Minister took charge in September 2018 and by October 2018, approved the NEAP 2018/19 and nominated Mr. Babar Bin Atta as his focal person for this emergency programme. The November campaign was inaugurated by the President and Prime Minister of Pakistan. The programme has engaged closely with the Federal Minister of National Health Services. His first briefing was given on the overall situation of Polio Emergency Program soon after his appointment. Since then, he has received monthly briefings with the last one on 24th Dec 2018.

The TAG acknowledges the approval of Planning Commission form 1 (PC1) by Central Development Working Party (CWDP). The Government and partners should ensure the funding of Planning Commission form 1 (PC1) and Financial Resource Requirements (FRR) to secure national contribution to the program.

The Pakistan-Afghanistan bordering areas with frequent population movement - defined as three distinct Northern, Central and Southern corridors - along with Karachi continue to be the primary areas of concern. The corridors and Karachi have and continue to contribute substantially to the overall number of WPV1 cases reported. Genetic sequence analysis of WPV isolated from Northern, Central and Southern Corridors show predominantly long chains of transmission highlighting importation often resulting in sustained transmission and indicating that these are areas with gaps that require attention and swift response. Contributing 8 out of 12 cases reported in 2018, Peshawar and KP overall pose the greatest risk to eradication of polio in

Pakistan. Success in Pakistan will largely depend on interruption of WPV1 transmission in KP.

High population and density, movement patterns from active reservoirs, birth rate, poor sanitation, and absence of sustained Essential Immunization (EI) make it difficult to interrupt transmission from core reservoirs. However, the programme does not need to re-invent the wheel but focus on implementation, as one team, of tried and tested NEAP strategies fully. This does not imply that the TAG considers innovation unnecessary – rather that innovative initiatives, in particular at the local level, should be developed within, and consistent with, the larger framework of existing, evidence-based PEI strategy. The 2018/19 NEAP priorities and structures has all the ingredients for success. The TAG also stresses that until solid routine immunization is achieved, sustaining the benefits of Pakistan's polio eradication achievements will be challenging.

The top priority of the programme should be to obsessively focus, in core reservoirs, on reaching still missed and chronically missed children, including still NA and still refusals where high incidence and/or clustering merit it, through continued improvement of operations. Community Health Workers (CHWs)/vaccinators should be capacitated and maximally supported to enable them to achieve quality work. Areas with security challenges require close attention to ensure effective implementation and third party monitoring.

Challenge mapping to identify key obstacles to acceptance of vaccination in the high-risk communities is useful but should be further refined to ensure activities focused on challenges which are specific, locally actionable and integrated within micro plans. The programme must be careful to balance the focus on refusals and efforts to reach all missed children. Within the continuing intensive focus on reaching all missed children, efforts to understand refusals should be continued and, where necessary deepened, using Focused Group Discussions (FGDs), Knowledge Attitude and Practice (KAP) surveys and support through sociological analysis, including analysis of 'direct' refusals. Initiatives to resolve and reduce refusals, in particular where they are clustered, should be continued to ensure ongoing evaluation of efficacy, including centrally through assessing changes/improvements in coverage in localities where initiatives are implemented.

Building on recommendations of the June 2018 meeting on approaches in key reservoirs, the TAG endorses the expansion of target age group up to 10 years in Peshawar; expansion of the IPV target group up to five years and expansion of the target age group to all ages at border crossing points with Afghanistan.

Lastly, the TAG strongly recommends ensuring continuity of administrators (Commissioners, DCs and EOC Coordinators) in the core reservoirs for at least 6-months.

Introduction

The TAG on Polio Eradication in Pakistan met in Karachi and Islamabad from the 8th to the 12th of January 2018. The meeting was chaired by Dr. Jean-Marc Olivé, attended by 6 TAG members and supported by the Pakistan Polio Eradication Team, led by Mr. Babar Bin Atta, the Prime Minister's Focal Person for Polio Eradication. The TAG welcomed the representatives from Government, local and international partners and donors.

The TAG reviewed progress in the Pakistan programme since its last meeting in June (including the implementation of TAG recommendations) and the remaining challenges the programme is facing in 2019. Key highlights and progress recognized by the TAG, included:

- The political transition in 2018 was smooth and the programme continues to enjoy strong political commitment and support. The government has committed to support leadership within the EOC structure, working as one team, to ensure the high quality of programme operations does not change.
- Pakistan's surveillance system continues to sustain highly sensitive AFP and ES to detect any poliovirus transmission. The National non-polio AFP (NPAFP) rate was maintained above the 6 per 100,000 population <15 years of age for 2018. Ongoing sensitization of health care providers at every level (from basic health centers in rural areas to private practices) to actively report any suspected AFP cases will continue to be an ongoing focus. As per the TAG recommendation, the programme has assessed a number of priority areas for expansion of ES sites. A new site in Kurram, KP, was initiated in December of 2018.
- Within the broader PEI objective to minimize all missed children, FGDs have been developed to guide localized strategies to address refusal where it is identified and represents a major problem.
- The Pakistan programme continues to strengthen collaboration with Afghanistan to stop transmission across the shared corridors. This work includes the synchronization of SIA activities, analyses of key population movements across the corridors, and implementation of the Southern and Northern Corridors Action Plans.

Looking forward to 2019, the Pakistan polio programme has identified key remaining challenges:

- In core reservoirs of WPV1, transmission trend of still missed children has been decreasing except for Baluchistan. The proportion of refusals among these still missed children varies from 67% in Karachi to 50% and 15% in KP and Quetta block respectively.
- In areas where partner agencies have no access and where third party monitoring is not feasible it is difficult to assess the quality of operations.
- In the Pakistan-Afghanistan Corridors, there is substantial cross-border movement, particularly in the Northern and Southern Corridors of poliovirus transmission. The

ban on house to house campaigns in Southern Afghanistan and the increase in inaccessible areas in the Eastern region are concerns for Pakistan.

- Across all high risk areas there are continuing challenges in reaching children through routine immunization and other basic health/ nutrition and wash services.
- Across the entire country, there is a low risk perception due to declining polio cases and the concentration of cases in a few pockets. To ensure vaccine acceptability and sufficient immunity, effective communication strategies (advocacy, social and traditional media engagement and targeted community engagement) remain critical.

The TAG meeting provided a welcome opportunity to discuss progress in each province, share initiatives to strengthen the programme, address challenges and solicit recommendations to guide the programme going forward.

Progress

Pakistan Programme

Pakistan continues its headway towards polio eradication in the second half of 2018 despite a range of challenges including evidence of increasing trends of community resistance. At the TAG meeting, Pakistan had reported ten (10) cases; however, two more cases have been reported since then bringing the 2018 total to 12, four more than the eight reported in 2017.

For the period July to December 2018, nine (9) wild polio cases were reported: Karachi in Sindh (1); Charsadda (1), Lakki Marwat (1), and Bajour (5) in KP; and Khyber (1) in KPTD.

Figure 1: Proportion of Environmental Surveillance (ES) samples positive for WPV1 (2017-18)

Areas of concern	2017			2018		
	Qtr3	Qtr4	Total	Qtr3	Qtr4	Total
Karachi	16 (57%)	13 (48%)	42 (38%)	11 (31%)	6 (18%)	27 (21%)
Quetta Block	5 (24%)	5 (24%)	30 (35%)	5 (23%)	12 (57%)	22 (26%)
Peshawar	0 (0%)	3 (50%)	8 (30%)	7 (78%)	8 (67%)	23 (68%)
Rawalpindi/Islamabad	3 (33%)	1 (11%)	13 (34%)	8 (89%)	8 (89%)	22 (59%)
Others	5 (5%)	6(6%)	13 (3%)	14 (14%)	17 (17%)	45 (11%)
Pakistan	**29 (18%)**	**28 (17%)**	**106 (16%)**	**45 (26%)**	**49 (29%)**	**139 (20%)**

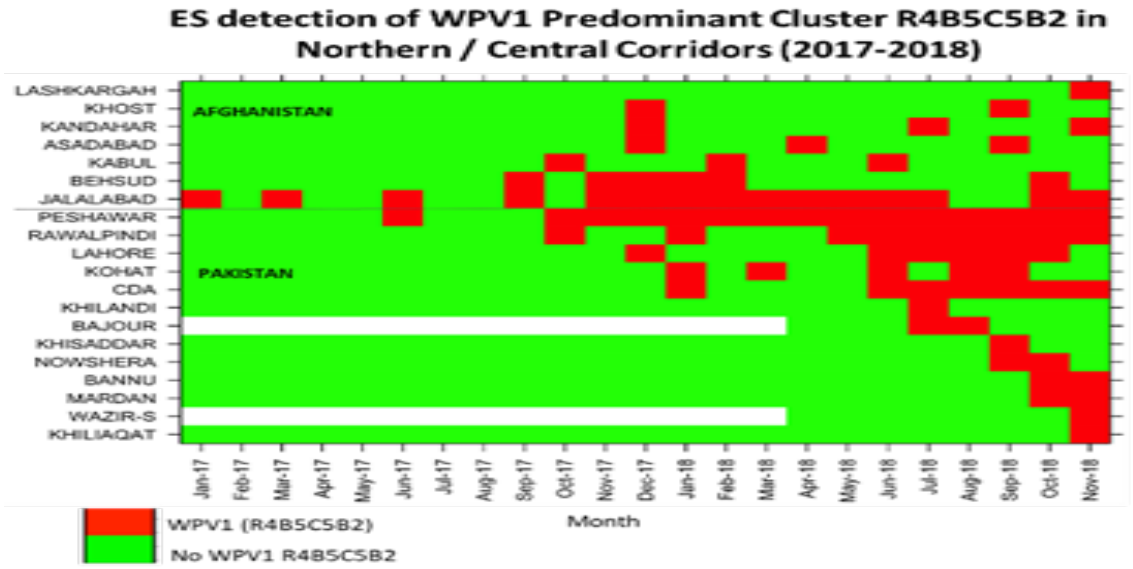
Overall, there was a marginal increase in the proportion of positive ES samples in 2018 (20%) compared to 2017 (16%) (Figure 1). Improvement was seen in Karachi and Quetta Block where the proportion of ES samples with WPV1 isolated reduced in 2018. A substantial increase in proportion of ES positive samples was noted between 2017 to 2018 in the twin cities of Rawalpindi and Islamabad (34% to 59%) as well as Peshawar (30% to 68%). Intense circulation of WPV1 in Quetta, Peshawar and twin cities was seen in the 4th quarter of 2018 compared to the first three quarters of 2018, and 2017.

The Pakistan-Afghanistan bordering areas with frequent population movement, defined as 3 distinct corridors (Northern, Central and Southern), along with Karachi, continue to be the primary areas of concern for the polio programme. The corridors and Karachi have and continue to contribute substantially to the overall number of WPV1 cases reported. Genetic sequence analysis of WPV isolated from the corridors show predominantly long chains of transmission highlighting how importation is resulting in sustained transmission and pointing to areas with gaps that require attention and response.

In 2018, the Northern corridor contributed to 7 out of 12 WPV cases in Pakistan with the last case reported on 29th December. The central corridor reported one case from Lakki Marwat on the 16th of December. There is substantial cross-border movement

between the Northern and Central corridors especially between Peshawar and Greater Nangarhar and the Southern and newly merged districts of KP. This movement poses a continued risk of onward spread across Pakistan (Figure 2).

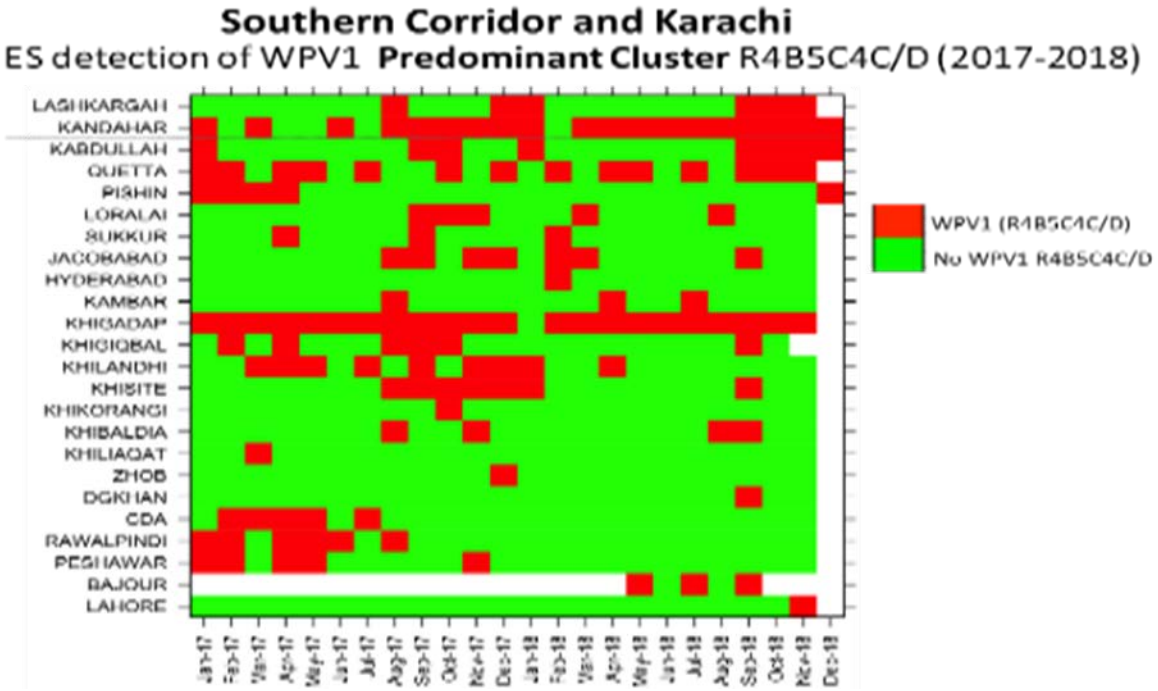
Figure 2: ES detection of WPV1 predominant cluster (R4B5C5B2) in Northern and Central Corridors (2017-2018)



The Northern corridor virus has been isolated in the twin cities of Rawalpindi and Islamabad as well as Lahore and Karachi. Recent and continued detection of the same cluster in Bannu and S. Waziristan raises concerns of the risk of established circulation in the central corridor.

While the Southern corridor remains a priority for polio eradication, no case was reported in 2018 in Tier 1 areas. There is substantial cross-border movement in the Southern corridor with strong connectivity between Killa Abdullah and Kandahar with sustain WPV1 transmission in 2018. Within Pakistan, there is widespread connectivity with Karachi and rest of Pakistan. These movement patterns are reflected in the isolation of WPV1 through environmental surveillance of predominant clusters circulating in the Southern Corridor and extending through to Central Balochistan, Karachi and Northern/Interior Sindh as well as sporadic detection in Northern Corridor, the twin cities and Lahore (Figure 3).

Figure 3: ES detection of WPV1 predominant cluster (R4B5C4C/D) in Southern Corridor and Karachi (2017-2018)

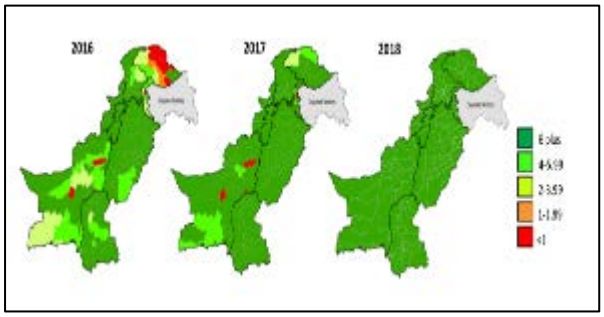


Population immunity estimates based on vaccination dose history of non-polio AFP cases and vaccine efficacy, as well as serology surveys indicate apparent high levels of humoral immunity; however, WPV1 persists in ES, suggesting a potential gap between humoral and mucosal immunity. In line with previous TAG recommendations, to stop transmission among seropositives, additional interventions to further boost immunity are required.

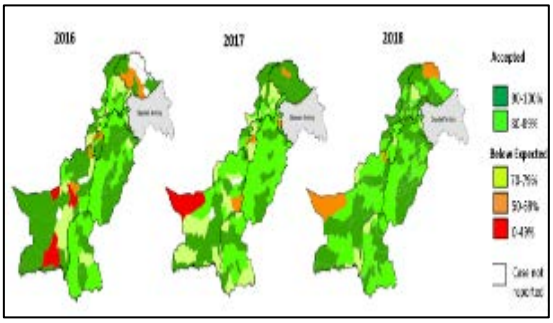
Timely detection of poliovirus transmission remains a key focus of the Pakistan PEI. The polio surveillance system continues to be enhanced through the “Surveillance for Eradication” workplan. Overall, the key surveillance indicators, including non-polio AFP (NPAFP) rate and stool adequacy (%) remain high across Pakistan. The NPAFP rates for the period July to December 2018 is above 6 per 100,000 population of children under 15 years across the country. There has been an improvement in stool adequacy rates with most districts achieving the 80% target. Despite these improvements, districts such as Chaghi in Balochistan and Chitral in KP are yet to achieve these targets. These are remote districts where delays in reporting of cases and reaching cases for investigation present significant challenges.

Figure 4: Surveillance indicators across Pakistan (2016-2018). (A) Non-polio AFP (NPAFP) rate; and (B) Stool adequacy (%)

A



B

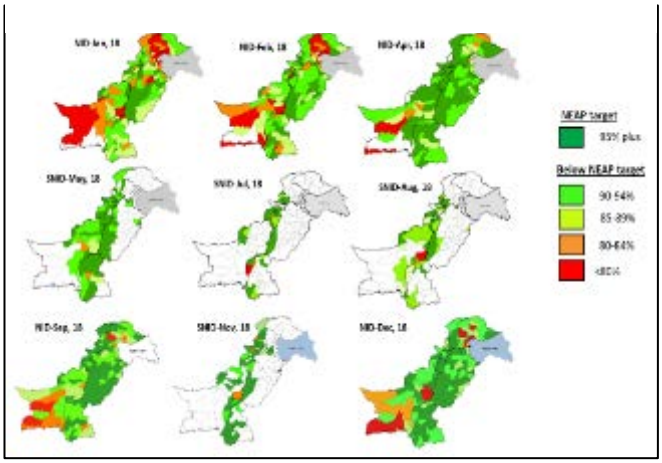


The Rapid Response Unit (RRU) conducted investigations for every reported polio case and positive ES sample (where WPV has not been isolated in the preceding 6 months). This was followed with 3 response SIAs for every case or event.

Between July and December, the Pakistan programme has implemented all the SIAs as per the NEAP 2018-19. Five SIAs were conducted between July to Dec 2018.

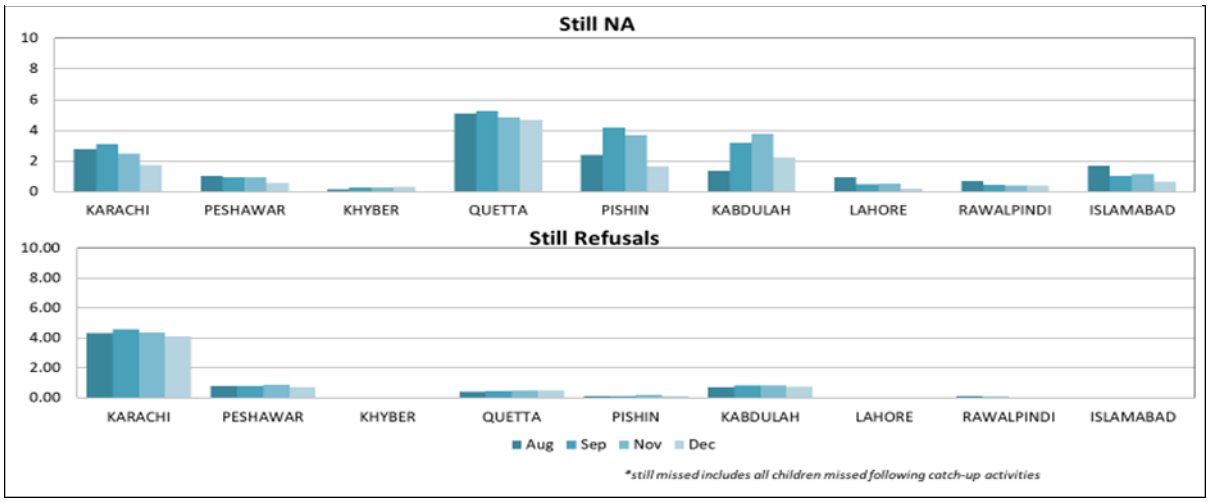
PCM data demonstrates continued improvement in vaccination coverage, however inconsistent performance is observed in Balochistan, parts of Sindh and newly merged districts of KP (Figure 5). Lot Quality Assurance Sampling (LQAS) data show performance trends similar to PCM.

Figure 5: SIA quality based on third-party post-campaign monitoring (PCM), 2018



Administrative data shows an increase in the proportion of still missed children (includes all children missed following catch-up activities) (Figure 6). Still NA continue to be a major component of overall still missed children, alongside evidence of clusters of refusals; Still NA and clusters of still refusals are good indicators of programme progress and operational quality.

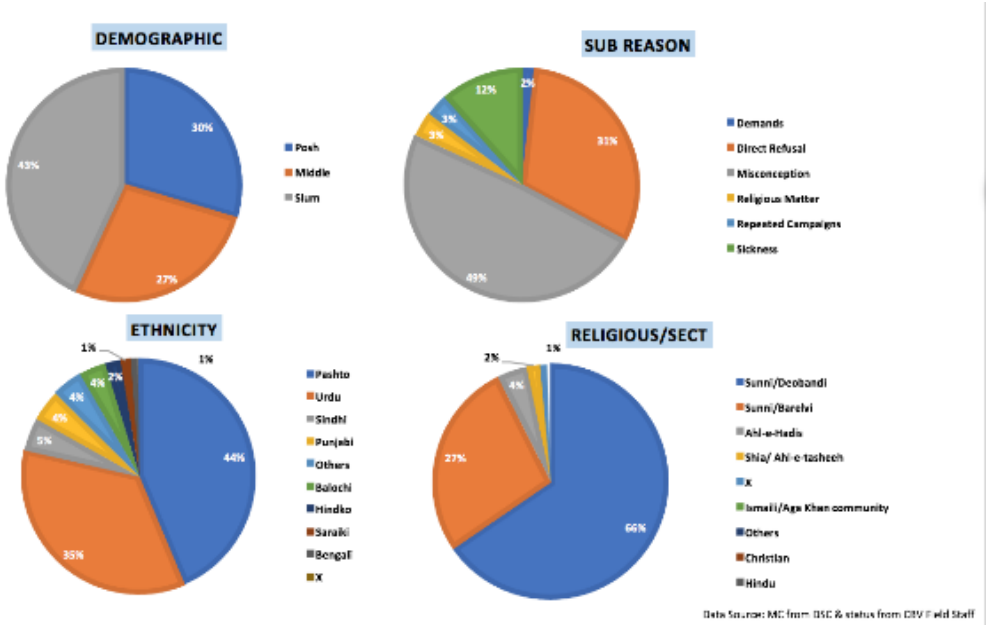
Figure 6: Proportion of still missed children from total target due to not available (NA) children and to refusal (Aug-Dec 2018)



C4E is the theme of NEAP 2018-19, which encompasses the programmatic shift to targeted communication actions. Targeted FGDs are conducted in priority UCs to understand factors that contribute to refusals, identify appropriate messaging and inform strategies to address clusters of refusals. In Karachi, Quetta block and Peshawar-Khyber corridor, area level FGDs and social profiling is conducted by the C4E task teams. Creative problem solving tactics as challenge mapping have been use to develop localized approaches and strategic communication activities tailored to specific issues identified in an area. Community engagement and reporting tools are updated accordingly, and community engagement undertaken through multiple influencers and female teams.

Social profiles of still missed children, persistently missed children and refusals are developed using social data collected by the CBV on these children and through targeted FGD's. Area level (UC) communication activities are then developed focused on building active engagement and programme ownership within the community. Additionally, RRU IEC kits have been developed to increase risk perception in core reservoirs. The social profiling of 34 high risk UCs of Karachi highlighted that a large proportion (43%) of refusals are in slums, misconceptions followed by direct refusals are the main reasons of refusals, the predominant ethnicity is Pashto (44%) and Urdu (35%), and majority of refusals (66%) belong to Sunni Deobandi sect (Figure 7).

Figure 7: Still refusal social profiling of 34 high risk UCs of Karachi in November 2018



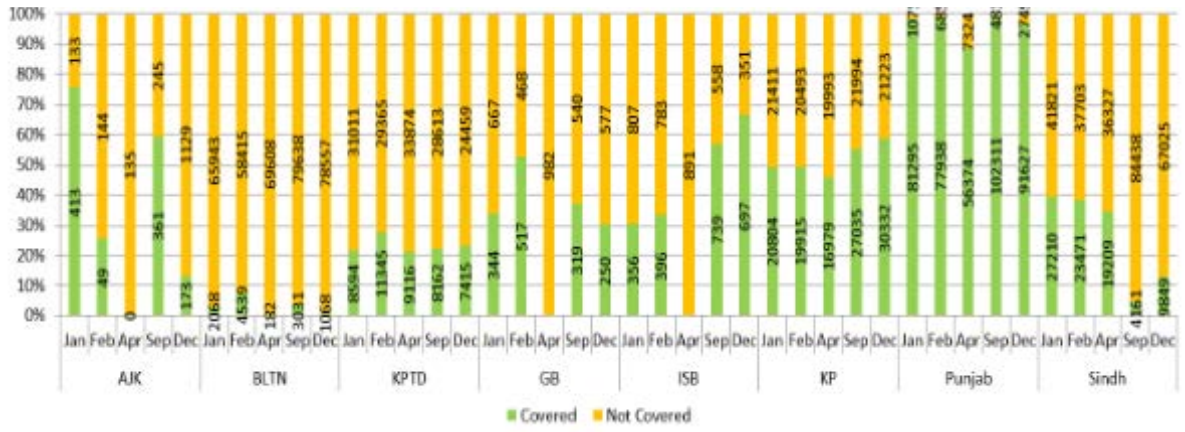
Reaching High Risk & Mobile Populations (HRMP) remains a priority for the programme. Between July and December 2018, 5,155,998 HRMP children were vaccinated during SIAs and 9,483,056 children were vaccinated at permanent and temporary transit sites. Of these, 62,207 were identified as zero dose.

Coordination with Afghanistan similarly remains a priority for the programme due to the closely interlinked populations and frequent movement patterns between the two countries (particularly across the three corridors). SIAs have been synchronized with Afghanistan in border areas. Monthly conference calls between Afghanistan and Pakistan teams in border areas and quarterly cross border meetings via VC are important mechanisms through which coordination is strengthened.

PEI supported the successfully implementation of Measles SIAs between15-20 October 2018. An administrative coverage of 98% was achieved and PCM results indicate 90% coverage in most provinces.

To improve EI coverage, the programme is now routinely sharing information of zero dose (EI) children identified during SIAs. By strengthening PEI/EI synergy, the programme aims to support coverage of identified zero doses. Progress is evident in provinces such as Punjab and KP while Sindh and Balochistan have the lowest of zero dose cases reported covered (Figure 8).

Figure 8: Proportion of zero dose essential immunization (EI) cases covered (Jan-Dec 2018)



EI remains a concern across Pakistan but particularly in Balochistan and the newly merged districts of KP.

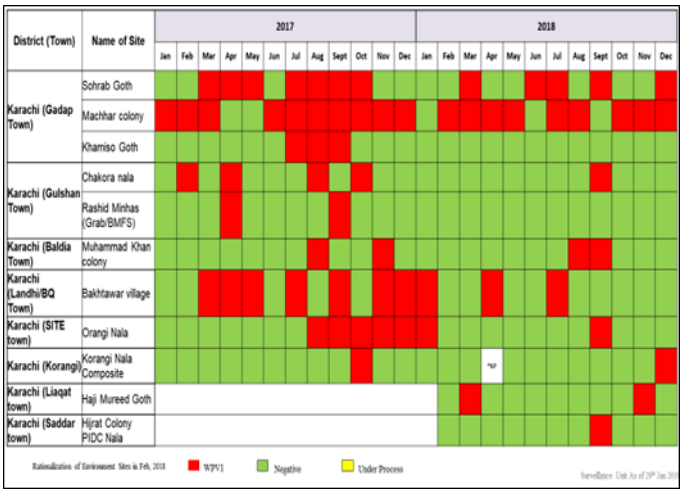
PEI in Pakistan continues to receive support from the new Government. The Prime Minister took charge in September 2018 and by October 2018, approved the NEAP 2018/19 and nominated Mr. Babar Bin Atta as his focal person for this emergency programme. The November campaign was inaugurated by the President and Prime Minister of Pakistan. The programme has engaged closely with the Federal Minister of National Health Services. His first briefing was given on the overall situation of Polio Emergency Program soon after his appointment. Since then, he has received monthly briefings with the last one on 24th Dec 2018.

Sindh Province

In Sindh province, the number of polio cases fell from 30 in 2014 to 1 in 2018. Prior to this single case from Karachi (Gadap) in September 2018 there had been no cases in Sindh for almost a year (August and November 2017 from Gulshan and Gadap Karachi).

Overall, in Karachi, there has been a reduction in the proportion of samples with WPV1, 22% in 2018 compared to 38% in 2017 (Figure 9). While this may indicate progress, there has been consistent isolation of WPV1 from sites in Gadap town (Machar colony and Sohrab Goth), indicating persistent circulation in the district.

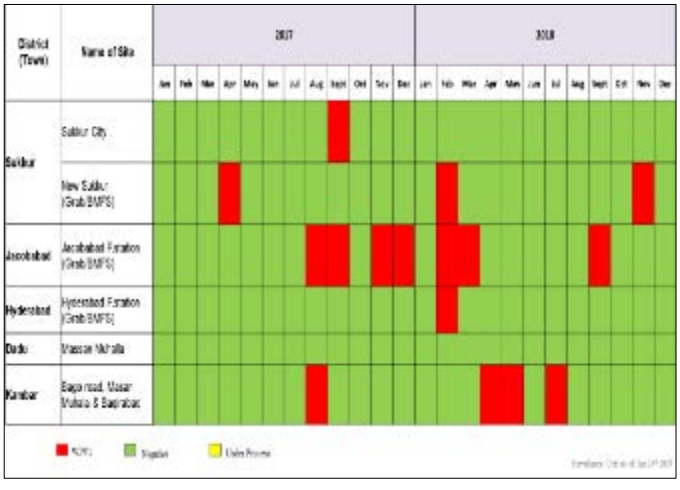
Figure 9: Environmental sample (ES) results for Karachi Division, by site and month (2017-2018)



In Interior Sindh, the last case of polio was reported in 2016. Despite this progress, Interior Sindh remains susceptible to importation of polio virus from Karachi, Quetta Block and other provinces (including KP). In 2018, 13% of the total collected samples were positive for WPV1, an increase from 9% in 2017 (Figure 10). WPV1 clusters isolated in Jacobabad and Sukkur in September and November respectively were linked to clusters circulating in Quetta and Peshawar.

On surveillance, the focus is on early detection through enhanced surveillance and building response capacity. Timely investigation was done for all positive samples (either through ES or stool from AFP cases), with action plans developed and implementation ongoing. Case and event responses and a focus on improving the quality of SIAs conducted have succeeded in interrupting circulation. The programme continues to focus on operational weaknesses identified in the investigations.

Figure 10: Environmental sample (ES) results for Interior Sindh, by site and month (2017-2018)

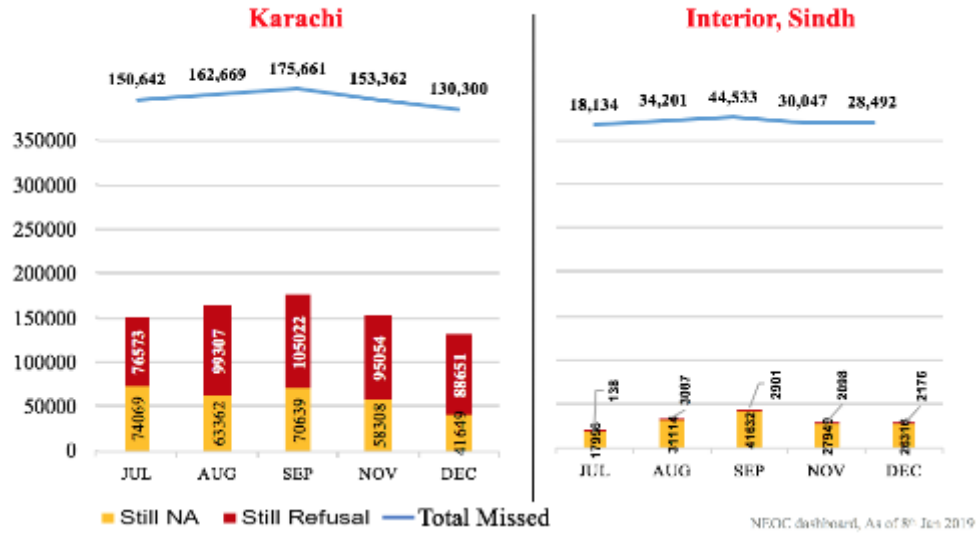


All standard indicators of surveillance met the benchmark at the district-level; however, there are some areas that require improvement at the sub-district level. Stool

adequacy in Sindh showed improvement from 2017, especially in Karachi. To increase sensitivity of the AFP surveillance in Kambar where an external surveillance review was performed, reporting sites were increased from 65 to 92 between July to December 2018, ensuring high reporting of AFP cases (84 in total between Jul-Dec).

In July to December 2018, five SIAs were conducted in Sindh province. Overall administrative coverage was maintained above 95% for the province. Transition to the full CBV strategy was completed in October 2018 in Karachi. This has improved the coverage and recording of missed children. Overall, there was a reduction in still missed children (including both NA and refusals) from September to December 2018 (Figure 11).

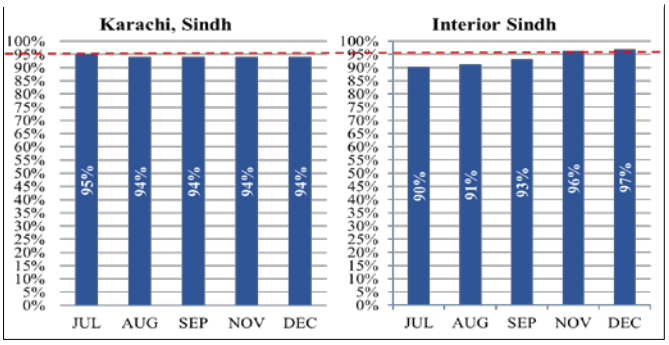
Figure 11: Numbers of still missed children in Sindh, Karachi and Interior Sindh (Jul-Dec 2018)



Further segregation of NA children over this time period demonstrated that a high proportion of still missed children were outside the UC (54% in Interior Sindh, 27% in Punjab, 11% in KP and 4% in Balochistan). The proportion of locked houses was less than 1% of the target houses.

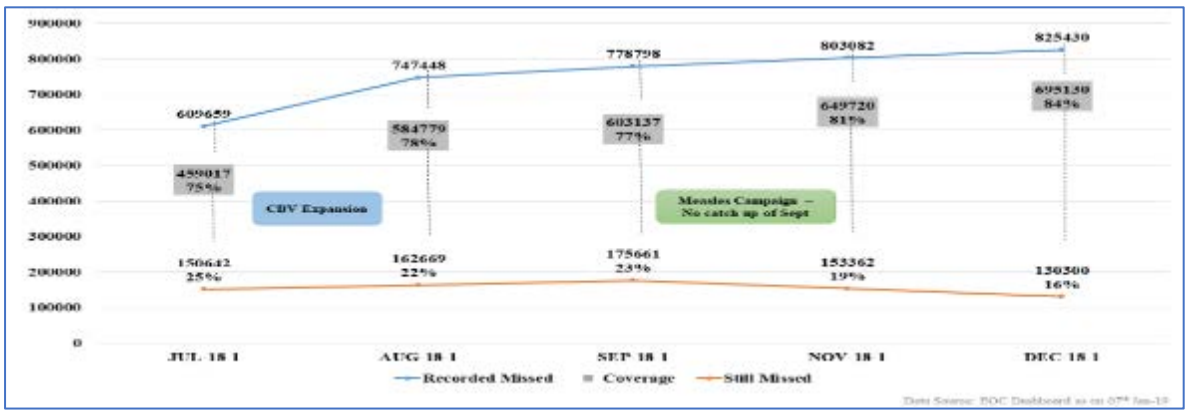
Overall, Sindh has struggled to reach the 95% LQAS pass rate bench mark in most of the SIAs conducted and only met targets in November and December SIAs (Figure 12). Karachi continues to struggle to achieve these standards. While Karachi has not met these standards, disaggregation of LQAS data shows that performance in high risk UCs of Gadap is consistently meeting targets. Similar trends are observed in PCM results.

Figure 12: LQAS pass rate for Karachi and Interior Sindh (Jul-Dec 2018)



To better understand the issues of reaching still NA and clusters of still refusals children, the C4E task team has instituted several strategies which include social and demographic profiling of refusals. This will guide the development of specific messages and communications interventions. Dedicated communication staff have also been recruited in high risk UCs to support implementation of the C4E strategy. Through this and other interventions, progress albeit marginal and slow, is seen in the reduction of still missed children in Karachi (Figure 13).

Figure 13: Trend of recorded and still missed children in Karachi (Jul-Dec 2018)



To address the issues in Gadap, Karachi (including still refusals, operational issues and poor EI), the Gujro 4 Action plan was developed and implementation has commenced. Model EI center at Jannat Gul Hospital and 4 experimental dispensaries and maternity home at Lassi Goth will be functional by end of January 2019. A team has been set up to support implementation of the plan and track what impact these interventions have on ground.

To support the implementation of HRMP strategies, Sindh has nominated HRMP focal persons at the Provincial and District levels. HRMPs are included in microplans and monthly mapping and registration of HRMP populations is currently a key priority to

vaccinate HRMP children. Between July and December 2018, 23,370 under 5 children were vaccinated on trains (moving between Hyderabad and Karachi) during SIAs. A total of 70 PTPs are established at all strategic locations including all major entry/exit points of the province.

Approximately 484,065 children under five years were vaccinated during seasonal activities and in temporary transit vaccination points. A total of 12,606 children under five years were vaccinated during special OPV/IPV campaigns in HRMP settlements.

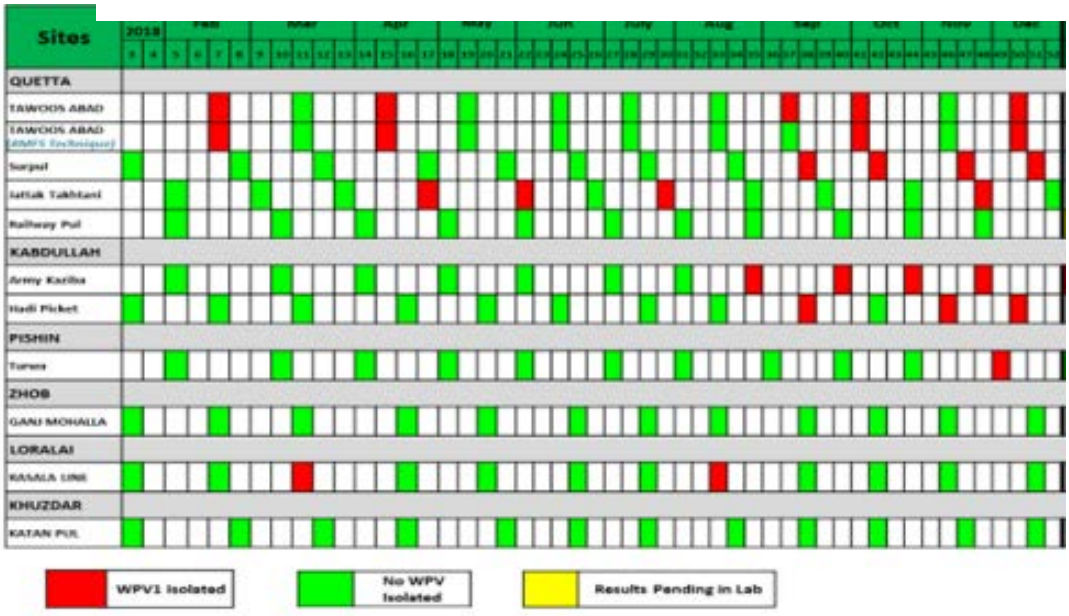
To ensure good coordination and synchronization with Balochistan in vaccinating children moving between provinces; three cross-border meetings have been conducted between Sindh and Balochistan teams between July and Dec 2018.

Balochistan

In 2018, 3 WPV cases were reported from one district (Dukki), a Tier-2 district. This emphasizes the inherent risk to virus importation and outbreaks in newly created and remote districts with weak health and administrative infrastructure and generally sub-optimal campaign performance. The outbreak in Dukki has been contained and the province continues to maintain focus on similar districts such as Dera Bugti by deploying special mobile teams (SMTs) during campaigns and strengthening campaign monitoring.

While no cases have been reported from Tier-1 districts in Balochistan (i.e. Pishin, Quetta and Killa Abdullah – Quetta block) since November 2017 (Killa Abdullah), the area remains one of the keys to eradication. Despite no cases being reported WPV1 continues to be detected through ES across Quetta Block (Figure 14), with repeated introductions from Kandahar, Afghanistan.

Figure 14: Environmental Sample results from Balochistan (Jan-Dec 2018)



Persistent transmission of WPV1 in the Quetta-Kandahar Axis (15 cases in Southern Afghanistan in 2018) is a challenge the province is continuously facing. Frequent movement of people from core reservoirs of Afghanistan (Kandahar) and Karachi; still missed children and clusters of refusals during campaigns are persistent challenges to interrupting circulation in the Quetta block particularly in Quetta and Killah Abdullah districts. The two predominant WPV1 clusters isolated from stool specimens (of the 3 cases from Dukki) and the ES samples are linked to two clusters native to Karachi and Kandahar.

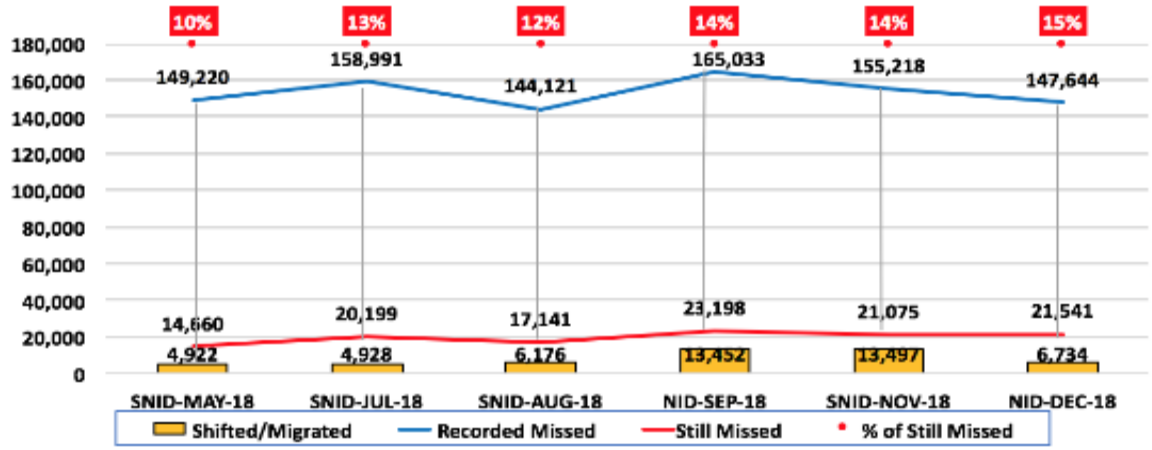
Overall, the AFP surveillance system in Balochistan remains sensitive, with good performance on all standard indicators. While the province previously struggled with the proportion of AFP cases reported within 7 days and stool adequacy, most of the districts have managed to reach recommended targets.

From July to December 2018, six SIAs have been conducted in Quetta Block and three campaigns in the other districts in the province. Balochistan continues to sustain gains made in Quetta Block with the number of LPUCs reducing from 52% in July to 27% in November. Operational weaknesses such as low same day coverage and security related issues are key challenges flagged in persistent LPUCs. For the December NID in Quetta Block, the proportion of female vaccinators was 58% in the whole of Balochistan.

PCM results indicate improving trends where more than 95% of targeted children are vaccinated in every campaign. PCM in several tier 3&4 districts have been persistently low. The focus remains to consistently maintain high quality coverage, in every campaign in Tier-1 districts; and ensure that campaign performance in Tier 2-4 districts are raised to the NEAP standards.

Persistent clusters of refusals, still missed children including NA continue to challenge the programme in Quetta Block with >20,000 recorded still missed children consistently reported between September and December 2018 (Figure 15).

Figure 15: Missed children trends (based on administrative data) in Quetta Block (May-Dec 2018)



Quetta-Block		SNID-MAY-18	SNID-JUL-18	SNID-AUG-18	NID-SEP-18	SNID-NOV-18	NID-DEC-18
Target Population		700,243	722,672	735,658	731,372	701,077	692,854
Recorded Missed		149,220	158,991	144,121	165,033	155,218	147,644
Still Missed		14,660	20,199	17,141	23,198	21,075	21,541
Shifted/Migrated		4,922	4,928	6,176	13,452	13,497	6,734
% of Target	Recorded Missed	21%	22%	20%	23%	22%	21%
	Still Missed	2%	3%	2%	3%	3%	3%
% of Recorded	Still Missed	10%	13%	12%	14%	14%	15%

Source: DSC Quetta

Communication analyses of LPUCs were conducted correlating behavioral factors with demographic, socio political and economic status. Advocacy at district, UC and community level for engagement of influencers and opinion leaders was done particularly to bridge the trust deficit in high-risk communities. In Killa Abdullah, engagement of district administration in refusal coverage as well as integrated health services in the areas with clusters of resistance are being explored.

High coverage rates were achieved in IPV campaigns conducted in Pishin and Quetta targeting children 4-23 months in September. LQAS results indicated 100% pass rate (from 9 lots assessed) in Killa Abdullah and 92% pass rate (from 13 in Quetta out of 13 lots assessed).

In Balochistan, EI remains a concern with 79% of the 171 AFP cases 6 to 23 months of age reported in 2018 being zero dose. Low EI coverage has been a challenge and the Government's focus on EI has increased. However, a substantial number of EI centers are not functional. With the influx of a high number of zero dose children from Afghanistan into Quetta Block, EI is crucial to sustain gains and mitigate against the risk of virus importation. Through the Red Cross, activities to strengthen EI in Killa Abdullah and accelerate EI in Quetta Block are ongoing.

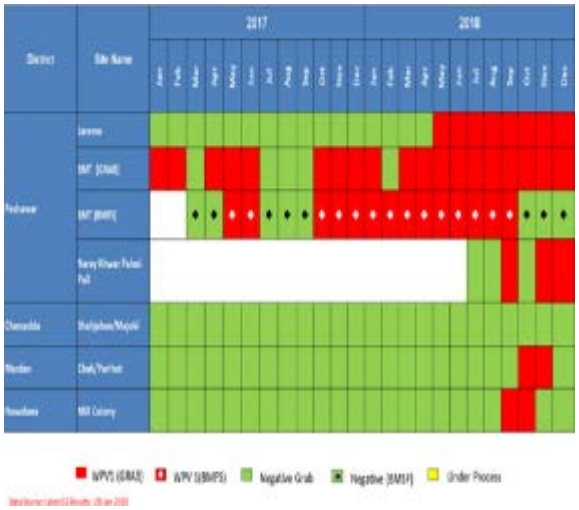
Quetta Block is an economic hub and a key transit point for people travelling to and from Afghanistan, drawing people from surrounding districts and across the border. This poses a constant threat for polio virus introduction. The programme continues to support transit vaccination points along inter country, provincial and district borders. Since July 2018, four face-to-face and six video conferences have been conducted between Afghanistan and Pakistan teams to ensure coordination of SIAs, surveillance activities and monitoring of cross border PTPs at both sides.

Strong government commitment and support from deputy commissioners providing leadership on the ground continues. The PEOC and DPCRs are providing a platform for a strong one team under one roof approach. Divisional Taskforce meetings are regularly held with representation from the PEOC. Since the last TAG, all 17 planned DTF meetings were conducted. Similarly, the Provincial Task Force Meetings are ongoing with 2 held since the last TAG. The challenge facing Quetta Block is how long the area will be able to withstand the very strong virus pressure from HRMPs.

Khyber Pakhtunkhwa

In 2018, KP and the recently merged KP tribal districts (KPTDs) have contributed to 8 of the 12 cases reported in 2018; a significant increase from the one case reported from Lakki Marwat in 2017. Six of the eight cases from KP were reported from KPTD (Khyber (1) and Bajour (5). The other two KP cases were reported from Lakki Marwat and Charsadda.Since October 2017, there has been persistent circulation of WPV1 in Peshawar with consistent isolation of WPV1 from Shaheen Muslim town ES site (Figure 16).

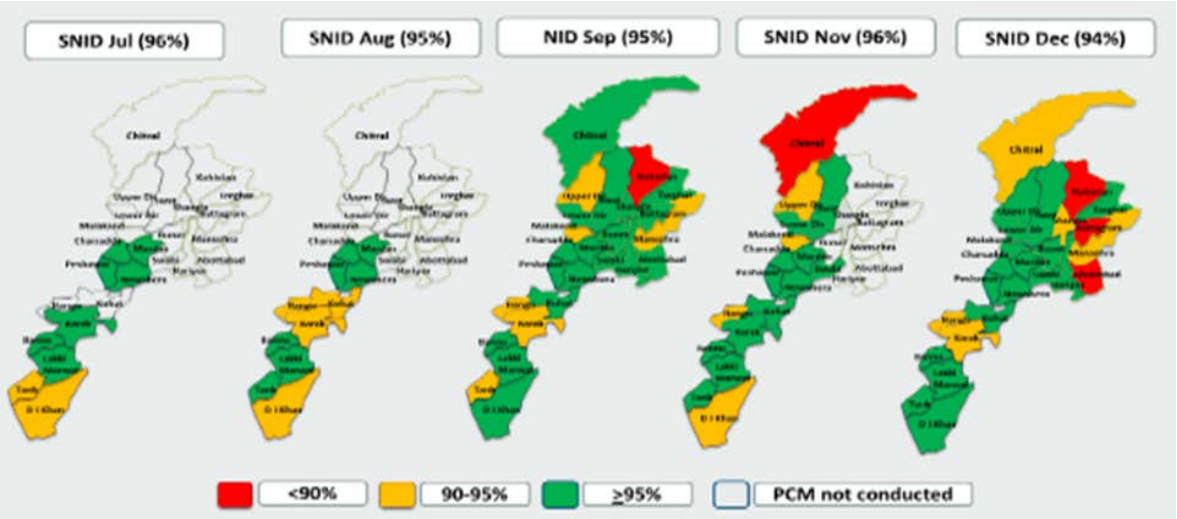
Figure 16: Environmental Sample results from Northern Corridor (2017-2018)



Peshawar is a major economic hub in KP province and a major transit point linking people travelling to and from the province to the rest of Pakistan. For this reason, Peshawar is the engine driving the circulation of WPV1 in the Northern corridor, its expansion to Lahore and Rawalpindi, and recent introduction to the Central corridor. Population movement between high risk districts and core reservoirs is clearly illustrated by isolation of the Karachi virus as well as the Northern corridor virus from cases and ES in Bajour.

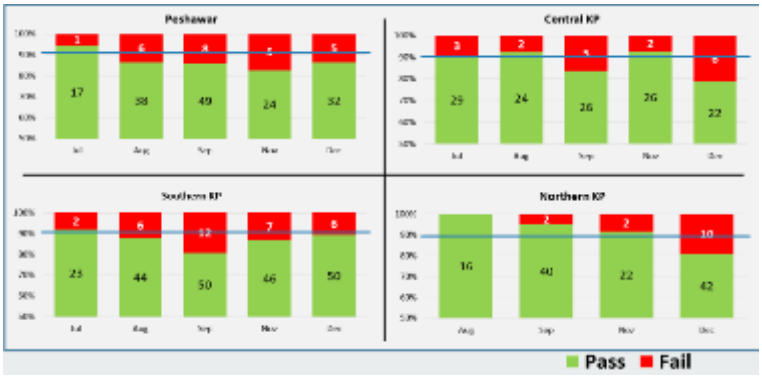
The surveillance system for KP is sensitive and has managed to meet the standards as articulated in the NEAP 2018/19. The NPAFP rate has increased from 15.7 to 18.1 per 100,000, while notification within 7 days and stool adequacy was maintained at 82%. In KPTD, NPAFP rate for 2018 was 20.25 per 100,000 population under 15 years, stool adequacy and notification within 7 days maintained at 94% and 88 % respectively.

Figure 17: Post-campaign monitoring (PCM) results from SIAs conducted in KP (Jul-Dec 2018)



Five SIAs were conducted between July and December 2018. PCM results indicate overall, good performance with the province consistently achieving high targets above 95% (Figure 17). However, in Chitral, Kohistan and Abottabad coverage rates were below 90% while DI Khan, Hangu, Karak and Mansera had inconsistent performance in the five campaigns. LQAS demonstrates gaps in both Peshawar and rest of KP; with large proportion of failed lots in Northern and Central KP in Dec SIA (Figure 18).

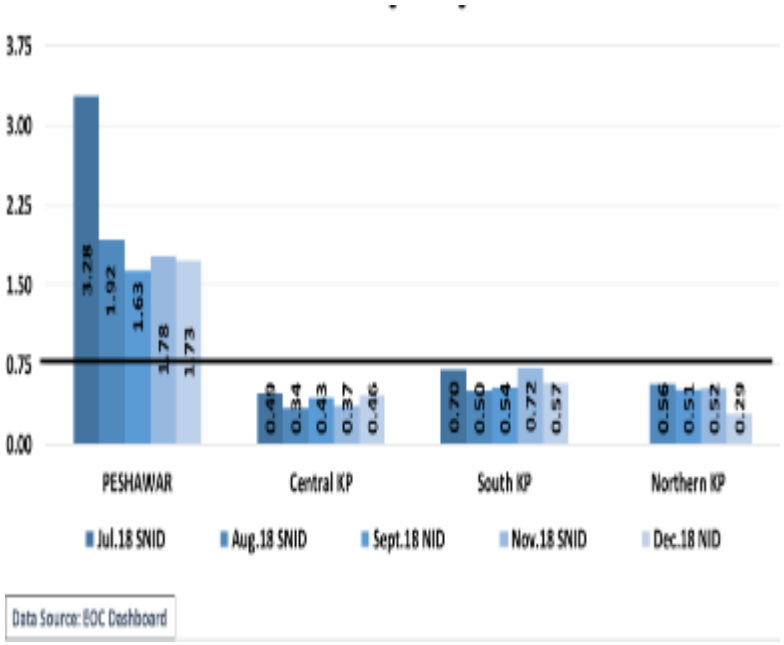
Figure 18: LQAS results in Peshawar and across KP (Jul-Dec 2018)



In KPTD, PCM results indicate surprisingly high coverage ranging from 93% to 96% in the five SIAs conducted. A key challenge in these districts is reliance on male teams who make up 93% of teams. This significantly affects access to children in these deeply conservative communities.

In Bajour, the compromised security situation in 2018 (including killings of notables and LEAs on a regular basis), make operations and monitoring of performance in these districts challenging. Investigation of cases from Bajour indicate campaigns were deferred in UC Chamarkand and UC Nawagai (Kamangara). The district has 10 UCs that border with Kunar, Afghanistan, with a target of around 49,250 children <5 years of age. Campaign data indicates that on average, 5% of total children covered are guests from Peshawar, Karachi, Kohat, and Charsadda. Peshawar continues to struggle with missed children and clusters of refusals. SIA data indicates high numbers of missed children in each of the five campaigns conducted between Jul-Dec 2018 (Figure 19).

Figure 19: Missed children proportion (out of total target) in Peshawar and KP based on administrative data (Jul-Dec 2018)



Some of the key triggers for refusals are deaths and hospitalization of children wrongly associated with polio vaccine following incidents such as the tragic mishandling of the measles vaccine in Nawabshah in February 2018; the admission of children in Holy Family Hospital Rawalpindi claiming reaction after forced vaccination in Bannu in March 2018 and the coincidental deaths of 3 children in Shaheen Muslim Town 1 UC of Peshawar in April 2018 during ongoing IPV / OPV SIAs. Other triggers identified include continuous circulation of anti-polio videos on social media and community fatigue from repeated campaigns.

The programme has focused on missed children trend analysis and social profiling of UCs to better understand factors leading to persistent NA (potentially silent refusals) and clusters of refusals. The C4E team is responding through engagement and mobilization of relevant influencers for refusal conversion, building community awareness and creating an enabling environment for vaccination. This is being reinforced by wide circulation on social media of positive videos by celebrities, doctors, and community elders endorsing polio vaccination/messages and ongoing capacity building of FLWs/UC staff on IPC Skills and negotiation techniques with refusal families.

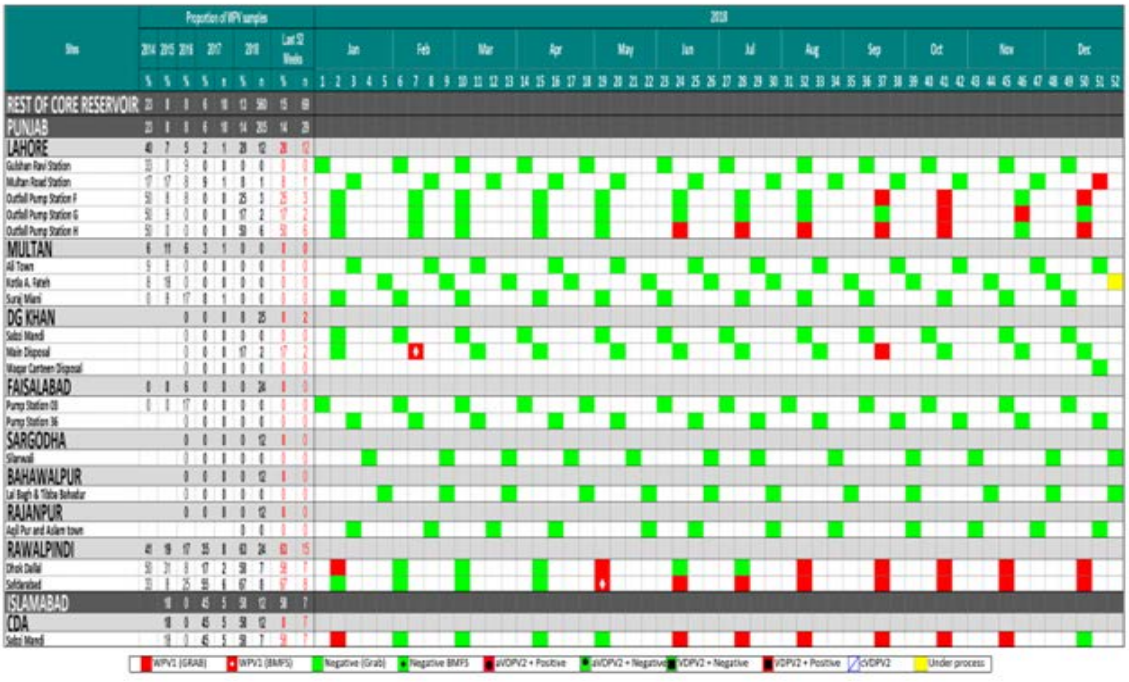
One of the activities prioritized in PEI – EI synergy is the identification of EI zero dose children by polio teams and their follow up for registration and vaccination by EI staff. The programme is sharing data on zero dose children with EI and while all identified children are not yet being consistently covered, there seems to be an increasing trend of children covered over the last 6 months. However, this data should be verified to ensure that these children are vaccinated. In recently merged KP districts, the numbers covered are much lower, with only 27% of reported zero dose cases vaccinated by EI.

Punjab

The re-establishment of local circulation in the twin cities of Rawalpindi and Islamabad, and Lahore in the last 7 months of 2018 is a concern. The ES sites in Punjab demonstrate the progress the province has made in maintaining a high immunity profile in the province and preventing establishment of WPV circulation in most districts covered by ES (Figure 20).

Unfortunately, this is not true in the twin cities (Rawalpindi and Islamabad) where WPV has been isolated from ES sites for most of 2018 with approximately 89% of samples collected from July to December testing positive for WPV1. Genetic analysis of isolated WPV show linkages to clusters isolated from Peshawar, Kohat and Nangahar, a reflection of the diversity of people coming to the Twin cities. Additionally, between July-December 2018, Lahore repeatedly isolated WPV1 from ES, with 37% of samples testing positive.

Figure 20: Environmental Surveillance results from Punjab sites in 2018



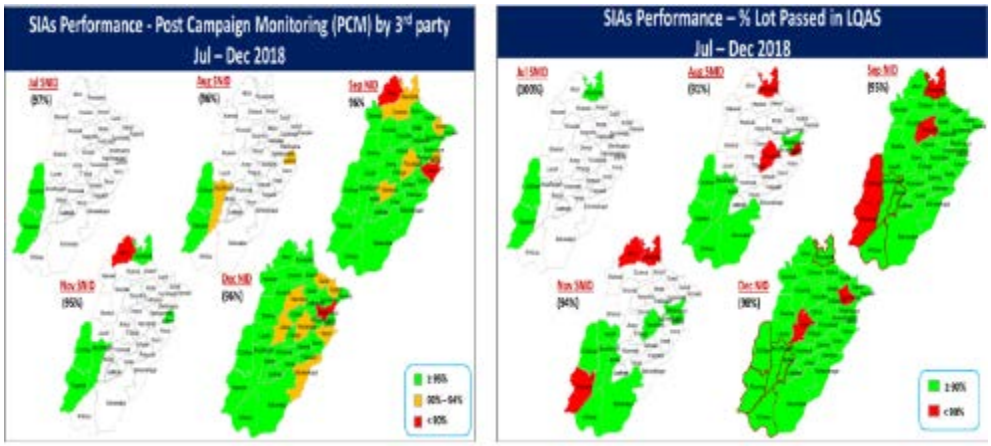
Surveillance review of 12 districts of Punjab found the surveillance system sensitive. AFP surveillance indicators consistently meet targets across Punjab except for Gujranwala, Mianwali and Faisalabad where the programme did not meet targets on notification within 7 days and stool adequacy.

All positive ES samples were extensively investigated with granular analysis of UCs draining to ES sites, tribal areas, riverine & Inter-provincial borders. Focus has increased in Rawalpindi, Islamabad and DG Khan to address continuing risks of

transmission extending from the Northern Corridor. Two event responses have been conducted, 3 SNIDs and 2 NIDs. Twin City coordination has been significantly enhanced. Punjab has conducted six SIAs from July to Dec 2018.

The province has consistently achieved high coverage rates (above 95%) as indicated in the PCM and LQAS data (Figure 21). The programme has prioritized districts or assessed lots where the SIA quality failed to meet the NEAP targets and standards such as Attock, Kasur, Sheikupura, Gujranwala, Jhang, DG Khan due to operational issues, children not available for vaccination or refusals.

Figure 21: Post-campaign monitoring (PCM coverage) and LQAS pass rate in Punjab (Jul-Dec 2018)



Negative media, misconceptions and repeated campaigns are the leading cause of refusals identified in Punjab. The communication team are engaging both social and traditional media influencers and journalists as well as working with media to produce positive reports. As a result, there has been some increase in positive tonality in media. The focus, however, remains on ensuring that front line workers have the right messages and interpersonal communication skills.

Punjab province continues to maintain a high level of EI. Of 2,845 AFP cases reported in 2018 between 6-59 months, only 104 (3.7%) were zero dose EI. The highest proportion of zero dose AFP cases were reported from DG Khan, Rajanpur and Lahore. The province continues to be a shining example on PEI/EI synergy. Almost 100% of identified zero dose cases during SIAs were found vaccinated during validation exercises conducted. From June to November 2018, a total of 303 weak UCs were evaluated and follow up action plans developed to improve EI coverage. Of these, 63% showed significant improved performance.

Table 1: Summary of zero dose EI cases identified during SIAs, including proportion coverage and validated for follow-up

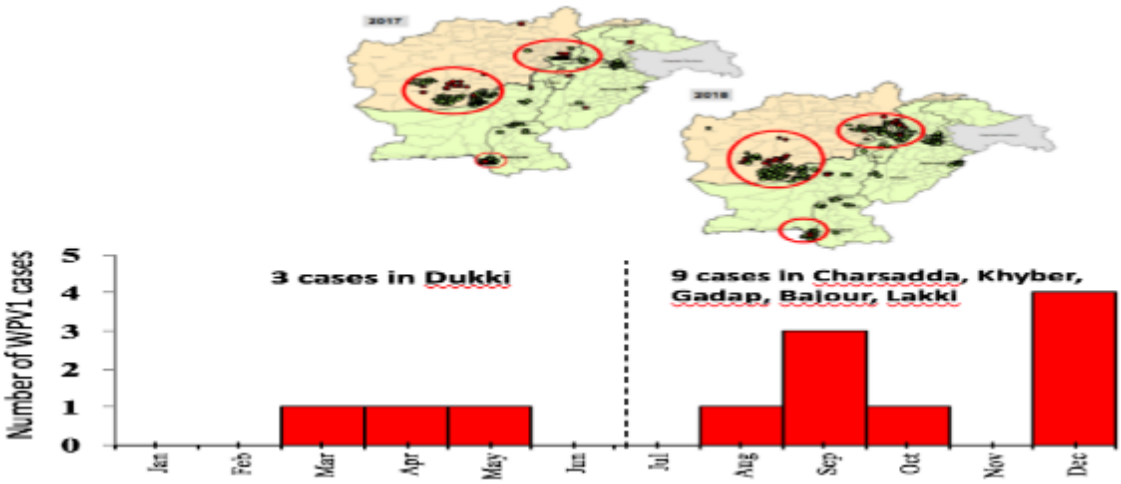
SIAs	EI Zero dose recorded	% Coverage	Validated	% Validated
SNIDs (Jul)	6,443	100%	1031	99%
SNIDs (Aug)	35,678	99%	559	98%
NIDs (Sep)	102,792	100%	1987	99%
SNIDS (Nov)	35,418	99%	787	99%

A SES (Synergy Evaluation System) Android App & Dashboard developed with the help of Punjab Information and Technology Board (PITB) for real time Weak UCs evaluation will be implemented from January 2019 (phase 1) in Punjab following a pilot in 2018. The system will expand to include information on EI stores, outreach sessions, fixed site monitoring, 30 household clusters for NPAFP cases, EI dose validation, NA validation and data quality assessment in phase 2.

Key Findings and Recommendations

In 2018, Pakistan reported 12 cases, four more than in 2017 (Figure 22). KP is currently the most concerning province in the country, with 8 cases reported in 2018 – more than half of the total cases reported nationally and an increase from 1 case reported in 2017.

Figure 22: WPV1 polio cases reported and positive Environmental Surveillance (ES) samples in Pakistan (2018)



Transmission of WPV1 persists in the same hotspots and core reservoirs as shown by ES. Karachi and Peshawar are the primary areas of concern and pose an epidemiological risk of continued transmission and exportation. Sustained transmission in Peshawar is worrying and the virus is finding vulnerable pockets in areas with an epidemiological history. Quetta Block is under continuous threat of re-establishing transmission, from persistent transmission in Southern Afghanistan.

Management and Oversight

- Despite multiple TAG recommendations, the timely issuance of blanket No Objection Certificates (NOCs) for both national and international staff to travel within the country and visas for international staff has remained unresolved for more than 1 year (including the recent NTF in Nov 2018) and is a major barrier to effective programme operations. The new administration in Pakistan presents an opportunity to finally resolve this issue.
- The TAG re-emphasizes that the ‘one team’ approach is essential at all levels to the success of the program, and this approach must extend from the UC to global partners.
- The Prime Ministers Focal Group (PMFG), including the Ministry of Health (MOH), Secretary to the Prime Minister, PMFP & Ministry of Interior, was and is an important oversight mechanism.

- Turnover of administrators in high risk polio reservoirs unnecessarily disrupts focus and quality operations and actually undermines the ability of the government to achieve its polio eradication goals.

Recommendations

- The TAG urges the current administration to resolve the matter of NOCs and VISAs for international staff as a matter of urgency, as agreed with PMFP by mid-February.
- The TAG recommends a monthly meeting of the PMFG to implement and track recommendations of the Prime Minister's Task Force.
- TAG strongly recommends ensuring continuity of administrators (Commissioners, DCs and EOC Coordinators) in the core reservoirs for at least 6-months.

NEAP 2018/19

- The 2018/19 NEAP priorities and structures have all the ingredients for success. The focus must be on implementing the NEAP.
- Since the establishment of the Emergency Operations Centers (EOCs), a lot of progress has been made. The TAG reiterates the need to ensure the continued adherence and reinforcement of the 'one team' EOC management structure, and the role of EOC coordinators supported by a core technical team as the day to day managers of the EOCs should be maintained and strengthened.
- The personal leadership of the Minister of Health for the implementation of the NEAP and ensuring strong EI and basic health services to deprived communities will be a critical factor in the programme's success.

Recommendations

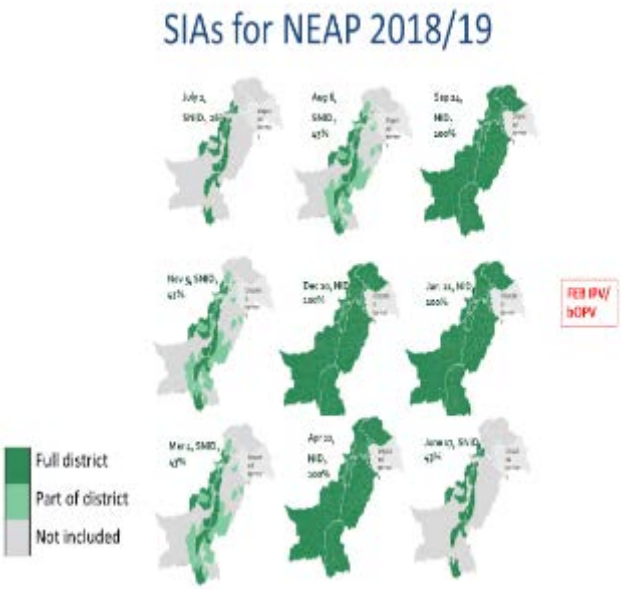
- **The top priority of the programme should be to obsessively focus on reaching still missed children in core reservoir areas through continued improvement of operations.**
- Frontline workers including, Community Health Workers (CHWs)/Vaccinators, should be capacitated and maximally supported to enable them to achieve quality work, they should not be responsible for covering recorded refusals. The policy of covering refusals by supervisors or specific teams tasked with this should be followed everywhere.
- EOCs should support the detailed analysis of available data to help identify the true risks to achieving high coverage of the most vulnerable groups and ensure appropriate plans and actions to reach these groups.
- Areas with security challenges require close attention to ensure effective independent monitoring and implementation

SIAs for NEAP 2018-19

- The TAG endorses the proposed SIA schedule, and scope of SIAs
- The TAG recommends that Pakistan and Afghanistan synchronize their remaining SIAs until June 2019 SIAs for NEAP 2018-19.

Figure 23: Pakistan SIA calendar. (A) SIAs for NEAP 2018/19; and (B) Revised SIA calendar, synchronized with Afghanistan.

A



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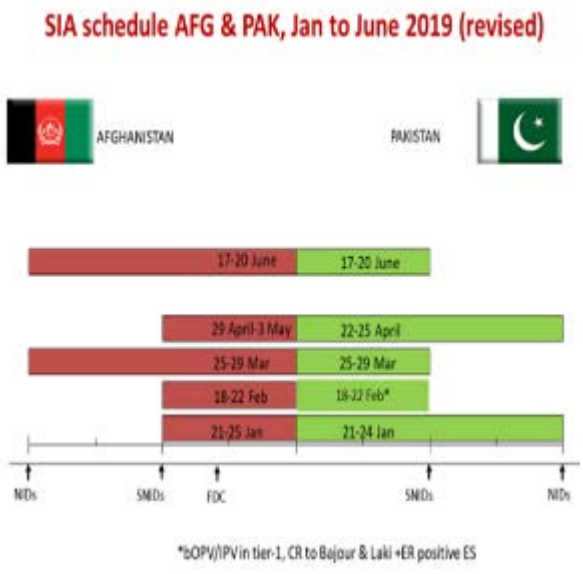
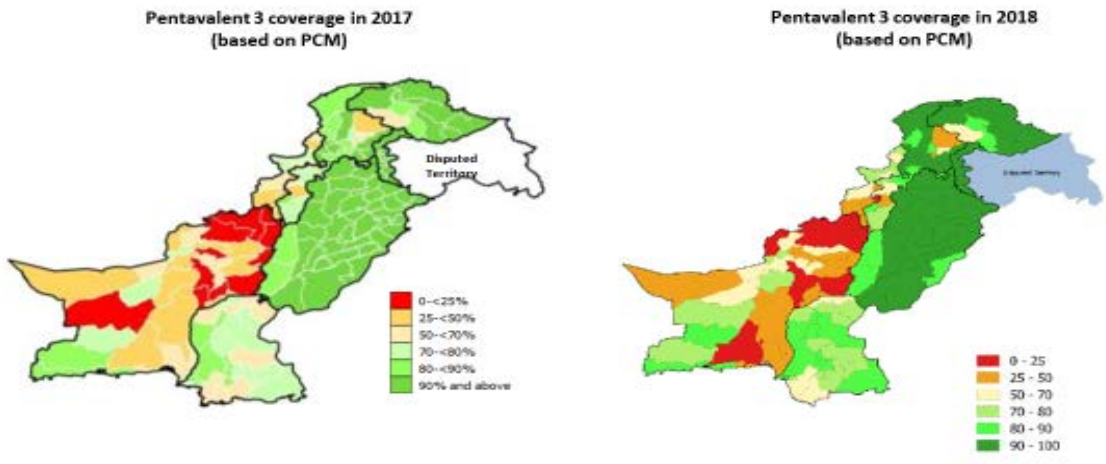


Core Recommendations

The following core recommendations extend across the programme:

Essential Immunization (EI)

Figure 24: Pentavalent 3 coverage (based on Post-Campaign Monitoring (PCM) in Pakistan) (2017 and 2018)



- TAG notes that despite some recent improvements, EI remains critically weak in Tier-1 reservoirs.
- Pakistan is missing a critical channel to immunize children in polio reservoirs.
- The TAG congratulates Pakistan on the high quality measles SIA which shows the benefit of EI-Polio synergy

Recommendations

- EI is an essential element of strong ongoing primary health care. Fixing EI in tier 1 polio reservoirs is an urgent need, EI capacity and coverage need to be built over time and in ways that ensure increasing and sustained coverage.
- Provincial Task Forces (PTF) should have oversight for tracking progress in EI for all tier 1 reservoirs paying particular attention that the following indicators are met by June 2019:
  - 100% of EI operational funding has been released
  - 100% of EI centers are functional
  - 0% Vacancies in EI staffing
  - >90% EI zero dose coverage (as an indicator EI synergy with the polio programme based on data sharing and referrals)
  - All outreach activities are documented and monitored monthly
- These data should be reported to TAG at next meeting for all Tier 1 reservoirs

Supporting reduction in missed children – Operations & Communication (C4E)

The programme has made good progress at integrating operations and communication but more needs to be done to ensure it is central to all aspects of the programme; especially in areas related to increasing the skills of front line workers and of developing and implementing localised action plans for reducing clusters of missed children. Frontline workers must be supported at every opportunity to take the initiative to vaccinate all eligible children.

Recommendations - Operations

- SIA activities should focus on maximizing coverage of missed children within a 14-day limit
- All localized action plans developed, as Gujro 4 in Karachi, should be assessed regularly against local data to show changes/improvements.
- Continue evaluating the impact of operations and communication interventions on missed children, particularly persistently missed children, (including vaccinator capacity, household interaction, cluster analysis/ intervention, community engagement, local media/IEC, and mass media/Spin Saree/Khala), to help direct programme resources to effective activities
- TAG requests the program review UC level data on guest and NA children to identify priority areas and activities to be implemented in order to close the immunity gap.
- Disaggregation and validation of NA3 (whether they represent NA out of district or silent refusal).
- Conduct periodic surveys of guest children to assess their origin location and coverage.

Recommendations – Communication for Eradication (C4E)

- Creative problem solving approaches as challenge mapping appears to be a useful innovation but should be further refined to ensure activities focused on challenges which are specific, locally actionable and integrated within microplans.
- The programme must be careful not to over-emphasize refusals at the cost of efforts to reach missed children for other reasons.
- Within the continuing intensive focus on reaching all missed children, efforts to understand refusals should be continued and, where necessary deepened, using e.g. FGDs, KAP surveys and support through sociological analysis, including analysis of ‘direct refusals’.
- Initiatives to resolve and reduce clustered refusals should be continued but need to be evaluated to ensure ongoing monitoring of their efficacy.
- Mass and local media strategies to enhance community perception of polio risk may help in increasing coverage of children and reducing refusals. Based on

existing and new data (e.g. the planned 2019 KAP, FGDs), community perceptions of risk should be further and continually assessed.
- However, aligning other local development initiatives with priority areas for the polio programme can also help in building more positive community attitudes to OPV. Communication strategies to build community trust in local government and service providers should also be considered to build sustainable compliance and demand. The social media strategy going forward should be proactive rather than reactive, and should be reviewed to ensure coherence between national, provincial and local initiatives

Enhancing the impact of immunization

Building on the recommendations of the June 2018 meeting on immunization approaches in key reservoir areas, TAG endorses in principle:

- Expansion of target age group up to 10 years in Peshawar
  - March SNID using mOPV1 or bOPV.
  - Assess experience and be prepared for a second round using either mOPV1 or bOPV depending on vaccine availability
- Expansion of the IPV target age group up to 5 years in tier 1 districts, including 10 select towns of Karachi.
  - Round to be conducted in February 2019 as per EOC plan
  - Fractional IPV to be used in Peshawar given non-inferiority of boosting between IPV and fIPV and the skilled workforce available in Peshawar
- Expansion of the target age group to all ages at border crossing points with Afghanistan.
  - Detailed mechanisms for this expansion to be developed in a coordinated fashion by each national programme.

Province-specific Key Findings and Recommendations

Sindh

The TAG highlighted the following key findings for Karachi and Sindh:

- TAG recognized and appreciated the strong commitment and engagement of the Commissioners and DCs in Sindh and their physical presence in the field during SIAs.
- TAG congratulated Karachi on a successful transition of all UCs to the CBV strategy and establishment of the Gujro Emergency Response Unit (ERU) to facilitate vaccine acceptance and revitalize EI.
- Karachi with its history of amplification of virus transmission and challenges in achieving high coverage remains a main risk for the programme.

- TAG was concerned by the increased trend of missed children in Karachi from March to December 2018 and recognized the efforts employed to reduce these numbers, with early indication of progress.
- TAG appreciated the Sindh team's acknowledgement of the challenges in reaching HRMPs, especially at inter-provincial borders and Karachi.

Recommendations:

Karachi

- TAG endorsed the categorization of the UCs by 3 risk level in Karachi (1+33+154) and recommended specific Action Plans (similar to the Gujro plan and including communications) for each tier. Priority should be on still missed children in slum areas. All localized action plans should be assessed regularly and frequently against localized coverage data to show changes/improvements.
- Review Karachi Emergency Action Plan with focus on further strengthening the existing management structure in light of CBV expansion.
- The Sindh government must strengthen the recent CBV expansion by providing Team Support Centers (TSCs) to all teams, deploying enough security personnel ensuring all UPEC chairperson are qualified medical doctors and the issues with hiring of UCMOs are resolved and their retention secured.
- Increase accountability for EPI activities by ensuring EPI teams vaccinate ALL zero-dose EI children identified through polio programme.
- Continue active engagement of private sector (focusing on small hospitals and clinics) for influence in community (particularly in posh areas) and participation in AFP surveillance

Interior Sindh

- Provincial leadership (Minister, Secretary Health, EPI manager and EOC coordinator) should conduct regular review and field visits – "No more surprises such as the Sujawal cases in 2016".
- Ensure HRMP are included in micro plans and prioritized for vaccination through SIAs & EPI
- Validation of micro plans for inclusion of HRMPs

Balochistan

The TAG highlighted the following key findings for Balochistan:

- TAG recognizes the sustained government ownership, commitment & support.
- TAG appreciates that the outbreak in Dukki has been successfully controlled due to improved SIA quality.
- TAG is concerned that Killa Abdullah and particularly Gulistan remain a challenge for operational quality and community acceptance.
- TAG acknowledges that security issues across Balochistan remain a challenge to both vaccination and monitoring.

- TAG commends the programme for ensuring regular cross-border activities and exchange of information with Afghanistan.
- TAG appreciates the improvements in both surveillance and total OPV doses and reduction in overall zero dose children since 2017.
- TAG remains concerned about the sustained low EI status across Balochistan despite accelerated EI activities implementation.
- Despite SIA improvements in Tiers 1-3, Tier 4 districts continue to pose challenges and make up most of the LPUCs of the province.

Recommendations:

- EOCs to review the existing Southern-Corridor Action Plan by adding a clear plan to prevent reestablishment of WPV in Quetta Block by vaccinating and validating missed children.
- Killa Abdullah remains the highest risk district in Quetta Block.
    - The Assistant Commissioners of Killa Abdullah and Gulistan should lead the program at their respective tehsils. The TPCRs should be functionalized immediately.
    - The Chief Secretary (CS) should consider instituting a multi-agency team for Gulistan comprising the district and provincial administration to create demand for vaccination and resolve community related refusals
- Essential Immunization strengthening plans in Killa Abdullah and Dukki must be operationalized and expanded to other high-risk UCs of Quetta Block and interior Balochistan
- Sustain the recent renewed government ownership by ensuring monthly PTF are chaired by either CS or Chief Minister (at minimum).
- Engage the LEAs/Army to ensure implementation of high-quality house to house SIAs in security-sensitive areas of interior Balochistan with proper independent monitoring
- Expedite surveillance strengthening plans and explore opening new ES in Nasirabad division and Dera Bughti

Figure 25: (A) Low Performing UCs (LPUCs) in Tier 1-3 districts between Sep 2017- Dec 2018; and (B) Proportion of AFP cases with 0, 1-2, 3, 4-6 and 7+ OPV doses (2011-2018)

Khyber Pakhtunkhwa

The TAG highlighted the following key findings for KP:

- Peshawar, and KP overall, pose the greatest risk to eradication of polio in Pakistan (60% of cases reported in 2018 are from the province). Success in Pakistan depends largely on interruption of WPV1 transmission in KP.
- TAG highlights the risk of persistent transmission in the northern and central corridors shown by environmental site positive samples in Peshawar and other areas, as well as cases.
- TAG commends the programme for successfully integrating Frontier Regions from KPTD into respective districts of KP.
- TAG notes the turnover of Provincial EOC coordinators since October 2017 and is concerned that this might have weakened the sustained leadership needed for the programme. TAG is pleased that an experienced coordinator has now been appointed. It is hoped that he will stay the course and be given the authority to truly lead the programme.
- TAG cautions that stool adequacy surveillance indicators remain sub-optimal in key high-risk areas such as Lakki Marwat.
- Significant steps have been taken to track zero dose EI children, strengthen EI and achieve EI/PEI synergy in KP; however, more must be done for EI coverage in Peshawar.
- TAG commends the EOC on efforts to better understand the reasons for continued transmission, including population movement patterns (both HRMPs and guests), vaccination status of mobile groups, and SIA quality across KP districts.

The following key findings were specific to Peshawar:

- TAG recognizes that the Peshawar programme remains strong and is not a broken system. “The Peshawar Action Plan (PAP) has worked for the district, it is not a reinvention but rather a plugging of the gaps in implementation,” Peshawar Commissioner.
- TAG commends the EOC on the Peshawar Action Plan and steps taken to better understand and address community resistance to polio vaccination (including the implementation of community engagement activities)
- The extremely high immunity required to stop transmission in Peshawar means that every gap in operations, management and team capacity needs to be filled and maintained. At its core this means carrying out the basic and well known functions of the programme as close to a level of perfection as possible. There may be some innovations that can be added to boost immunity at the margins but without the basics working at peak performance innovation will not be enough (this is a finding, not a recommendation).
- TAG commends Peshawar for their actions taken to address the large number of still missed children including expanding tracking during extended catch up and hiring of female Temporary Tehsil Monitors (TTMs) and stresses that continued vigilance is required.
    - The current workforce and program strategy in place in Peshawar remain critical for the interruption and thenceforward Eradication.

Recommendations:

KP

- Greater Peshawar (Peshawar and bordering tehsils of Mardan and Nowshera) and Khyber must be considered as one epidemiological entity.
- The TAG implores all stakeholders to follow the disciplined approach outlined in the NEAP for the identification and resolution of issues in Peshawar and KP. This is already being implemented in other provinces and the approach is yielding results. All support to Peshawar must be channeled through the DPCR and the DC. Peshawar should be supported by partners in a coordinated manner through the PEOC.
- Do not proceed with validation of microcensus in Peshawar (maintain baseline process of updating microcensus without extending to additional validation mechanisms)
- Through the EOC, partners should support a detailed analysis of available data on missed and high risk children to ensure the most effective focus of strategies and activities for reaching these groups.

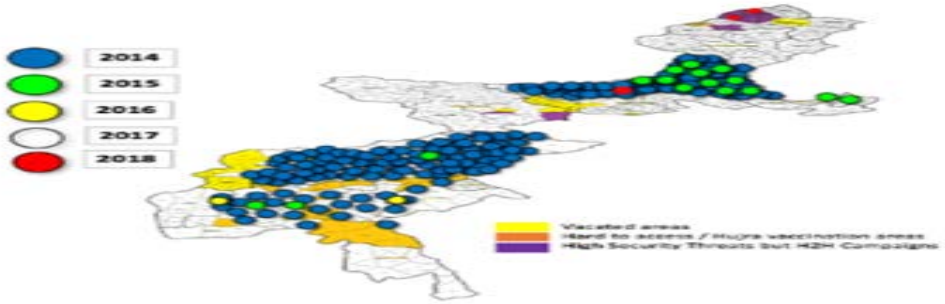
Peshawar

- The top priority for Peshawar must be on increasing the operational and communication capabilities and performance of front-line vaccinators and teams. This means:
    - DPEC and partners should orient their efforts to supporting all teams to be top performers.
    - Creating metrics to measure team capabilities.
    - Providing training and capacity building for teams to identify and immunize guest children and newborns and have the necessary IPC skills to communicate effectively with the community.
    - Teams should focus on immunizing children and use other people to address refusals.
    - Continue and enhance recognition of good performance, provision of high quality supportive supervision, and ongoing accountability for data falsification or breach of duties.
- Monthly review and fine-tuning of the Peshawar Action Plan
    - Focus must remain on the greater goal of reaching the maximum number of children every round by ensuring tracking and validating coverage of missed children and vaccinating all guest children.
    - Clusters of missed children among high risk populations such as Ahl-Hadeeth and Mohmand should be prioritized.
- Data analysis should focus on SIA quality and missed children. The program should quantify the remaining children to be reached and link that with other monitoring parameters with emphasis on ICM, PCM and LQAS data to identify possible gaps in operations, ideally down to the team level.
- Sustaining immunity requires urgent attention to strengthening EI services with OPV and IPV.
- TAG appreciates the recent polio-plus interventions in SMT-draining UCs by government and partners and recommends further investments to address the genuine demands of marginalized communities.

KP newly merged districts

- TAG is concerned with the reported WPV1 cases and the continued threat of new outbreaks due to population movement with shared corridors.
- TAG acknowledges there is still a significant risk in KPTD in security challenged areas including; South Waziristan (Shaktoi Belt), North Waziristan, Bajour and Mohmand due to operational and monitoring challenges.
- TAG appreciates the efforts to verify the still missed children that are out of district
- TAG appreciates the detailed information on these security-compromised areas and the efforts taken to coordinate with LEAs.
- TAG notes the weak EI service delivery and accountability in KPTD

Figure 26: Epidemiological picture of KP newly merged districts (2014-2018)



Recommendations:

- All efforts must be made to ensure at least 4 house-to-house campaigns are conducted in KPTD (particularly Mohmand and Bajour) in the first half of 2019 (each 4 days minimum).
- Global standard SIA quality control and monitoring to be conducted by partner agency staff in all UCs
- Increase and sustain independent monitoring through PCM and LQAS in all KPTD and ensure no cluster/lot replacement from January 2019.
- Continue program analysis on vacated, bordering and security challenged areas to identify and reach any potentially missed populations and present the analysis at the next TAG
- Ensure funding is available to operationalize DPCRs and effectively conduct campaigns (compensate for funds previously available to each agency).

Punjab and the Twin cities (Rawalpindi and Islamabad)

- TAG appreciates the continued overall success of Punjab in reaching children through SIAs and EI.
- TAG appreciates the steps taken towards EI/PEI synergy in Punjab and the follow up and validation of zero dose EI.

- TAG is concerned with the continued transmission in the twin cities (Rawalpindi/ Islamabad) as well as Lahore.
- TAG recognizes that a major challenge in twin cities is HRMP and identifying/ vaccinating new arrivals.

Recommendations:

- Ensure polio remains a focus for the Punjab government by conducting monthly review meetings chaired by the Chief Secretary and quarterly PTF chaired by Chief Minister.
- Develop Essential Immunization strengthening plans for high-risk UCs and Tehsils in South Punjab.
- Conduct UC level analysis of missed children as they relate to HRMP (given that HRMPs are a major challenge in higher risk parts of Punjab (e.g. Rawalpindi).
- Secure sufficient and sustainable field personnel in Islamabad and Rawalpindi.

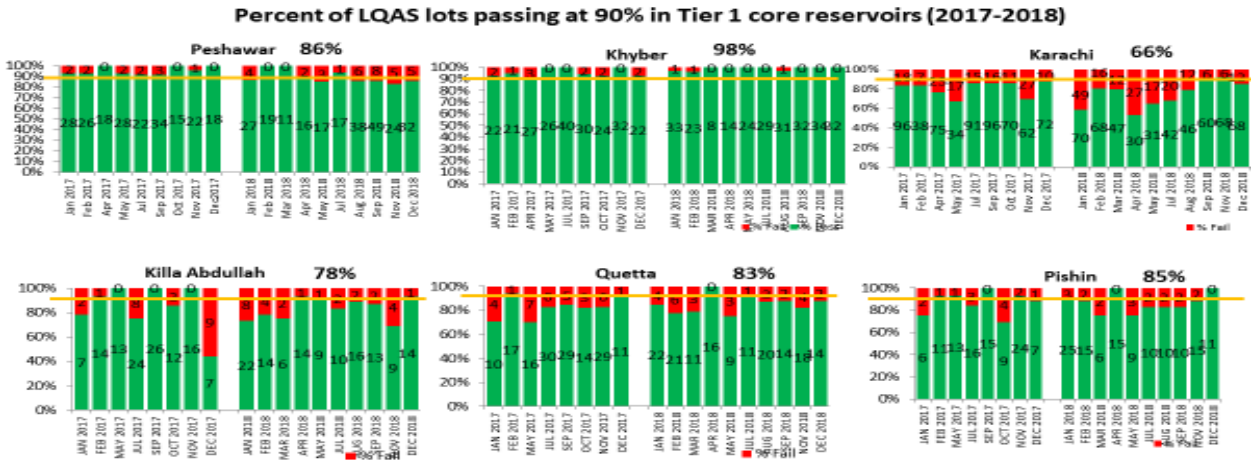
Conclusion and TAG Responses to NEOC Questions

Why is it so difficult to interrupt transmission from core reservoirs?

- Sustained high immunity required to stop transmission due to:
  - Population size/density
  - Movement patterns from active reservoirs
  - Birth rate
  - Poor sanitation
  - Absence of sustained EI
- The programme does not need to re-invent the wheel but does need to implement tried and tested NEAP strategies fully and at consistently high levels of performance simultaneously across all tier 1 high risk districts.

- SIA quality must achieve optimum quality in all areas simultaneously for at least 5+ consecutive SIAs to stop WPV transmission

Figure 27: Percent of LQAS lots passing at 90% in Tier-1 core reservoirs (2017-2018)



Questions for the TAG from NEOC

What additional/innovative approaches we can adopt to clear WPV from persistently ES positive in the shared corridors and Karachi?

- Focus on reaching still missed children.
- Additional immunization strategies (expanded age groups for IPV / OPV).

Does the TAG endorse all age vaccination at the border with Afghanistan?

- In principle, the TAG endorses all age vaccination at the border with Afghanistan where feasible with ongoing monitoring of impact.

What does TAG propose to enhance risk perception about Polio without affecting operations on ground?

- Enhancing risk perception may help in reducing missed children; however, the strategy should be conducted in parallel with efforts to strengthen confidence in OPV and trust in local service providers

Do we need to continue the liberal inclusion criteria for AFP cases?

- Yes, keep liberal inclusion of AFP cases.

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