



صحت محفوظ

NATIONAL EMERGENCY OPERATIONS CENTRE
ISLAMABAD, PAKISTAN



NATIONAL EMERGENCY ACTION PLAN FOR POLIO ERADICATION 2018/2019

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1ST JULY 2018 - 30TH JUNE 2019



NATIONAL EMERGENCY OPERATIONS CENTRE
ISLAMABAD, PAKISTAN



We are grateful to the millions of Pakistani families who protected their children and the children of the world by participating in polio vaccination campaigns conducted in the past year. We are also grateful to the tens of thousands of frontline workers – the true heroes of polio eradication – who every month help protect the children of Pakistan by leading the effort from the frontlines.

This document is produced by the National Emergency Operations Centre for Polio Eradication, Islamabad, Pakistan. The information presented is based on the most recent and best available data at the time of publication. The EOC may update and, where necessary, modify the analysis and data provided, in order to ensure the most current and accurate view is available to all.

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ABBREVIATIONS AND ACRONYMS

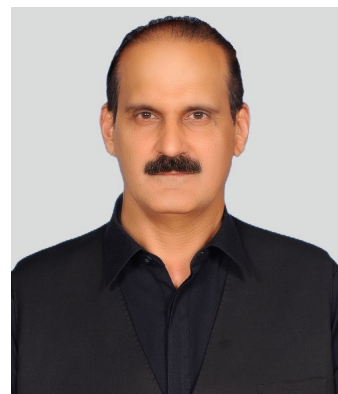
AFP	Acute flaccid paralysis
AC	Assistant Commissioner
ADC	Additional Deputy Commissioner
AEFI	Adverse event following immunization
AIC	Area in Charge
AJK	Azad Jammu and Kashmir
AOW	Area of Work
BMFS	Bag-mediated filtration system
BMGF	The Bill and Melinda Gates Foundation
bOPV	Bivalent oral polio vaccine
C4E	Communication for Eradication
CBV	Community-based vaccination
CDC	The U.S. Centers for Disease Control and Prevention
CHW	Community health worker
DC	Deputy Commissioner
DDM	Direct disbursement mechanism
DHO	District Health Officer
DPCR	District Polio Control Room
DPEC	District Polio Eradication Committee
DSRC	District Surveillance Review Committee
DTFs	Divisional Task Forces
EI*	Essential Immunization
eIFA	Electronic Information for Action
ECC	Emergency Coordination Centre
EOC	Emergency Operations Centre
EPI	Expanded Programme on Immunization
ERC	Expert Review Committee
FATA**	Federally Administered Tribal Areas
FGD	Focus group discussions
FLW	Frontline worker
GAPIII	Global Action Plan to minimize poliovirus facility-associated risk (Third Edition)
GB	Gilgit Baltistan
GPEI	Global Polio Eradication Initiative
HR&MP	High-risk and mobile population
IEC	Information, Education, and Communication
IDIMS	Integrated Disease Information Management System
IHR	International Health Regulations
IMB	International Monitoring Board
IPV	Inactivated polio vaccine
ITD	Intratypic differentiation
iVDPV	Immunodeficiency-associated vaccine derived poliovirus
KAP	Knowledge, Attitudes, and Practices
KHI	Karachi
KP	Khyber Pakhtunkhwa
KPI	Key performance indicator
KPTD	KP tribal districts
LQAS	Lot quality assurance sampling
LPUC	Low-performing Union Council
M/o NHR&C	Ministry of National Health Services, Regulations & Coordination

mOPV	Monovalent oral polio vaccine
N-STOP	National Stop Transmission of Polio
NAC	National Authority for Containment
NCC	National Certification Committee
NEAP	National Emergency Action Plan for Polio Eradication
NEOC	National Emergency Operations Centre
NID	National Immunization Days
NIH	National Institute of Health
NPAFP	Non-polio acute flaccid paralysis
NPCC	National Poliovirus Containment Committee
NPEV	Non-polio enterovirus
NPMT	National Polio Management Team
NSC	National Steering Committee
NTF	National Task Force
OPV	Oral polio vaccine
PC1	Planning Commission Form 1
PCM	Post-campaign monitoring
PEF	Poliovirus-essential facility
PEI	Polio Eradication Initiative
PEOC	Provincial Emergency Operations Centre
PID	Primary immunodeficiency disease
PMFP	Prime Minister's Focal Person
POB	Polio Oversight Board
PTFs	Provincial Task Forces
PTPs	Permanent transit points
RRL	Regional Reference Laboratory
RRU	Rapid Response Unit
SETT	Surveillance for Eradication Task Team
SIA	Supplementary immunization activities
SMT	Special Mobile Teams
SNID	Subnational Immunizations Days
SOPs	Standard operating procedures
TAG	Technical Advisory Group
TORs	Terms of Reference
tOPV	Trivalent oral polio vaccine
UC	Union Council
UCMO	Union Council Medical Officer
UNICEF	United Nations Children's Fund
UPEC	Union Council Polio Eradication Committee
VDPV	Vaccine-derived poliovirus
VPD	Vaccine-preventable disease
WASH	Water, sanitation and hygiene
WHO	World Health Organization
WPV	Wild poliovirus

* NEAP 2018/2019 marks an important shift in programme terminology. In lieu of what is generally referred to as routine immunization, "Essential Immunization" (EI) now designates the package of vaccinations (including polio vaccines) that children aged below 23 months are entitled to in accordance with the Immunization Policy of Pakistan. The rationale for this shift lies in the need to emphasize the importance of immunization as an essential component of basic healthcare and as a right of all children in Pakistan.

**With the signing of the 25th constitutional amendment bill, the formerly Federally Administered Tribal Areas (FATA) has been merged with Khyber Pakhtunkhwa province. Within this document, the acronym FATA is only used in instances where the provided information refers to time periods before the signing of the merger in to law in May 2018.

FOREWORD



Aamir Mehmood Kiyani
Federal Minister for National Health Services,
Regulations and Coordination

Pakistan's journey to become polio-free has been nothing short of remarkable. The nation has come a long way and won many battles on multiple fronts. Our hard work, determination, and resilience have brought us closer than ever towards a future where the poliovirus can no longer undermine the well-being of Pakistan's children, families, and communities.

Our gains are clear. Over the past four years, a 97% reduction in cases has been actualized, and no case has been reported from the core reservoir since the start of this year. Quite simply, we're witnessing the best epidemiology Pakistan has ever seen. This achievement was made possible through the systematic implementation of well-planned, high-quality campaigns that reached Pakistan's children with the essential vaccine before the deadly virus was able to reach them.

We owe a tremendous debt to our true heroes – the 260,000 Sehat Muhafiz, frontline workers who brave all odds to travel door to door, down countless streets, in every district and province to guarantee that no child is left unprotected. We fully recognize that the point of contact – between vaccinator and parent – is crucial to our ultimate success. We therefore, place emphasis on the selection, training, and supportive supervision of our valuable frontline workers. Community-based vaccination (CBV) was also a game changer in improving campaign quality and getting access in the high-risk core reservoir districts known to be the engines of wild poliovirus (WPV) transmission. Local, permanent vaccinators equipped with tools and knowledge were essential to build trust and to track and immunize the cohort of children who had been consistently missed previously.

These shrinking gaps in missed children are an improvement, but they are not the end of our efforts. On our way to Zero Polio, we employed many out-of-the box strategies over last year to close the remaining gaps, address prevailing challenges, and accelerate our results. Building on an extensive survey of high-risk mobile populations, the programme strengthened microplans and initiated review and field validation by involving partner staff and independent third parties.

To make sure no strain of the virus goes undetected, the programme also increased the sensitivity of its surveillance systems including acute flaccid paralysis (AFP), community-based, and environmental surveillance (ES) methods. As a result, the non-polio AFP rate has been consistently growing to reach a country average of over 12 per 100,000 population below 15 years of age - way ahead of the global standard for AFP surveillance. We have also expanded the number of environmental sampling locations to 55 collection sites spread across the country-making it the largest ES network in the world!

The programme continues to focus on strengthening Essential Immunization. Synergies between polio and the Expanded Programme on Immunization (EPI) are being promoted and pursued at every opportunity within the reservoir districts and elsewhere.

We made every effort to smooth the functioning of our Emergency Operations Centres (EOCs) at the national and provincial level, so partners and government staff can work seamlessly together as 'one team under one roof'. These EOCs are the real powerhouses behind our success, and their work has been bolstered by the best available data, comprehensive operational research, and real-time assessment and monitoring. The improvements to our EOCs are commendable. Information now reaches decision makers and frontline staff in a swift, effective manner that helps drive programme priorities, performance, and accountability on a daily basis.

Communication has come to the fore, as the programme employs robust strategies and a clever use of media to address refusals during vaccination rounds and instill greater trust by parents, caregivers, and communities nationwide. This was no easy feat, given the wave of negative propaganda and misreporting faced last year. It was critical, therefore, to ensure that the objective of polio eradication was understood at the doorstep of every home and we made it possible with the unwavering support and commitment of a wide network of local influencers, religious leaders and scholars, healthcare providers, tribal elders, social mobilisers, and community-based vaccinators. To further sharpen the effectiveness of our communication strategies, we have embarked on a 'Communication for Eradication' strategic plan, driven by high-quality epidemiological and social data, with a focus on those who were getting missed. The plan utilizes detailed social profiling for all high-risk populations to roll out context-specific communication interventions across multiple channels, including mass media and local influencers. The strategy promises to create an enabling environment for community trust and acceptance by shifting key norms and practices in support of polio vaccination.

With all these updates, it is still too early for us to celebrate the end of polio yet. Challenges persist, and the programme remains mindful of the fact that there is still a lot to be done. Positive environmental samples, as well as the three cases reported from Balochistan, show us that the virus is still able to find opportunities for its survival and take road to find children with suboptimal immunity anywhere.

Pakistan now has all the tools we require to stop transmission within the next low transmission season. It will now take us to ensure consistent access to all children in hard-to-reach or underserved areas, as well as in mobile communities. I am confident that it can be accomplished by working together and making all elements of the programme accountable for immunizing every child in each polio vaccination campaign.

We further acknowledge the fact that the global eradication is inextricably linked to simultaneous progress in Pakistan and Afghanistan. We continue to align our strategies for maximal gains in the shared corridors of transmission and urge the global community to play its role in ensuring access of the Afghanistan programme to all vulnerable children consistently.

On behalf of the Government of Pakistan, I extend deep appreciation and gratitude for the steadfast support of the international community. We are truly in this together, and I want to assure you of our unwavering commitment to reach every child – and to end polio forever.

EXECUTIVE SUMMARY

In the past three years, Pakistan has made tremendous progress towards polio eradication, with its lowest ever number of confirmed wild poliovirus (WPV) cases reported last year. This progress comes as intensive planning and coordination has yielded many pathbreaking strategies: from community-based vaccination (CBV) to new surveillance methods for eradication; from a strong operational platform and full organisational accountability, to innovations in monitoring and evaluation that give visibility into the programme's toughest challenges.

Yet even with this progress, Pakistan remains one of only two countries still reporting WPV cases; the other country is neighbouring Afghanistan. In 2017, 8 and 14 cases were reported from Pakistan and Afghanistan, respectively. As of June 2018, a total of 13 cases—3 from Pakistan and 10 from Afghanistan—have been reported. All cases in Pakistan were detected in Dukki, a rural district in Balochistan.

These cases make clear that neither Pakistan nor Afghanistan can eradicate polio without the other, and all of Pakistan remains at risk as long as WPV continues to circulate in either Pakistan or Afghanistan.

Until both countries reach and sustain 'zero' polio, the programme cannot celebrate. While the decline in the number of WPV cases demonstrates positive progress, the continued reporting isolation of WPVs from environmental surveillance (ES) samples in Peshawar and Karachi provides sobering evidence of persistent transmission in many parts of the country. Despite the reduction in the overall percentage of positive samples in the past 12 months, the distribution of sporadic positive samples across multiple geographic areas and epidemiological blocks and the persistent isolation of WPV from environmental samples in some core reservoirs indicate continued challenges to eradication.

Programme assessments also point to underlying operational issues that have created gaps in the quality of supplementary immunization activities (SIAs), seen in the proportion of unvaccinated and undervaccinated children.

Under the National Emergency Action Plan (NEAP) 2017/2018, 5 National Immunization Days (NIDs) and 5 Subnational Immunization Days (SNIDs) were conducted. While the proportion of targeted children remaining unvaccinated among recorded missed children declined dramatically to approx. 3% at the beginning of 2016, that proportion has gradually increased in the last two years and is now at approx. 6%. Looking to independent third-party post-campaign monitoring (PCM) data, there were variations in campaign performance. In Punjab, vaccination coverage remained above 90% throughout the low season and was $\geq 95\%$ in April and May 2018. In Khyber Pakhtunkhwa (KP) and what was formerly the Federally Administered Tribal Areas (FATA), coverage was $\geq 90\%$ in 7 of 9 and 8 of 9 campaigns, respectively. Coverage was $\geq 90\%$ for 3 of 10 campaigns in Balochistan, 6 of 10 in Sindh, 3 of 8 in Islamabad, zero of 6 in Azad Jammu and Kashmir (AJK), and 2 of 6 in Gilgit Baltistan (GB).

Performance was equally varied in the highest-risk districts. In Karachi, the proportion of Union Councils (UCs) passing lot quality assurance sampling (LQAS) remained $<80\%$ for most towns throughout 2017 and 2018. In Quetta block, the proportion of UCs passing LQAS in both Quetta and Killa Abdullah was $<80\%$ between July and December 2017, though performance gains were observed in the second half of the 2017/2018 NEAP cycle. Consistent good performance was observed in both Khyber and Peshawar with the proportion of UCs passing LQAS remaining above 90%.

An assessment of 2017/2018 essential immunization (EI) in CBV Union Councils in Tier 1 districts was conducted in March-May 2018. The findings continue to highlight persistent gaps in EI coverage in the most critical districts. Coverage for Pentavalent 3 and IPV 1 remained extremely low in Killa Abdullah and Pishin, very low in Quetta, Khyber and parts of Karachi, and low in Peshawar and some parts of Karachi. These unacceptably low levels of EI coverage in the highest-risk districts hinder reaching and sustaining poliovirus eradication. Addressing the underlying challenges to improving EI coverage is beyond the scope of the polio programme and requires instead an 'all government' intervention. Using the established polio management, oversight and accountability structures to strengthen EPI performance is necessary if progress is to be made.

Under NEAP 2017/2018, the programme took additional measures to assess capacity in reaching all high-risk and mobile populations (HR&MPs). Detailed surveys of HR&MP groups were carried out in more than 60 districts with a high proportion of HR&MPs and a recurrent history of WPV transmission. A clear and granular profile of HR&MPs emerged: who they are, where they come from, where they go, and when they go. The surveys have been extremely useful in assessing the potential risk posed by HR&MPs, particularly as HR&MP groups were found to be systematically missed by the programme. However, where HR&MPs were undervaccinated, settled populations were also affected, indicating operational issues were the main problem. The finding gives clear direction: fixing operational issues at the district and sub-district level will support efforts with HR&MP-related issues, as outlined in the *HR&MP Vaccination Strategy*.

Quantitative and qualitative assessments all suggest that the programme is at a point where street-by-street knowledge of missed children and local community dynamics are the most important information the programme has and can use to cover the 'last mile' to eradication.

Community engagement remains the most critical factor in addressing remaining coverage gaps in the core reservoirs. Direct or hidden refusals associated with misconceptions and religious or other beliefs are the primary reasons for the non-vaccination of remaining missed children in these areas. The expansion and deployment of full-time, local, and mostly female vaccinators in all Tier 1 districts has created new opportunities for direct community engagement at the household level. The Sehat Muhafiz philosophy, which positions frontline workers (FLWs) as a community resource and as local and trusted health workers, and focused on identifying, tracking and covering missed children, has brought substantial benefits.

Surveillance also continues to be crucial to the eradication effort. In the past two years, the surveillance system was enhanced through the implementation of the Surveillance for Eradication Work Plan. Focused strategic planning, frequent field reviews, supportive missions, and quarterly reviews have transformed surveillance in all provinces. Furthermore, the concept of 'green is not always green' – meaning good indicators are not always equivalent to good surveillance – has helped refocus the programme on the basics of surveillance: a well-trained team conducting active and passive surveillance and, where necessary, innovating to enhance timely reporting. Investments in new technology, such as the development of new, web-based surveillance data system and the full rollout of mobile phone data collection for active surveillance, has improved the quality and timeliness of data. In 2018/2019, maintaining a highly sensitive surveillance system will be a critical priority and thus has become newly designated as a separate area of work.

Governments at all levels continue to lead the way in polio eradication. This 'all-government' approach to eradication has been effective in solving problems and driving success. In the last three years, the 'one team under one roof' concept has worked well to bring collaboration and coherence to a multi-level, multi-disciplinary, and multi-agency organisation. Additionally, the Emergency Operations Centre (EOC) network is now mature and provides a strong platform for the programme. Transforming this new national asset into a national institution will be a priority for NEAP 2018/2019.

Yet as a third year of heavy investments and intensive push comes to an end, the fight to rid Pakistan of polio must not relent. Despite the programme's achievements, steep challenges remain. Sustaining peak performance across all high-risk districts remains difficult. In 2017/2018, the programme was unable to simultaneously maintain high performance across all high-risk districts. Addressing chronic operational issues will be critical to success in the year ahead – and to completing the 'last mile' toward a polio-free Pakistan.

The way forward is clear. For 2018/2019, the programme will continue to implement the basic core strategies that have delivered substantial progress: comprehensive vaccination through four NIDs and five SNIDs; sensitive poliovirus surveillance throughout the country; and thorough monitoring and data analysis to drive decision making. To finally achieve eradication, the programme will increase its focus on both high-risk population groups settled in core reservoirs and other high-risk districts, and high-risk and mobile populations.

For core reservoir and high-risk districts

- Enhance quality and reach of the immunization strategies where appropriate to increase overall population immunity.
- Implement a comprehensive 'Communication for Eradication' strategy based on interactive approaches and focusing efforts on listening to the community and finding ways to address specific issues.
- Fully implement corridor action plans and consolidate coordination with the Afghan polio eradication program on strategy and operational harmonization.
- An option for expanding targeted age group for vaccination in critical areas especially among the seropositive older age group will be considered during the course of the next low transmission season.
- Increase investment in EI coverage, especially through targeted support in low-performing tier 1 districts.

For high-risk and mobile populations:

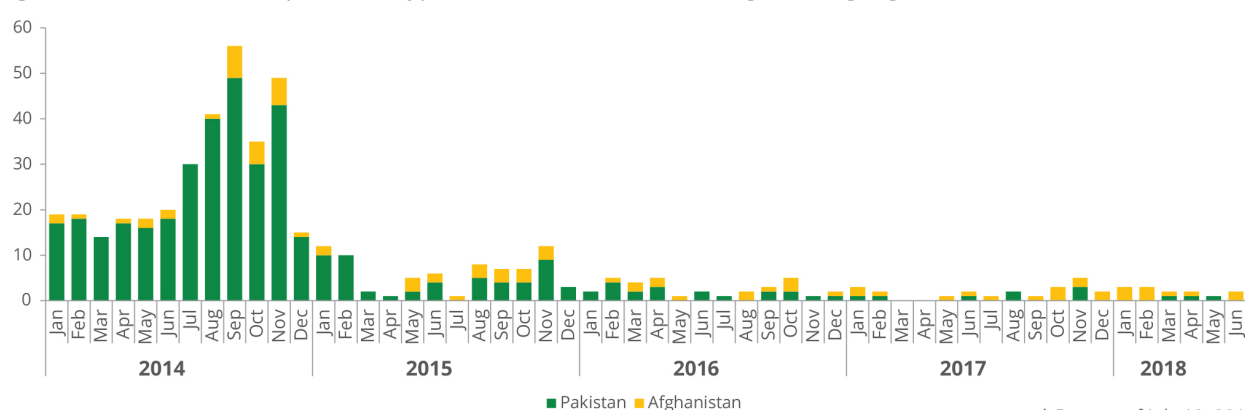
- Update HR&MP Strategic Plan incorporating lessons learned last year to identify and target this population in areas where they contribute most to poliovirus transmission.

BACKGROUND

Overall polio situation

Pakistan has made tremendous progress towards polio eradication in the past three years, with the lowest ever number of confirmed wild poliovirus (WPV) cases reported last year. It remains one of only 2 countries in the world still reporting WPV cases; the other country is neighbouring Afghanistan. In 2017, Pakistan reported eight cases, while Afghanistan reported 14. As of June 2018, a total of 13 cases – 3 from Pakistan and 10 from Afghanistan – have been reported (Figure 1). All 2018 cases in Pakistan have been reported from Dukki, a rural district in Balochistan (Figure 2).

Figure 1 – Confirmed wild poliovirus type 1 cases in Pakistan and neighbouring Afghanistan, 2014 – 2018*



* Data as of July 12, 2018

Since July 2017, Pakistan has reported 8 WPV1 cases, 3 from Dukki, 2 from Karachi, and one each from Killa Abdullah, Zhob, and Lakki Marwat (Figure 2). Of the eight WPV cases reported in the last year, 7 were <24 months old, 6 had zero EI OPV doses, and four had <4 total OPV doses.

While the decline in the number of WPV cases demonstrates positive progress in Pakistan, the continued isolation of WPVs from environmental samples in key districts provides sobering evidence of persistent low-level transmission (Table 1). The overall percentage of positive samples for the country has declined slightly during the last year and even sharply in some key risk areas (Table 1). Yet the distribution of sporadic positive samples across multiple geographic areas and epidemiological blocks, and the repeatedly positive samples in some core reservoirs indicate continued challenges to eradication. Furthermore, the persistent transmission of one cluster (R4B1C1)

outside of the known core reservoirs has been worrisome due to its geographic diversity and time interval between isolate detection (Figure 3).

Furthermore, epidemiologic evidence and genomic sequencing of both WPV cases and environmental samples have confirmed linkages between transmission in Afghanistan and Pakistan, signifying the importance of approaching these two countries as a single epidemiologic block to finally achieve eradication.

This approach helps to identify five distinct circulation zones relevant to programmatic planning for Pakistan (Figure 3).

- **Karachi:** A core reservoir with both WPV cases and positive environmental samples in the last year, Karachi is also both the destination and starting point for many high-risk and mobile populations HR&MP to other parts of Pakistan and southern Afghanistan.
- **Northern corridor:** The northern border area includes the core reservoir of Peshawar along with relevant districts of Khyber Pakhtunkhwa (KP) in Pakistan, as well as the known transmission links with Nangarhar, Kunar, and Nuristan provinces in Afghanistan, which have had multiple WPV cases in 2017/2018.
- **Southern corridor:** The southern border area includes the core reservoir of Quetta block in Balochistan and the southern provinces of Helmand and Kandahar in Afghanistan, which have reported multiple WPV cases since January 2017.
- **Central corridor:** The central corridor links Southern KP with provinces in the south-eastern region of Afghanistan has been relatively silent but requires continued vigilance, considering the accumulating risk.
- **Central Pakistan:** Sporadic WPV cases have been reported in a wide geographic expanse of Central Pakistan. Silent circulation continues to persist in areas of East Balochistan, North Sindh, and South Punjab.

Figure 2 – Spatial distribution of wild poliovirus type 1 confirmed cases, Pakistan and Afghanistan, July 16 – June 18

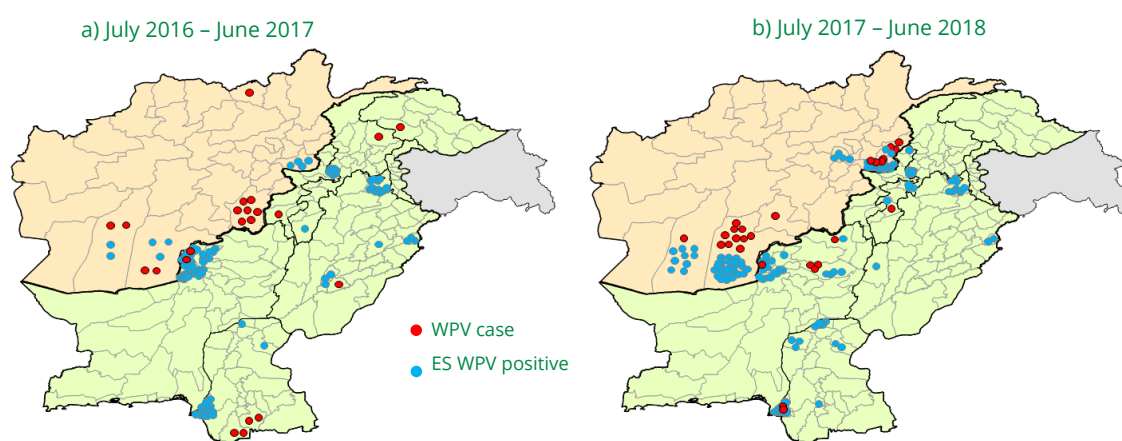
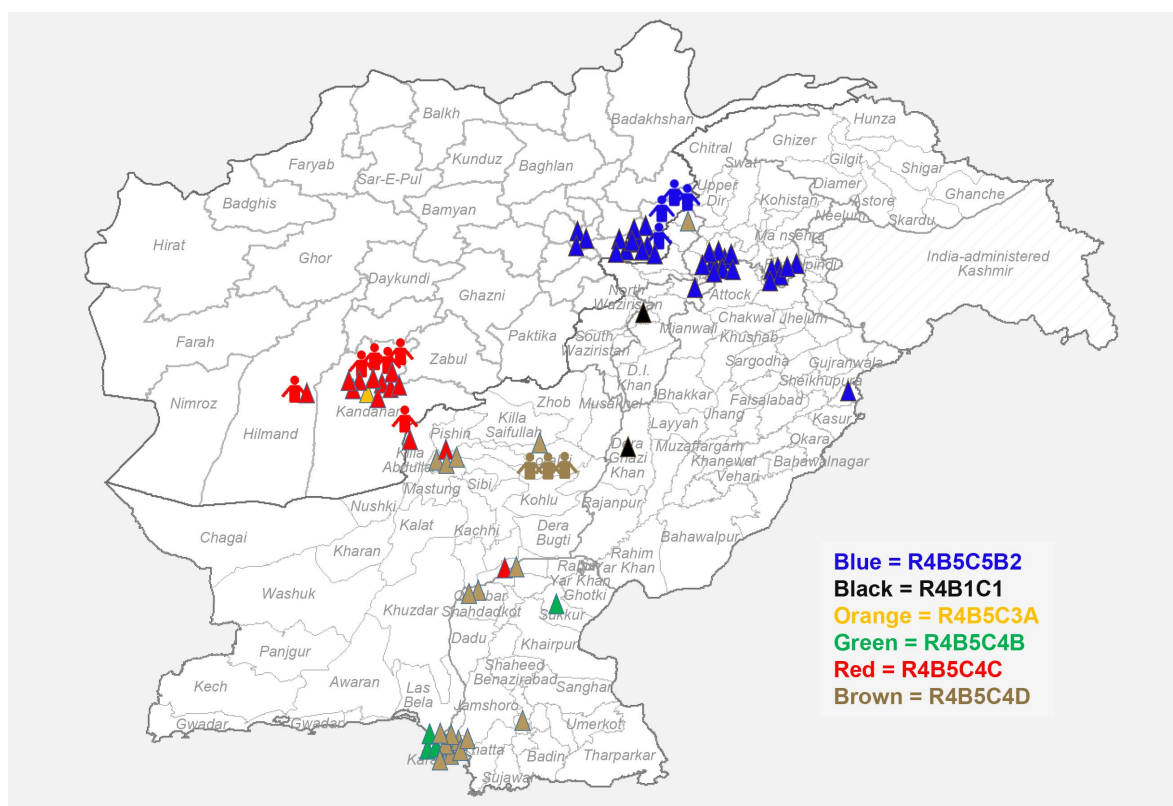


Table 1 – Number and proportion of WPV isolated from sewage samples, by quarter 2017-2018, key areas of concern in Pakistan

Areas of concern	2017					2018	
	Qtr1	Qtr2	Qtr3	Qtr4	Total	Qtr1	Qtr2
Karachi	6 (22%)	7 (25%)	16 (57%)	13 (48%)	42 (38%)	6 (19%)	4 (13%)
Quetta Block	14 (64%)	6 (29%)	5 (24%)	5 (24%)	30 (35%)	2 (10%)	3 (14%)
Peshawar	2 (33%)	3 (33%)	0 (0%)	3 (50%)	8 (30%)	3 (43%)	5 (83%)
Rawalpindi/Islamabad	4 (44%)	5 (45%)	3 (33%)	1 (11%)	13 (34%)	2 (22%)	4 (40%)
Others	1 (1%)	1 (1%)	5 (5%)	6 (6%)	13 (3%)	9 (9%)	5 (5%)
Pakistan	27 (17%)	22 (13%)	29 (18%)	28 (17%)	106 (16%)	22 (13%)	21 (13%)

Figure 3 – WPV1 cases and positive environmental samples, Pakistan and Afghanistan, by cluster, Jan 2018-June 2018

NEAP 2017/2018: PROGRESS AND CHALLENGES

The Pakistan Polio Eradication Initiative (PEI) has indeed made substantial progress in the past three years, the evidence of which is clearly visible in the declining number of cases. Yet while virological trends have been largely positive, performance gains have not been consistently observed in immunization activities in the last 12 months. The aggressive targets set for provinces by the National Emergency Action Plan (NEAP) 2017/2018 have not been fully realized.

Note: This section covers a time period before the promulgation of the 25th constitutional amendment bill merging what was the formerly Federally Administered Tribal Areas (FATA) with Khyber Pakhtunkhwa (KP). Consequently, it refers to 'FATA' because this was the administrative structure and terminology in place at the time of data collection.

Supplementary immunizations

National and Provincial level

Since the beginning of the last NEAP in July 2017, 5 National Immunization Days (NIDs) and 5 Subnational Immunization Days (SNIDs) have been conducted. While the proportion of children remaining unvaccinated among recorded missed children declined dramatically to approx. 3% by the beginning of 2016, that proportion has gradually increased in the last two years and is now at approx. 6% (Figure 4).

Looking to the independent third-party post-campaign monitoring (PCM) data in Table 2, no province was able to consistently attain the 95% coverage NEAP target throughout the NEAP year. The performance was most consistent and best observed in Punjab, where average coverage remained above 90% throughout the low season and where NEAP targets were met during the April and May 2018 campaigns. Performance was also high in KP and

FATA: both achieved at least 90% coverage in 7 of 9 and 8 of 9 campaigns, respectively, and both surpassed the NEAP target in 2 campaigns. Coverage was more than 90% for three of 10 campaigns in Balochistan, six of 10 in Sindh, 3 of 8 in Islamabad, zero of 6 in Azad Jammu and Kashmir (AJK), and 2 of 6 in Gilgit Baltistan (GB) (Table 2).

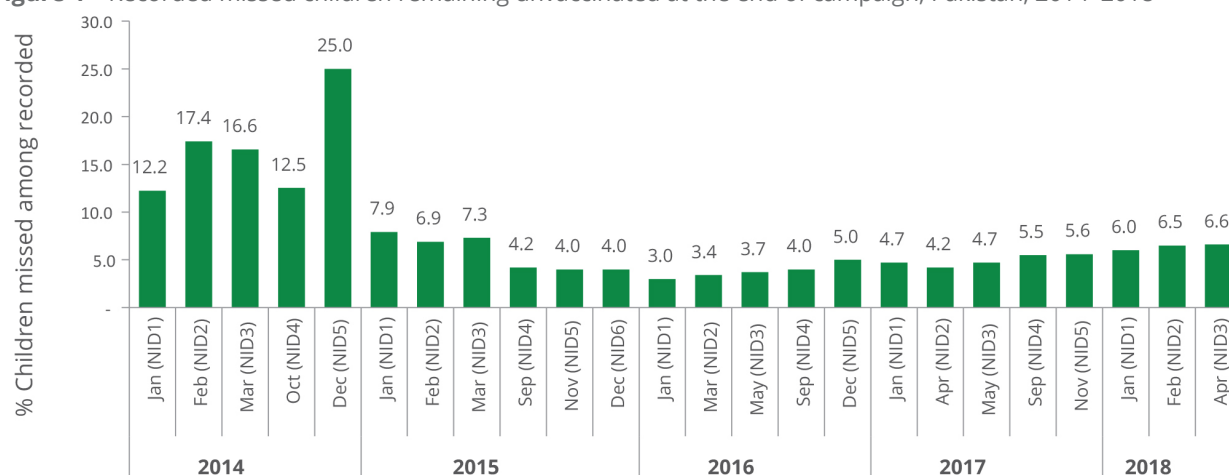
Table 2 – Detailed review of campaign performance using multiple data sources, Pakistan, 2017/2018.

	Province	Jul 17*	Sep 17	Oct 17*	Nov 17	Dec 17*	Jan 18	Feb 18	Mar 18*	Apr 18	May 18*
Third-party post-PCM	AJK	83%	84%	ND	79%	ND	79%	82%	ND	88%	ND
	BALUCHISTAN	86%	85%	83%	83%	84%	84%	86%	91%	91%	93%
	FATA	90%	88%	92%	91%	90%	92%	91%	ND	96%	95%
	GB	89%	91%	ND	87%	ND	85%	87%	ND	91%	ND
	ISLAMABAD	91%	86%	90%	ND	85%	81%	ND	81%	89%	91%
	KP	95%	91%	93%	89%	90%	88%	91%	ND	96%	94%
	PUNJAB	92%	91%	90%	91%	92%	93%	93%	90%	95%	95%
	SINDH	96%	91%	89%	87%	88%	89%	91%	96%	93%	96%
	PAKISTAN	91%	89%	89%	87%	88%	88%	89%	91%	93%	94%
Low-performing Union Councils	AJK	20%	17%	ND**	22%	ND	18%	15%	ND	12%	ND
	BALUCHISTAN	48%	38%	45%	36%	48%	32%	34%	31%	25%	18%
	FATA	38%	34%	27%	31%	30%	20%	18%	ND	19%	7%
	GB	32%	25%	ND	15%	ND	24%	21%	ND	19%	ND
	ISLAMABAD	40%	38%	23%	75%	27%	23%	20%	22%	17%	10%
	KP	13%	13%	10%	12%	10%	12%	11%	ND	7%	6%
	PUNJAB	21%	9%	11%	10%	9%	7%	7%	11%	7%	4%
	SINDH	36%	18%	20%	22%	20%	13%	16%	19%	16%	6%
	PAKISTAN	29%	16%	19%	17%	20%	12%	13%	13%	11%	7%
Lot quality assurance sampling	AJK	80%	75%	ND	50%	ND	25%	75%	ND	67%	ND
	BALUCHISTAN	77%	86%	81%	87%	71%	79%	82%	81%	91%	85%
	FATA	97%	95%	97%	98%	93%	93%	96%	98%	99%	96%
	GB	25%	100%	ND	67%	ND	33%	50%	ND	33%	ND
	ISLAMABAD	56%	50%	63%	20%	67%	100%	80%	83%	75%	88%
	KP	90%	88%	93%	87%	90%	81%	91%	88%	88%	94%
	PUNJAB	96%	99%	89%	99%	99%	90%	98%	97%	96%	95%
	SINDH	89%	84%	82%	73%	86%	71%	84%	83%	67%	78%
	PAKISTAN	86%	89%	88%	87%	88%	82%	89%	89%	87%	89%

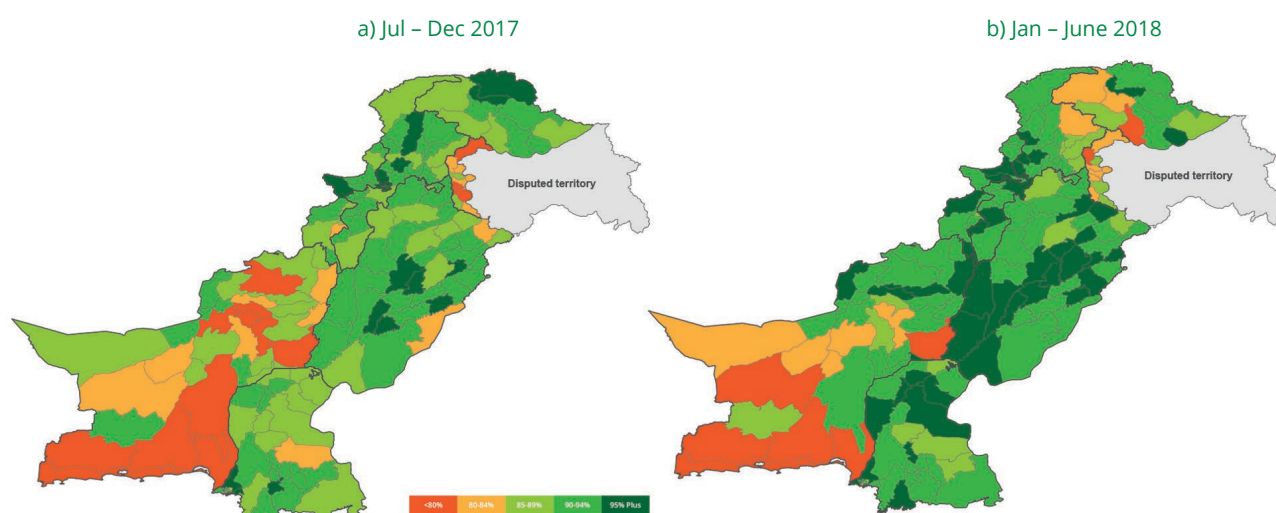
*Sub-national campaigns;

Abbreviations: AJK, Azad Jammu and Kashmir; FATA, area now part of KP but then referred to KP Tribal Districts (KPTD); GB, Gilgit Baltistan; KP, Khyber Pakhtunkhwa; ND, Not done; PCM, Post-campaign monitoring.

NEAP Targets: PCM, ≥95%; LPUCs <10%; LQAS ≥90%

Figure 4 – Recorded missed children remaining unvaccinated at the end of campaign, Pakistan, 2014–2018

The lot quality assurance sampling (LQAS) data was consistent with what was observed with PCM data (Table 2). The NEAP target for any province is at least 90% of the Union Councils assessed passing LQAS at 90% or more coverage. The NEAP target was achieved in five of the 10 campaigns in KP, nine of the 10 campaigns in Punjab, and 10 of 10 campaigns in FATA. The results for FATA are, however, treated with caution considering the inability of monitors to have access to all selected clusters in a timely manner. Performance was sub-optimal in Balochistan, which achieved NEAP targets only on one of 10 campaigns and where performance was especially low in July, December, and January, when fewer than 80% of the assessed Union Councils (UCs) passed. Performance was also suboptimal in Sindh, which was unable to reach the NEAP target in any of the campaigns and saw less than 80% of UCs passing LQAS in 4 of the 10 campaigns, and less than 70% passing during the April NID. Islamabad, AJK, and Gilgit Baltistan were also among the underperforming areas as assessed by LQAS. Similarly, consistent trends were observed with low-performing Union Councils, or LPUCs (Table 2).

Figure 5 – Third-party post-campaign monitoring, Pakistan, July 2017 – June 2018

District and sub-district level

Compared to the first half of the NEAP 2017/2018 cycle, supplementary immunization activity (SIA) quality improved over the second half of the year (Figures 5 and 6).

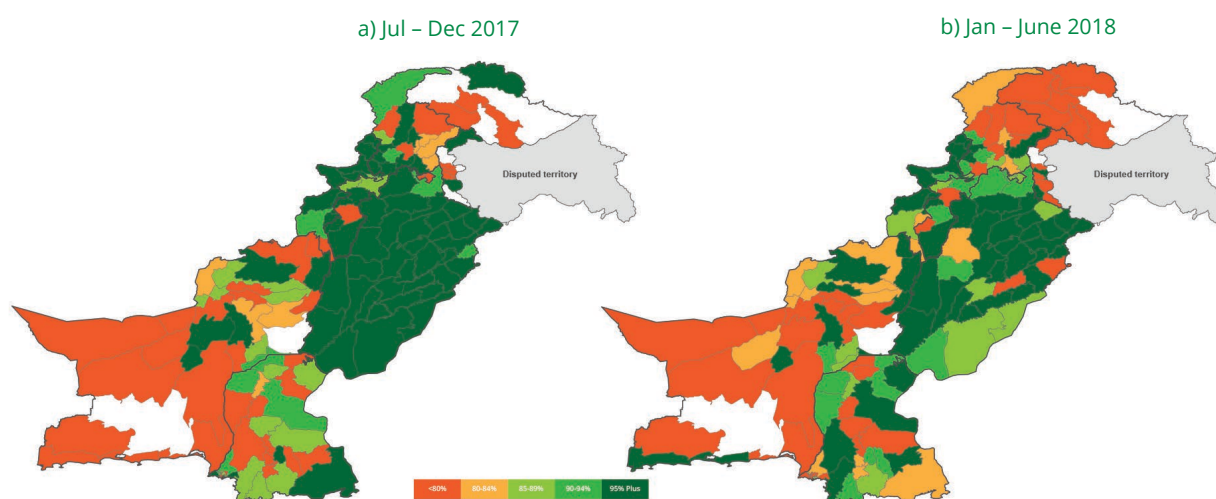
Looking to the PCM data, SIA performance remained at a high level throughout the year in Punjab, KP, and what was at the time of assessment FATA (Figure 5). Almost all districts managed to consistently achieve more than 85% coverage, with most achieving more than 90%, especially during the second half of the NEAP implementation year. Performance improvement was particularly noticeable in the highest-risk districts of South Punjab, including Rahim Yar Khan, Rajanpur, Dera Ghazi Khan, Muzaffargarh, and Multan – all of which reached above the 95% NEAP target. Performance gains were also observed in Orakzai and North Waziristan agencies of FATA, and Charsadda and Mardan districts in Khyber Pakhtunkhwa. LQAS pass rates for these provinces was consistent with PCM data (Figure 5). In FATA, where access to all selected clusters was not always possible during the monitoring, these results must be interpreted with caution.

Consistent underperformance was observed, however, in interior Balochistan. PCM coverage was on average <80% in parts of Zhob and Sibi divisions and many districts in South Balochistan, including Gwadar, Kech, Awaran, Panjgour, and Khuzdar (Figure 5). While performance improvements were observed in Zhob division – partly driven by response to the ongoing WPV outbreak – below par performance continued in other divisions during the second half of the year (Figure 5). Looking to the LQAS data, the proportion of UCs passing was below 80% in multiple districts in Sibi, Makran, and Rakhshan divisions, reinforcing the image of an underperforming interior Balochistan (Figure 6).

Underperformance was also observed in Sindh, in Larkana, Sukkur, and Shaheed Benazirabad divisions, in the first half of the NEAP year (Figures 5 and 6). Positive gains were observed in the second half, contributing to multiple districts in North Sindh reaching coverage of above 95% in PCM (Figure 5) and the proportion of UCs passing LQAS surpassing the 90% benchmark (Figure 6). Despite the improvements seen elsewhere, SBA division and especially the Sanghar district continued to show sub-par performance (Figures 5 and 6).

Performance as measured by PCM and LQAS was below the NEAP targets in Islamabad AJK and GB (Table 2, Figures 5 and 6).

Figure 6 – Proportion of Union Councils passing* lot-quality assurance sampling (LQAS), July 2017 – June 2018.



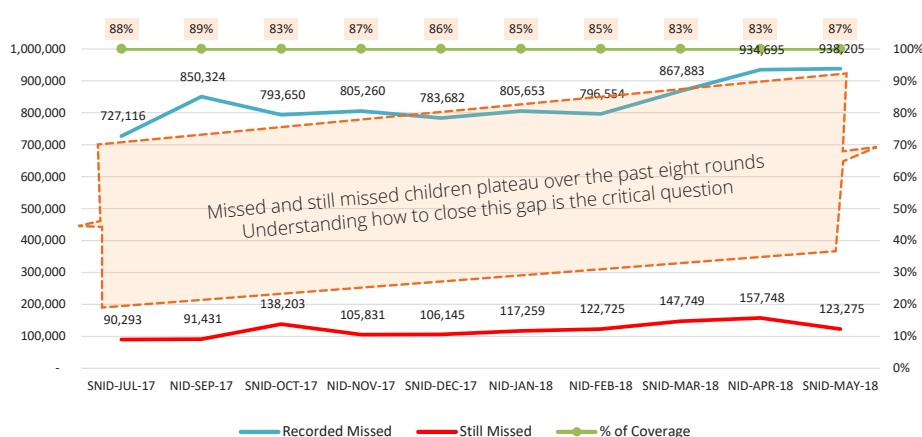
*LQAS conducted in accordance with standard GPEI protocols. Threshold for pass in Pakistan is set at a coverage estimate of 90% or more (or three or fewer children missed out of 60 assessed per lot).

Tier 1 districts

In Tier 1 districts, one cause for concern in the NEAP 2017/2018 cycle is that overall trends of missed children appear to have plateaued. The number of recorded missed children and missed children remaining unvaccinated has generally remained steady but increased slightly in the April NID (Figure 7). The most critical task ahead is to further reduce the number of children who remain unvaccinated after follow-up to the round is completed.

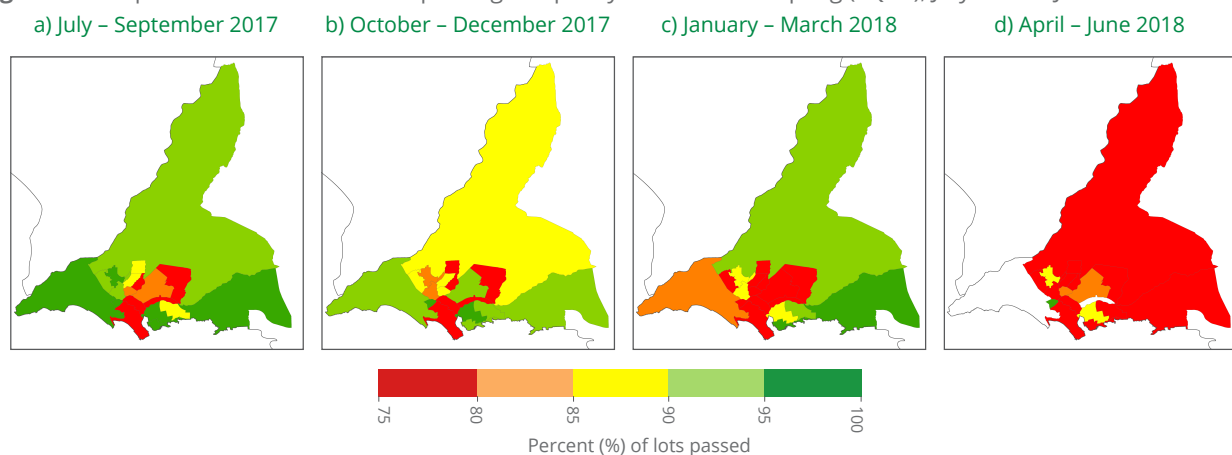
For further consideration on this challenge, Tables 3 and 4 below show detailed analysis of missed children from both PCM and LQAS. It is important to note that both monitoring measures have not been able to robustly assess reasons for missed children. PCM was especially affected by reports of ‘vaccinated but not finger-marked,’ making the interpretation of data difficult (Tables 3 and 4).

Figure 7 – Trends of recorded and ‘still’ missed children in (CBV), Tier 1 UCs, 2017/2018



Campaign		SNID JUL 17	NID SEP 17	SNID OCT 17	NID NOV 17	SNID DEC 17	NID JAN 18	NID FEB 18	SNID MARCH 18	NID APR 18	SNID MAY 18*
Target Population		3,217,768	3,509,271	3,473,185	3,493,218	3,501,863	3,499,292	3,495,235	3,457,025	3,482,213	3,468,143
Recorded Missed		727,116	850,324	793,650	805,260	783,682	805,653	796,554	867,883	934,695	938,205
Still Missed		90,293	91,431	138,203	105,831	106,145	117,259	122,725	147,749	157,748	123,275
Percentage on Target	Recorded Missed	23%	24%	23%	23%	22%	23%	23%	25%	27%	27%
	Still Missed	3%	3%	4%	3%	3%	3%	4%	4%	5%	4%
Percentage on Recorded											
Still Missed		12%	11%	17%	13%	14%	15%	15%	17%	17%	13%

Figure 8 – Proportion of Union Councils passing lot-quality assurance sampling (LQAS), July 2017 – June 2018.



The proportion of UCs passing LQAS has remained below 80% for most towns in Karachi throughout 2017 and 2018 (Figure 8). In Quetta block, performance improvements were observed, especially in Killa Abdullah district where vaccination coverage by PCM surpassed the 95% NEAP benchmark during the second half of the NEAP year (Figure 5). LQAS performance, however, was not aligned with PCM; the proportion of UCs passing LQAS in both Quetta and Killa Abdullah remained below 80% between July and December 2017. Moderate performance improvements were observed as measured by LQAS between January and May 2018 (Figure 6). Consistently good performance was observed in both Khyber and Peshawar district. As measured by PCM, high vaccination coverage rates reaching more than 95% on multiple campaigns was observed (Figure 5). Similarly, the proportion of UCs passing on LQAS remained above 90% (Figure 6).

Essential immunization

Tier 1 districts

Assessment of 2017/2018 essential immunization (EI) was conducted in March-May 2018 for community-based vaccination (CBV) Union Councils in Tier 1 districts. The findings continue to highlight the persistent gap in EI coverage in the most critical districts (Figures 9 and 10). Coverage for Pentavalent 3 and IPV 1 remained extremely low in Killa Abdullah and Pishin, very low in Quetta, Khyber, and parts of Karachi, and low in Peshawar and some parts of Karachi (Figures 9 and 10).

Figure 9 – Pentavalent 3 coverage status in Tier 1 districts, Pakistan 2017 and 2018

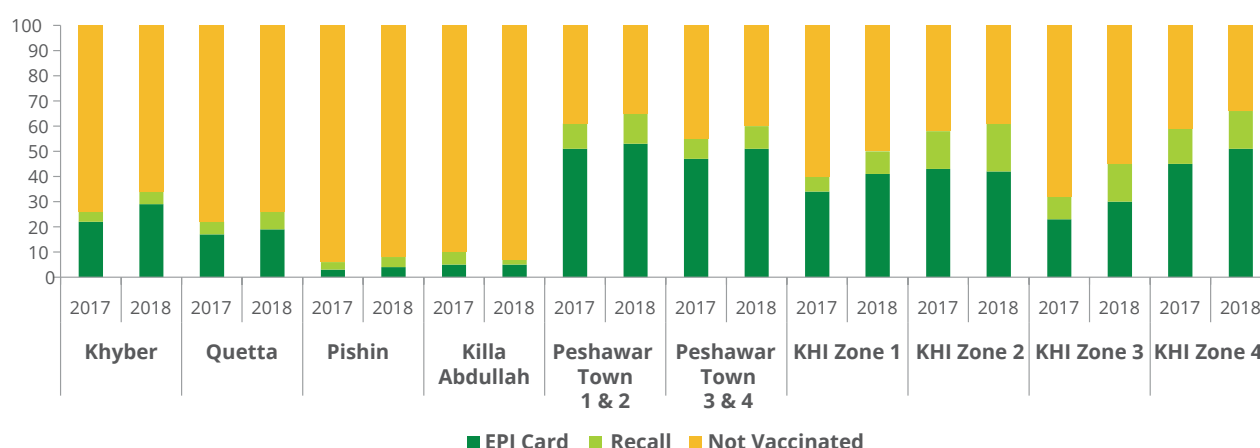
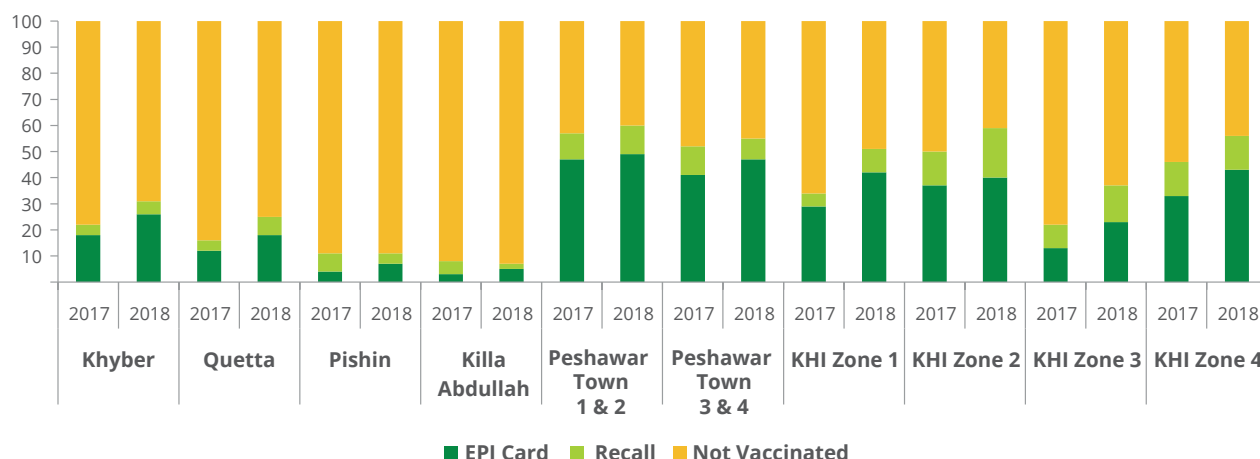


Figure 10 – IPV1 coverage status in Tier 1 districts*, Pakistan, 2017 and 2018



*Only Union Councils implementing the community-based vaccination strategy were assessed. For Karachi (KHI), the zones were divided as follows: Zone 1, Baldia, Kamari and Orangi; Zone 2, Korangi, Landhi and Bin Qassim; Zone 3, Gadap only; Zone 4, other CBV Union Councils.

Table 3 – Analysis of missed children from 3rd party post-campaign monitoring data, Tier 1 districts, July 17–June 18

Tier-1 Districts	Total children assessed	Missed children*	Child away	Team missed child	Team did not visit	Refused	Child was sleeping	New born	Newly arrived/Migrant	Don't know	Vaccinated but not finger marked
KABDULAH	2485	171 (6.9%)	13 (0.5%)	7 (0.3%)	11 (0.4%)	12 (0.5%)	5 (0.2%)	7 (0.3%)	3 (0.1%)	4 (0.2%)	109 (4.4%)
KARACHI	38973	3792 (9.7%)	278 (0.7%)	80 (0.2%)	248 (0.6%)	400 (1%)	86 (0.2%)	47 (0.1%)	33 (0.1%)	118 (0.3%)	2502 (6.4%)
KHYBER	3653	219 (6%)	8 (0.2%)	7 (0.2%)	0 (0%)	2 (0.1%)	3 (0.1%)	0 (0%)	0 (0%)	1 (0%)	198 (5.4%)
PESHAWAR	2431	71 (2.9%)	3 (0.1%)	0 (0%)	1 (0%)	3 (0.1%)	4 (0.2%)	3 (0.1%)	0 (0%)	4 (0.2%)	53 (2.2%)
PISHIN	3019	298 (9.9%)	11 (0.4%)	3 (0.1%)	4 (0.1%)	4 (0.1%)	1 (0%)	2 (0.1%)	1 (0%)	7 (0.2%)	265 (8.8%)
QUETTA	2558	315 (12.3%)	12 (0.5%)	1 (0%)	4 (0.2%)	4 (0.2%)	4 (0.2%)	2 (0.1%)	0 (0%)	0 (0%)	288 (11.3%)
TIER 1 (ALL)	53119	4866 (9.2%)	325 (0.6%)	98 (0.2%)	268 (0.5%)	425 (0.8%)	103 (0.2%)	61 (0.1%)	37 (0.1%)	134 (0.3%)	3415 (6.4%)

Table 4 – Analysis of missed children from lot quality assurance sampling data, Tier 1 districts, July 17 – June 18

District	Total children assessed	Missed children*	Child away	Team missed child	Team did not visit	Refused	Child was sleeping	New born	Newly arrived/Migrant	Don't know	Vaccinated but not finger marked
KABDULAH	6300	252 (4%)	41 (0.7%)	36 (0.6%)	4 (0.1%)	42 (0.7%)	3 (0%)	2 (0%)	7 (0.1%)	10 (0.2%)	107 (1.7%)
KARACHI	27660	1643 (5.9%)	178 (0.6%)	116 (0.4%)	102 (0.4%)	525 (1.9%)	30 (0.1%)	23 (0.1%)	56 (0.2%)	29 (0.1%)	584 (2.1%)
KHYBER	8160	162 (2%)	22 (0.3%)	31 (0.4%)	2 (0%)	2 (0%)	2 (0%)	4 (0%)	5 (0.1%)	3 (0%)	91 (1.1%)
PESHAWAR	7680	197 (2.6%)	28 (0.4%)	14 (0.2%)	2 (0%)	23 (0.3%)	0 (0%)	5 (0.1%)	13 (0.2%)	12 (0.2%)	100 (1.3%)
PISHIN	6060	152 (2.5%)	16 (0.3%)	28 (0.5%)	0 (0%)	8 (0.1%)	0 (0%)	2 (0%)	8 (0.1%)	10 (0.2%)	80 (1.3%)
QUETTA	8280	301 (3.6%)	33 (0.4%)	52 (0.6%)	12 (0.1%)	39 (0.5%)	4 (0%)	9 (0.1%)	11 (0.1%)	5 (0.1%)	136 (1.6%)
TIER 1 (ALL)	64140	2707 (4.2%)	318 (0.5%)	277 (0.4%)	122 (0.2%)	639 (1%)	39 (0.1%)	45 (0.1%)	100 (0.2%)	69 (0.1%)	1098 (1.7%)

Lessons learned 2017/2018

- Performance gains are fragile and can be lost.
 - Sustaining and improving on operational performance gains, year after year, is critical to achieving eradication. The work it will take to get to 'zero' requires sustained performance across multiple SIAs.
 - The programme was unable to meet NEAP targets in many districts throughout 2017/2018. This underperformance in some districts, especially over a long time in parts of interior Balochistan, did come back to haunt the programme in the form of outbreaks in Zhob division.
 - Addressing chronic operational issues will be critical to success in 2018/2019.
- Community engagement remains the most critical asset for closing gaps in the core reservoirs.
 - Direct or hidden refusals associated with misconceptions and religious or other beliefs are the primary reasons for the non-vaccination of remaining missed children in these areas.
 - The expansion and deployment of full-time, local, and mostly female vaccinators in Tier 1 districts presented opportunities for direct community engagement at the household level.
 - The Sehat Muhafiz (Guardians of Health) philosophy, which positions frontline workers (FLW) as a trusted, local health resource, has brought substantial benefits through addressing refusals and identifying, tracking, and covering missed children.
 - The programme is at a point where street-by-street knowledge of missed children and local community dynamics are the most important information for reaching children who are the hardest to vaccinate. Including community engagement activities in microplans and in discussions at meetings of the Union Council Polio Eradication Committee (UPEC) and District Polio Eradication Committee (DPEC) will be critical to ensure these pivotal programme inputs are properly explored and assessed at the local level.

- To further enhance the quality of engagement, the programme must consider more interactive communication approaches. The most high-risk families – intractable refusals, absences, and guest children – resist the promotional approach for a multitude of reasons and may require a listening approach not subjected to a scheduled timeframe.
- Microplan assessment ahead of the campaigns was a very positive step forward in understanding the quality and utility of campaign preparation.
 - Due to the timing of the activity, the scale of this activity remained limited.
 - While the process has been valuable in understanding the underlying reasons for underperformance in multiple districts, microplanning issues are yet to be consistently addressed.
- The programme's continuous innovation on all aspects of monitoring and evaluation continues to provide a strong, essential foundation for programmatic self-evaluation.
- HR&MP assessments have been extremely useful in identifying the potential risk posed by the HR&MP population.
 - Assessments were conducted in 60 districts, capturing data on more than 200,000 children.
 - A clear and granular profile of HR&MPs – who they are, where they come from, where they go, and when they go – has now been developed and is being utilised to assess risk.
 - The bottom-line message: HR&MP populations are not missed by the programme. Where the HR&MP population was undervaccinated, it was clear that operational issues that also affected the settled population within the district were the main problem.
 - Fixing operational issues at the district and sub-district level will support HR&MP-related issues addressed in the HR&MP Vaccination Strategy.
- Focused strategic planning, frequent field reviews, supportive missions, and quarterly internal reviews have transformed surveillance in all provinces.
 - 'Green is not always green.' This concept, that good indicators are not always equivalent to good surveillance, has helped refocus the programme on the basics of surveillance: a well-trained team conducting active and passive surveillance and, where necessary, establishing innovative techniques to enhance timely reporting.
 - Data quality is integral to good surveillance.
 - Sustained long-term success in surveillance will require bridging this process with VPD surveillance. Laying the foundation now for that work is important.
- Essential immunization remains well below acceptable levels in the highest-risk districts. Despite all the investment, the observed extremely low coverage in Killa Abdullah and Pishin and the very low coverage in Quetta, Khyber, and Gadap town in Karachi are all concerns. Addressing the underlying challenges to improving EI coverage is beyond the scope of the polio programme and requires an "all government" intervention. Using the polio management, oversight, and accountability structure is now necessary.
- Government ownership of the programme solves problems and drives success; where that ownership wasn't evident, operations gaps have persisted.
- The 'One Team under One Roof' concept works. The EOC network now provides a strong platform for the programme. For the 'One Team' concept to truly deliver there must truly be 'one team'. On the occasions where this was lost, performance deteriorated.

THE NATIONAL EMERGENCY ACTION PLAN, JULY 2018 - JUNE 2019

Goal

To stop all wild poliovirus (WPV) transmission in Pakistan, once and for all.

Strategic objectives

1. Stop poliovirus transmission in all remaining WPV reservoirs through focused, intensified national efforts and coordinated strategies across international borders.
2. Rapidly detect, contain, and eliminate poliovirus from any newly infected areas.
3. Protect the overall health of populations by maintaining and increasing immunity to poliovirus infection through implementing quality SIAs and routine EPI.

Guiding principles

Achieving these strategic objectives requires a core set of working principles which guide all polio eradication initiative (PEI) staff, from frontline workers (FLW) to the National Emergency Operations Centre (NEOC). These principles have been the essential driving force behind the success achieved to date and will continue to be the cornerstone for sustaining gains and finally achieving polio eradication.

Effective Collaboration – We operate and communicate as ‘one team under one roof’.

Reaffirm Open Communication – We promote honest, open communication and easy access to information.

Active & Continuous Improvement – We surface challenges – both big and small – to actively learn lessons and pursue creative approaches leading to continuous improvement in our work.

Dedication – We proudly commit to provide outstanding quality in everything we do to reach every child.

Integrity – We hold the highest ethical standards, investigating all data discrepancies.

Commitment – Frontline workers are our most valuable asset, and we are dedicated to attracting, retaining, and supporting the highest quality workforce.

Agility – We constantly innovate to find fast, effective, and sustainable solutions to real-time field problems.

Tenacity & Boldness – We resolutely focus on results to ensure a healthy future for all of Pakistan’s children.

Individual and Team Recognition – We have a performance and learning culture that promotes listening to field teams and recognition of performance.

Organisational and Individual Responsibility – We are all accountable to the highest personal and professional standards and we hold to responsible practices that will ensure short- and long-term success.

National & Organisational Oversight on Accountability – We provide fair and robust oversight and ‘checks and balances’ to deliver quality services of the best value, to effectively meet the needs of the communities and children we serve.

Strategic challenges

- Sustaining motivation and commitment to a long-running programme and building upon prior gains in the face of multiple other national public health priorities
- Identifying and characterizing population clusters not yet reached by immunization efforts

- Addressing persistent resistance (both overt and covert) and closing the remaining gaps in SIA operations which lead to insufficient immunity among geographically accessible populations
- Sustained transmission throughout the epidemiologic block of Pakistan-Afghanistan, which requires strategically and operationally well-aligned and coordinated efforts to halt both within-country spread and the persistent cross-border transmission associated with highly mobile populations
- Addressing systemic weaknesses in EPI in many parts of the country
- Sustaining government commitment at all levels following the upcoming national elections.

Areas of work

In recognition that the PEI has achieved the lowest incidence of polio cases ever in the last year, the 2018/2019 NEAP includes the core strategies utilised to date and further highlights the critical importance of early detection and response to any poliovirus transmission to achieve final eradication.

The NEAP 2018/2019 identifies four key Areas of Work (AOWs).

1. **Programme Operations:** Ensuring all vaccination activities reach all targeted children
2. **Detection and Response:** Ensuring rapid detection and appropriate response to any WPV case or evidence of low-level poliovirus transmission
3. **Risk Assessment and Decision Support:** Ensuring programme decisions are driven by the best available data
4. **Management, Oversight and Accountability:** Ensuring the programme is well-supported, managed, and coordinated with oversight and accountability for all.

Specific deliverables and targets

Key programme deliverables

In addition to implementing the basic core strategies that have delivered substantial progress, the 2018/2019 NEAP will further strategically focus its efforts on high-risk population groups living in core reservoir or high-risk districts, high-risk and mobile populations, and the last fraction of children who persistently remain under-immunized throughout Pakistan. New or expanded program deliverables in the next year for each priority group include:

For core reservoir and high-risk districts

- Enhance quality and reach of the immunization strategies, where appropriate, to increase overall population immunity
- Fully implement corridor action plans and leverage coordination with Afghanistan for cross-border strategic and operational harmonization
- Increase essential immunization coverage, especially through targeted support in low-performing Tier 1 districts

For high-risk and mobile populations

- Update the High-Risk and Mobile Populations (HR&MP) Vaccination Strategy, incorporating lessons learned last year to identify and target these populations in areas where they contribute most to fuelling poliovirus transmission

For the persistently underimmunized fraction

- Implement a new comprehensive 'Communication for Eradication' strategy based on interactive approaches and focusing efforts on listening to the community and finding ways to address specific issues.

- Identify a small team with particular strengths (e.g., personalities, ability to discuss, etc) and train them to interact with repeated refusal families through participatory communication skills

Comprehensive monitoring will continue to be a crucial component driving programmatic decisions. The programme will further continue to conduct timely assessments of programme quality to identify gaps and implement targeted interventions. Besides constantly improving the field monitoring and facilitative supervision, the new NEAP emphasizes an accountability approach which focuses on positive rather than negative reinforcement.

Panel 1 – Key program deliverables and relevant outcome indicators

Key Deliverables	Key Outcome Indicators
4 NIDs and 5 SNIDs with the coverage and quality necessary to stop transmission and protect the population; include expanded vaccination strategies, where appropriate (Annex 2).	<ul style="list-style-type: none"> • ≥95% coverage by third-party post-campaign monitoring (PCM) in all districts. • Remaining unvaccinated ('still missed') children <0.75% of target population and <5% of recorded missed children. • Provide >1 dose of IPV through SIA to children between 4 months and <5 years in Tier 1 districts. If not enough doses are available, additional prioritization within Tier 1 may be sought.
Sensitive surveillance to detect all polio cases through active AFP surveillance and detect low-level poliovirus transmission through environmental surveillance (ES). Increase ES grab samples collected and tested from 55 to 60.	<ul style="list-style-type: none"> • Achieve annualized NPAFP rate of >6/100,000 children <15 years old and >80% adequate stools in each district. • 0% of isolated polioviruses from any source are divergent from its closest relative by >1.5%. • 100% of compatible cases are followed up.
Aggressive response to any polio case, as well as to poliovirus transmission detected through environmental surveillance. Response should be in accordance with revised protocol for comprehensive interventions to poliovirus circulation.	<ul style="list-style-type: none"> • All case response SIAs are conducted within 14 days of detection and achieve >95% coverage of targeted population. Similar timeliness in ES event response, if response is warranted. • Integrated measures implemented as necessary to stop all evidence of persistent environmental circulation within 180 days of first response.
Increased essential immunization (EI) service delivery through ongoing synergies with EPI in community-based vaccination (CBV)-covered Union Councils and support for innovative implementation of RI operations in a select number of high-risk districts.	<ul style="list-style-type: none"> • Tier 1 districts <ul style="list-style-type: none"> - Increase the Penta 3 and IPV1 coverage in Pishin and Killa Abdullah by at least 10%. - Increase 2017/2018 estimates in Quetta by at least 15 percentage points. - Increase 2017/2018 estimates in Khyber district, and Karachi by at least 10 percentage points. - In Tiers 2 districts, using the NPAFP RI OPV3 estimates for children between 6 and 23 months, achieve a year-on-year reduction in children who have not received OPV3 by ≥25%. - ≥50% of zero dose children identified by CBVs are vaccinated by EPI in all districts.

Strategic action plans for the Northern, Southern, and Central Corridors between Pakistan-Afghanistan are finalized by September 2018 and implemented in close collaboration with the Afghanistan programme PEI to coordinate cross-border activities. NEOCs of both countries align strategies to halt apparent cross-border poliovirus transmission.	<ul style="list-style-type: none"> • All activities identified in the action plans are tracked and implemented within the proposed timeframe. • 100% of planned SIAs in the border areas are synchronized.
The HR&MP Vaccination Strategy, outlining strategies to reach this vulnerable group, will be updated by August 2018.	<ul style="list-style-type: none"> • Polio vaccine coverage among HR&MP remains at ≥95% in all districts.
A comprehensive Communication for Eradication Strategic Plan to proactively engage communities, counter resistance and refusals, and generate widespread advocacy for the PEI will be in place by August 2018.	<ul style="list-style-type: none"> • Proportion of children remaining unvaccinated among recorded missed (still missed children) are <2% of recorded missed in Tier 1 districts. • Positive media reports ≥15%.

District risk categorization

The NEAP 2017/2018 developed an aggressive but flexible approach, with key outcome indicators for programme operations in recognition of the changing epidemiology and variability in risk for poliovirus transmission (Panel 1). The programme reconfigured districts into four distinct risk tiers: core reservoir districts (Tier 1), high-risk districts (Tier 2), vulnerable districts (Tier 3), and low-risk districts (Tier 4).

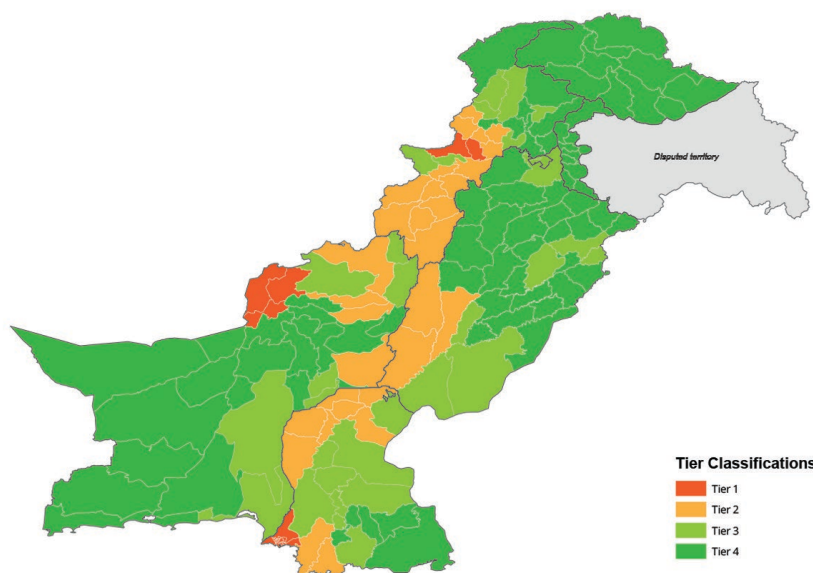
A 'core reservoir' (Tier 1) is any clearly definable contiguous geographic zone spanning an area not more than a division, or up to four closely linked districts and/or agencies with proven persistent local WPV1 circulation for at least 18 months and a repeated history of reseeding the virus outside the immediate transmission zone. High-risk districts (Tier 2) have detected intermittent transmission or sustained risk due to low levels of population immunity and other known risk factors. Districts in Tiers 3 and 4 are determined based on variabilities in both quantitative and qualitative assessment of risk.

For the NEAP 2018/2019, a revised tier classification of districts was completed after detailed consultation with the Provincial EOCs and the GPEI partnership and supported by risk modelling (Figure 11, Panel 2). The Tier 1 core reservoirs have remained the same as in the previous year: the city of Karachi, the districts of Quetta block (Quetta, Pishin, and Killa Abdullah), and the Khyber-Peshawar corridor (Khyber and Peshawar districts). Classification of the other districts has been revised slightly due to changes in epidemiology, programme performance, or re-assessment of risk. Tier classification may be revised on a half-yearly basis.

Recognizing that all of Pakistan remains at risk as long as WPV continues to circulate somewhere in either Pakistan or Afghanistan, the aim of this approach is to strategically focus resources and effort on halting virus transmission in current hotspots and quickly closing any emerging immunity gap in otherwise polio-free areas. Regardless of tier, all regions of Pakistan will be expected to meet the overarching goal of the NEAP 2018/2019. However, each tier will have specific goals, objectives, and strategies (Panel 2).

Figure 11 – Map of Pakistan showing different district Tier classifications for 2018/2019.*

Tier classification may be updated on a 6-monthly basis. Only parts of Tier 3 districts to be included in SNIDs.



*This figure reflects current geographic boundaries following the merger between the formerly Federally Administered Tribal Areas (FATA) with Khyber Pakhtunkhwa province in May 2018.

Panel 2 – District Tier Classifications for NEAP 2018/2019

Tier 1 - Core reservoir districts

Number of Districts: 11; Target population 4,091,608 (10%). SNID target, 10%

Goal: Interrupt persistent local transmission using multiple strategies

Strategy: 4 NID + 5 SNID in whole district + CBV in all UCs + combined bOPV/IPV SIA in children between 4 months and <5 years + essential immunization service delivery support and other auxiliary support

Tier 2 – High-risk districts

Number of Districts: 30; Target population 7,360,633 (19%), SNID target, 19%

Goal: Interrupt transmission. If transmission is ongoing, decrease vulnerability.

Strategy: 4 NID + 5 SNID in whole district + CBV in selected UCs + essential immunization service delivery support and other auxiliary support

Tier 3 - Vulnerable districts

Number of Districts: 32; Target population 12,548,702 (33%), SNID target, 17%

Goal: Decrease vulnerable districts

Strategy: 4 NID + 3 SNID in parts of district

Tier 4 - Low risk districts

Number of Districts: 79; Target population 14,521,015 (38%), SNID target, 0%

Goal: Maintain high population immunity

Strategy: NIDs only

Proportion of target population to be included in SNIDs (SNID ceilings) by province

AJK, 0%; Baluchistan, 52%; GB, 0%; Islamabad, 50%; Khyber Pakhtunkhwa, 58%; Punjab, 28%; Sindh, 70%. Overall SNID target for Pakistan is 46%.

PRIORITIES BY AREA OF WORK, 2018/2019

The goals and objectives of NEAP 2018/2019 will be delivered across the programme's four key Areas of Work (AOWs): Programme Operations; Detection and Response; Risk Assessment and Decision Support; and Management, Oversight and Accountability. Table 5 summarizes the key expectations from each area of work for each district tier classification. To enhance efficient coordination, these AOWs will be reflected in the functional management structures of the Emergency Operations Centres (EOCs) at both the National and Provincial levels.

For each area of work, the NEAP will require the full implementation of specific priorities. These deliverables, tasks and activities will be tracked through NEAP Implementation Work Plans and Quarterly NEAP Reviews. In addition, they will be monitored with specific reference to team and individual accountability.

Quarterly milestones

<p>Quarter 1 July to September 2018</p> <ul style="list-style-type: none"> • <i>Provincial Task Force meetings</i> • <i>Meeting of the National Task Force</i> • <i>By August 1, implementation Work Plans developed and circulated</i> • <i>Corridor response plans completed</i> • <i>Community-based vaccination expansion and harmonization completed</i> • <i>All ongoing WPV outbreaks and events controlled</i> 	<p>Quarter 2 October to December 2018</p> <ul style="list-style-type: none"> • <i>Provincial Task Force meetings</i> • <i>National Polio Management Team meeting</i> • <i>Implementation of all planned SIAs, including at least one* extended age-group round in selected high risk area</i> • <i>WPV transmission in all core reservoirs stopped</i>
<p>Quarter 3 January to March 2019</p> <ul style="list-style-type: none"> • <i>Provincial Task Force meetings</i> • <i>Meeting of the National Task Force</i> • <i>National Polio Management Team meeting</i> • <i>Implementation of all planned SIAs including at least one extended age-group combined bOPV/ IPV round in core reservoirs</i> • <i>At least one month with no evidence of WPV from all sources</i> 	<p>Quarter 4 April to June 2019</p> <ul style="list-style-type: none"> • <i>Provincial Task Force meetings</i> • <i>National Polio Management Team meeting</i> • <i>Implementation of all planned SIAs and at least one** extended age-group round in core reservoirs</i> • <i>At least four months of no cases and two consecutive months of no evidence of WPV from any source</i>

*An option to be reviewed and course of action decided during the 2018-2019 low season

** An option to be reviewed and course of action decided during the 2018-2019 low season

Table 5 – Primary goals and strategies by District Tier Classification for 2018/2019

Tier and Priority goal	Programme Operations	Detection and Response	Risk Assessment and Decision Support	Management, oversight and accountability
Tier 1 - Core reservoir Interrupt persistent local transmission	SIAs strategies: 9 bOPV SIAs; full districts targeted in all SNIDs; at least 1 SIAs with IPV targeting children between 4 months and <5 years; additional measures to be considered. Operational strategies: community-based vaccination in all UCs; temporary deployment of national-level and/or international supportive supervisors. EPI synergy: special measures to improve EI.	Prioritization for AFP surveillance resources and density of environmental surveillance sites. Prioritized for ES dual testing using BMFS	Micro census assessment; intra-campaign monitoring; LQAS in most UCs every campaign; post-campaign monitoring; essential immunization assessments	Review quarterly: NPMT, PTF; review monthly: provincial EOC, all DTfs, all DSRCs; review pre-intra- and post-campaign: all DPCRs, UPECs
Tier 2-High risk Interrupt any ongoing transmission; decrease vulnerability	SIAs strategies: 9 bOPV SIAs; full districts targeted in all SNIDs; additional measures to be considered. Operational strategies: community-based vaccination or special mobile teams in selected UCs; temporary deployment of national-level and/or international supportive supervisors.	Prioritization for AFP surveillance resources and density of ES within the division.	Priority for microplanning assessment during SNIDs; intra-campaign monitoring; LQAS in selected UCs; post-campaign monitoring;	Review quarterly: NPMT, PTF; review monthly: provincial EOC, all DTfs, all DSRCs; review pre-intra- and post-campaign: all DPCRs, UPECs
Tier 3-Vulnerable Decrease vulnerability	SIAs strategies: 7 bOPV SIAs. Partial districts targeted in 3 SNIDs; Operational strategies: mobile teams.	Prioritized for AFP surveillance reviews and field support visits. Establishment of at least one site within the division if possible.	Microplanning assessment during SNIDs; intra-campaign monitoring; LQAS in selected UCs; post-campaign monitoring;	Review quarterly: NPMT, PTF; review monthly: provincial EOC, all DSRCs; review pre-intra- and post-campaign: selected DTfs; all DPCRs, UPECs
Tier 4- Low-risk Maintain high population immunity	SIAs strategies: 4 bOPV SIAs. Not included in SNIDs; Operational strategies: mobile teams.	High priority for AFP surveillance reviews and field support.	Priority for microplanning assessment during NIDs; intra-campaign monitoring; LQAS in few UCs; post-campaign monitoring	Review quarterly: NPMT, PTF; review monthly: all DSRCs; review pre-intra- and post-campaign: provincial EOC, selected DTfs, all DPCRs, UPECs

PROGRAMME OPERATIONS

Interrupting endemic, persistent local transmission and protecting vulnerable populations will require well-coordinated, quality implementation of a broad range of programme operations.

The central strategy remains focused on the same activities as the previous NEAP:

- Oral poliovirus (OPV) vaccinations through EPI essential immunization and supplementary immunization activities (SIAs)
- Targeted outbreak/event responses to isolations of WPV from acute flaccid paralysis (AFP) cases or environmental surveillance (ES) samples

The new 2018/2019 NEAP continues these basic strategies but brings an added tactical focus on the core reservoirs – and on the core challenges within those core reservoirs, particularly vaccinating high-risk mobile populations (HR&MP). NEAP 2018/2019 also emphasizes closer coordination with Afghanistan on common reservoir challenges, as Pakistan and Afghanistan must both eradicate WPV to ultimately be successful in ridding the virus within their borders.

Community acceptance and vaccinator safety remain critical to the success of programme operations. Campaign monitoring data by district after each SIA generally corroborates a 2017 Knowledge, Attitudes, and Practices (KAP) finding that 95% of caregivers in core reservoir and high-risk districts support polio vaccination and that fewer than 5% fail to regularly vaccinate their children. A revised Communication for Eradication Strategic Plan will seek to sustain community demand for vaccination, address resistance proactively, and provide a comprehensive approach to enhance the quality of overall immunization efforts. While every effort will be made to access children in all areas, a top priority for all programme operations will be continuing to ensure the safety and welfare of all frontline workers (FLWs).

These operations will need to be closely integrated with and driven by comprehensive local surveillance and ongoing monitoring and evaluation efforts. While the operational response to detection of a WPV case is well established, the new NEAP will require the review of previous response to persistent ES positives and the establishment of standard protocol.

Beyond its primary focus on immunization, the NEAP 2018/2019 also recognizes the importance of complementary strategies aimed at overcoming barriers and improving the nutrition, sanitation, and broader public health needs of local communities. While some of these complementary strategies may be directed nationwide, others will be targeted to specific areas to build or maintain community trust and to address specific local priorities as part of an integrated approach.

Shared reservoir response strategies

The long-standing, frequent, and intense cross-border population movement between Afghanistan and Pakistan has generated shared poliovirus reservoirs that constitute a closely entwined epidemiological block between the two countries. Although some of the virus remains inside each country, this population movement fuels cross-border WPV transmission and poses a threat to eradication (Figure 3).

In 2017, the Pakistan and Afghanistan Technical Advisory Groups (TAGs), in recognition of the shared reservoirs, urged the respective programmes to mutually align strategies and activities in the bordering areas. In response, the 2017/2018 NEAP proposed further coordination between the two national polio programmes through synchronizing major activities like SIAs and case response vaccination campaigns; sharing surveillance, communications, and other programme data; and focusing on micro-synchronization of NEAP implementation in the bordering areas. While progress has been made, recent epidemiologic analysis underscores that more needs to be done and that neither Afghanistan nor Pakistan can achieve eradication without the other.

In May 2018, the Emergency Committee under the International Health Regulations (2005) (IHR) regarding the international spread of poliovirus concluded that joint planning to cease transmission in the two current active zones of transmission (the northern corridor and the southern corridor) and previously active transmission (central corridor) will be a key to success in achieving WPV eradication in Pakistan and Afghanistan, the region, and globally.

Programme operations in Pakistan must prioritize strategies that respond to the shared reservoirs. As such, the NEAP 2018/2019 will build on prior agreed plans and explore avenues for strengthening joint strategies.

Progress 2018/2019

- Increased interactions between the polio programmes at all levels that included regular local programme meetings for border districts of Afghanistan and Pakistan, province-level video conferences, and country-level face-to-face meetings.
- Developed action tracker with regular monthly and quarterly sharing of border district data on HR&MP, inaccessibility, communication activities, and AFP surveillance.
- Agreed on some common communication strategies and the key action points to be undertaken in the northern, southern, and central corridors at the last face-to-face Coordination Meeting in March 2018.
- Synchronized a majority of the planned SIAs (Sep 17, Oct 17, Feb 18, March 18, April 18, May 18).
- Continued ongoing vaccination at cross-border Permanent Transit Points (PTPs).

Priorities for 2018/2019

- Further optimize and ensure fullest implementation of the joint Pakistan-Afghanistan Northern and Southern Corridor Action Plans:
 - At the provincial/regional level, review implementation on a monthly basis
 - At the national-level, review implementation on a quarterly basis
 - Share a quarterly summary on progress of joint plan implementation.
- Synchronize all SIAs and explore ways to synchronize SIA implementation modalities across the corridors between Afghanistan and Pakistan.
- Ensure local data sharing and coordinated monitoring, surveillance, and event response activities between border districts.
- Continue joint, regular monitoring of PTPs to ensure maximum effectiveness.
- Coordinate strategic planning by corridor based on ongoing comprehensive analysis of epidemiologic, surveillance, and population movement data. Focus on joint strategies to identify and vaccinate HR&MPs.
- To address misconceptions and increase acceptance, ensure 360-degree campaign awareness along the border, using all Communication for Eradication and Media and Advocacy strategies, such as the inclusion of Pashtu-language information, education, and communication (IEC) materials; broadcast of polio messages on radio channels operating in cross-border areas; and IEC material distribution in internally displaced population (IDP) camps.

Supplementary immunization activities

The central programme operations strategy remains the same: to conduct house-to-house campaigns to reach and vaccinate each age-appropriate child with OPV during each campaign. The purpose of these multiple vaccinations is to fully protect each individual child and to build and maintain population immunity to stop WPV transmission. As in prior years, combined bOPV/IPV may also be given, depending on availability, to boost immunity in high-risk districts and UCs during selected SIAs. If stocks can be secured, mOPV1 may be used, especially in targeted areas to respond to a polio event.

The number of required SIAs is determined by a given district's WPV risk assessment. In addition to completing any delayed or postponed SIAs, the programme will endeavour the following under NEAP 2018/2019:

- Four NIDs (September and December 2018, and January and April 2019) targeting all districts.
- Three large-scale SNIDs (August and November 2018, and January 2019) targeting all Tier 1-2 districts and micro-targeting selected areas/populations of concern in Tier 3 districts.
- Two small-scale SNIDs (July 2018 and June 2019) targeting all Tier 1-2 districts and areas with large HR&MP populations.
- One bOPV/IPV combined SIA in tier 1 districts targeting children between 4 months and <5 years old.
- In accordance with the recommendation by the Pakistan TAG to enhance mucosal immunity for seropositive older age groups, an extended age-group campaign in at least two SIAs targeting children younger than 15 years will be conducted. *
- While ensuring an adequate number of rounds to provide the required immunity in each area, the programme has also paid special attention to the spacing of campaigns in this NEAP calendar to maximize quality and address community concerns regarding repeated rounds. Annex 2 shows the proposed SIA calendar for NEAP 2018/2019, which schedules an average interval of six weeks between rounds as compared to four weeks during the last year.
- In order to maximize the benefits of this new interval between campaigns, Emergency Operations Centres (EOCs) will publish in advance of each SIA a countdown of activities to be implemented during that campaign cycle. Such timelines will ensure the district maintains an overview of the sequence of events, prioritizes activities appropriately, clearly identifies the responsible person or task team, and thereby simplifies accountability. This organised countdown of activities will help to reach and vaccinate each and every child under five years of age with OPV during each campaign.

Community-based vaccination

Community-based vaccination (CBV) is a pivotal strategy for stemming virus circulation in the core reservoir and areas of highest concern for polio transmission in Pakistan. Under this approach, Community Health Workers (CHWs) – also called Female Community Volunteers (FCVs) in a handful of Karachi UCs – are hired from within their communities on a full-time basis. They implement all activities on a local level: registering, vaccinating, and continuously tracking all children <5 years old, developing microplans, and mobilising their communities to reach campaign goals.

CBV has successfully gained access to areas and children previously inaccessible to the programme. It also has rapidly increased the quality of polio vaccination services where quality was persistently problematic (Table 6). Micro-census data and household registration has given the programme a more accurate understanding of the targeted number of children in high-risk areas. Round by round, this local, stable, mainly female, and more accountable workforce has established greater trust with caregivers. The direct community engagement inherent to CBV also has been instrumental in the improved security of frontline workers and the transition from multi-phased to a single-phased campaign approach.

Since its rollout in Karachi in October 2014, CBV has gradually expanded in the core reservoirs. Following a comprehensive assessment in May 2016, Tier 1 districts adopted the approach, as well as a few selected Tier 2 districts in South KP. As of June 2018, the CBV workforce is now 18,710 strong, including supervisory tiers, and the female vaccinator proportion achieved to date is 81%.

In 2018–2019, the primary objective for CBV will be to focus on strategically addressing the specific gaps in each core reservoir in order to stop any ongoing transmission and halt further spread to other areas within Pakistan or Afghanistan.

*Option to be reviewed and course of action decided during the 2018/2019 low season.

Progress 2017/2018

- Successfully completed harmonization of operational management in Quetta and Killa Abdullah districts; 44 UCs transitioned from Community Health Volunteers (CHV) to CHW day-to-day operational management.
- Initiated outreach and regular cross-border meetings with relevant colleagues in Afghanistan to share data; tracked HR&MP and synchronized local operations.
- Implemented focus groups to better understand community non-compliance.
- Supported measles SIA.
- Addressed concerns about the quality of CBV and mobile team operations in remote areas through third-party monitoring and quarterly review of micro-census used for validating registration and addressing gaps.
- Conducted census and developed database of essential immunization (EI) defaulters in all core reservoirs, designed EI outreach microplans, and implemented regular interactions with EPI workers to support efforts in strengthening EI.
- Extensive tracking of 'still missed' and 'persistently missed' children in CBV areas through comprehensive monitoring and centralized database, coordinated through the Data Support Centre. Number and reasons for missed children vary by province.

Table 6 – Results of the poliovirus sero-prevalence survey conducted among children between 6 and 11 months old in Tier 1 districts, and other high-risk districts, Pakistan, 2016 – 2018.

Area sampled	Total number of children sampled		Number and proportion seropositive for poliovirus serotypes					
	Round 1	Round 2	Round 1			Round 2		
			Type 1 n (%)	Type 2 n (%)	Type 3 n (%)	Type 1 n (%)	Type 2 n (%)	Type 3* n (%)
Karachi Zone 1†	317 (Nov 2016)	339 (Apr 2017)	313 (98.7)	211 (66.6)	297 (94.0)	332 (97.9)	176 (51.9)	318 (93.8)
Karachi Zone 2†	344 (Jan 2017)	332 (Jul 2017)	342 (99.4)	207 (60.2)	333 (96.8)	331 (99.7)	124 (37.3)	325 (97.9)
Karachi Zone 3†	341 (Feb 2017)	299 (Aug 2017)	336 (98.5)	235 (68.9)	327 (95.9)	296 (99.0)	116 (38.8)	288 (96.3)
Larkana Division	341 (Jan 2017)	313 (Aug 2017)	338 (99.1)	203 (59.5)	323 (94.7)	308 (98.4)	176 (56.2)	296 (94.6)
Sukkur Division	300 (Dec 2016)	298 (Apr 2017)	297 (99.0)	158 (52.7)	286 (95.3)	296 (99.3)	244 (81.9)	292 (98.0)
Quetta District	309 (Jan 2017)	317 (Jul 2017)	293 (94.8)	229 (74.1)	287 (92.9)	310 (97.8)	257 (81.1)	303 (95.6)
Pishin District	308 (Dec 2016)	307 (May 2017)	283 (91.9)	137 (44.5)	267 (86.7)	300 (97.7)	272 (88.6)	295 (96.1)
Killa Abdullah District	312 (Mar 2017)	323 (Aug 2017)	274 (87.8)	190 (60.9)	250 (80.1)	297 (92.0)	209 (64.7)	275 (85.1)
Peshawar Towns 1 & 2	316 (Jan 2017)	323 (Apr 2017)	314 (99.4)	202 (63.9)	310 (98.1)	322 (99.7)	211 (65.3)	320 (99.1)
Peshawar Towns 3 & 4	308 (Dec 2016)	318 (Jul 2017)	302 (98.0)	201 (65.2)	286 (92.8)	308 (96.8)	160 (50.3)	304 (95.6)
Mardan & Swabi	306 (May 2017)	Pending	299 (97.7)	236 (77.1)		285 (93.1)		Pending
Khyber	293 (Sep 2017)	Pending	290 (99.0)	237 (80.9)		281 (95.9)		Pending
Rawalpindi District (reference)	298 (Mar 2017)		297 (99.7)	249 (83.6)	296 (99.3)			
Lahore District (reference)		291 (May 2017)				290 (99.6)	161 (55.3)	288 (99.0)

*NEAP target was 90% Type 3 seropositivity; Karachi was divided into three zones. Zone 1 (Baldia, Gadap, G. Iqbal, Gulberg, Kamari and Orangi), Zone 2 (Bin Qassim, Korangi and Landhi) and Zone 3 (other towns)

Priorities for 2018/2019

- Prioritize continuing to build capacity of FLWs and ensuring the safety and security of vaccinators.
- End the parallel operational management of 'roaming teams' in Peshawar; address the challenges of vaccinating children on the move within the CBV operational, supervisory, and management structure.
- Harmonize operational management in Karachi.
- As a matter of priority and urgency, complete the full transition of FCV Union Councils to CHW
- Expand CBV to all remaining 89 Union Councils of Karachi
- Work closely with the Communication for Eradication Task Team to tackle the refusals problem.

- Conduct detailed review of CBV operations in areas with persistent ES positives, with the aim of strengthening supportive supervision.
- Carry out quarterly micro-census and microplan validation and implement the HR&MP Vaccination Strategy.
- Support measures to improve EI with renewed focus, taking advantage of the extended interval between campaigns.
- Conduct biannual EI defaulter census.
- To strengthen outreach activities, support social mobilisation efforts.
- Strengthen data analysis of missed children at the provincial EOCs, districts, and UCs, particularly by identifying clusters of unvaccinated children during SIAs and ensuring focused follow-up, as required.
- Submit a detailed annual Work Plan for 2018/2019 that provides exact timelines for the implementation of activities.

Mobile team vaccination and capacity building

While the CBV strategy is deployed in the core reservoirs and a few other high-risk Union Councils outside the core reservoirs, house-to-house vaccinations during SIAs are conducted to cover about 90% of the target population using the 'mobile team' strategy. The strategy has successfully ensured high immunity for most of the population and minimized the risk of outbreaks and persistent transmission outside Tier 1 districts. However, last year, several districts outside CBV areas generated concern due to persistent detection of positive environmental samples. To strengthen local capacity for vaccine delivery and monitoring, special mobile teams (SMT) were created with expanded work schedules and intensified supervision in limited targeted areas including North Sindh, South Sindh, Karachi, and Islamabad.

During the implementation of the 2017/2018 NEAP, the three key objectives were:

- To improve microplanning through a revised training plan for local area supervisors, updated SIA tools, and regular pre-campaign quality assessment of microplans
- To ensure that microplans identify, track, and register HR&MP
- To improve the recording, tracking, and vaccinating of all missed children

Under the NEAP 2018/2019, the programme will further enhance progress made to address these three objectives to maximize protection for children against any introduction of poliovirus.

Progress 2017/2018

- Enhanced programme effectiveness in areas under SMT operations, as evidenced by improved quality indicators and marked decline in positive environmental samples.
- Conducted training of trainers (TOT) and undertook comprehensive training for Areas in Charge (AICs) with a revised training plan, emphasizing microplan preparation, desk review, and field validation.
- Revamped SIA tools to support microplan improvement. The SIA countdown was revised with clear inclusion of microplan preparation and validations dates. Microplan quality assessments were done by internal (AIC self-assessment) and external monitors.
- Increased focus on HR&MP through the development and implementation of the new HR&MP Vaccination Strategy, Pakistan 2017-2018, which offers standardized definitions and procedures such as HR&MP inclusion in microplans, continuous tracking, and rationalization of temporary and permanent transit vaccination posts.
- Improved missed children identification, registration, and follow-up through training vaccination teams and AICs and introducing a tally sheet for catch-up day activity planning, as well as separate tracking of guest and zero-dose children in the revamped tally sheet and an emphasis on recording persistently missed children.

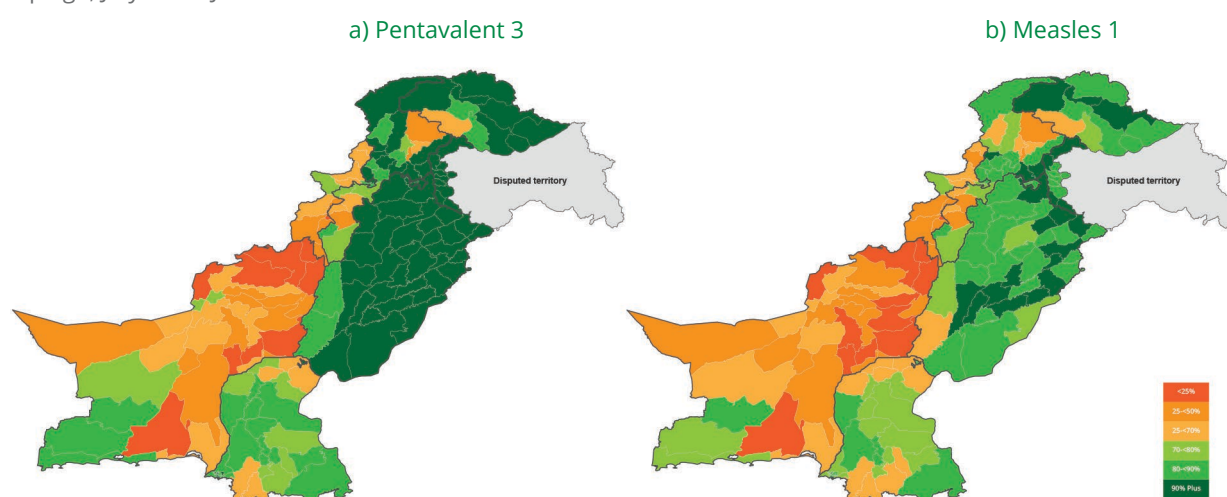
Priorities for 2018/2019

- Focus on districts with a high number of low-performing Union Councils (LPUCs) to address persistent microplanning gaps.
- Review impact of SMTs and, where necessary, exit strategies to be developed by NEOC.
- Expand capacity for detecting and assessing gaps in local programme operations through utilisation of data generated during SIA assessments (pre-, intra-, and post-SIA). This may be implemented through routine facilitated supervision, or a select group of master trainers at the national level may support provincial monitoring efforts as deemed necessary in key districts.
- Maximize female vaccinators and AICs and implement revised Communication for Eradication Strategic Plan to address refusals in place of punitive measures.
- Maintain focus on reaching and vaccinating HR&MP in every UC by ensuring HR&MPs are included in microplans.
- Submit a detailed annual Work Plan for 2018/2019 that provides exact timelines for the implementation of activities.

Synergy with the Expanded Programme on Immunization

Essential immunization (EI) is one of the four basic strategies for global polio eradication and is considered a cornerstone of the Government of Pakistan's public health strategy. Although the Expanded Programme on Immunization (EPI) in Pakistan has seen some gradual improvements, progress has not been uniform across the country. Figure 12 shows estimates for the proportion of eligible children receiving Pentavalent 3 and Measles 1. Not surprisingly, many of the same areas which have lagged in providing EI are the same areas which have either been endemic or at high-risk for poliovirus transmission. Along with immunity provided through SIAs, EI not only helps to stop the spread of poliovirus transmission, but it can also protect populations in all areas from reintroduction. To sustain the gains made towards polio eradication, there is a critical need for strengthening EI.

Figure 12 – Proportion of children receiving Pentavalent 3 and Measles 1 as assessed by the third-party post-campaign, July 2017–June 2018



*Age group for Pentavalent 3: 3- <24 months; Measles 1: 9- <24 months

EPI/PEI synergy is a combined, collaborative effort for the implementation of EI activities between EPI and EOC management at all levels, aiming to improve EI coverage. Specific activities in support of this synergy have gradually expanded since the 2014 NEAP. The focus on PEI has primarily been to support EPI activities in Tier 1 districts.

Under the 2017/18 NEAP, the target for EPI/PEI synergy was on supporting achievement of >80% Penta 3 and IPV coverage in CBV areas through multiple activities:

- Joint planning and implementation of EI outreach sessions
- Sharing with EPI any 'zero dose' and defaulter data (e.g., 0-23 month old children) identified through SIAs or AFP as not receiving any EI doses
- Joint monitoring and supervision by EPI and PEI staff of outreach session implementation
- Using PEI monitoring and evaluation tools to support the continuous assessment of coverage
- Despite all efforts, improvements are yet to be fully realized in outcomes. Small gains, however, have been observed in a few districts, such as Peshawar. In 2018–2019, the test of success will be measured in actual children reached. Implementation of innovative new measures to increase EI in the lagging core reservoir districts is urgently needed. Sustaining these small gains, building on them, and supporting the national measles SIA scheduled for October 2018 will be critical.

Progress 2017/2018

- Integrated work plan on EI improvement developed in Punjab, Sindh, KP, and Balochistan
- Updated EPI targets from CBV registry and biannual enumeration in all Tier 1 districts
- Regularized enhanced reporting, referral, and follow-up of zero dose children between PEI & EPI in Sindh, KP, and Punjab.
- Conducted annual EI coverage assessment in CBV UCs in Tier 1 districts to measure progress against NEAP targets.
- Assessed EI service delivery infrastructure for all UCs implementing CBV strategy in Tier 1 districts
- Established EPI/PEI Synergy teams involving EPI management at the national and provincial levels, along with associated SOPs and Accountability Framework.

Priorities for 2018/2019

- Enhance management, oversight, and accountability
 - Establish a well-functioning system for EPI/PEI synergy at the district and provincial levels, guided by the developed SOPs and addressing accountability issues through the EPI/PEI oversight mechanisms.
 - Continue oversight of EPI synergistic activities by PEOC and actively seek activities to support the ongoing Urban Immunization Plan in Karachi and major towns.
 - Deepen the involvement of PEI management and oversight structures, especially the District Polio Control Rooms (DPCRs), Divisional Task Forces (DTFs), PEOCs and Provincial Task Forces (PTFs) with the goal of improving accountability.
 - On a quarterly basis, Synergy task team to conduct a review of activities and data and submit a report to the National EOC, EPI, and other stakeholders.
- Enhance vaccination activities
 - In Quetta block, explore the feasibility of strengthening EPI service delivery through Post-Polio Health Initiative (PPHI), nongovernmental organisations (NGOs), or private sector.
 - Continue sharing of EI zero dose data of SIAs and AFP surveillance data with EPI at the district, provincial and national levels. Follow up to ensure coverage of these children.
 - In all CBV areas, PEI frontline workers to jointly plan social mobilisation with EPI for the fixed and outreach sessions and coverage of zero dose and defaulter, during the third week of every campaign.
 - In selected core reservoir districts with very low EI coverage, actively seek and support local and national partners to strengthen implementation of EPI.

- Support non-polio SIAs
 - In all areas, support the planning, implementation, and monitoring of the national measles SIA.
- Enhance utilisation of polio resources for other vaccine-preventable disease (VPD) surveillance
 - To not dilute efforts and to ensure real outcomes from this collaboration, the focus for 2018/2019 will be the support of measles surveillance.
 - Establish deeper collaboration and clearer structures of surveillance data sharing between the NEOC with the national Synergy task team, the provincial EPI teams, and other relevant stakeholders.
 - On a weekly basis, share both raw data and Powerpoint analysis of AFP, measles, and neonatal tetanus from data obtained from eIFA (web-based Information for Action system), active surveillance sites, and weekly 'zero' reporting sites. Establish a mechanism for the continuous sharing of raw data with national and provincial EPI data focal points.
 - Explore the training of partner and government surveillance officers in selected districts on measles surveillance, in accordance with existing protocols.
 - Update the TORs of specified personnel in selected districts to include measles surveillance.
 - Review existing electronic surveillance system and explore opportunities to harness the full capabilities of the new eIFA system for VPD surveillance (starting with measles). The new eIFA seamlessly links field, lab, and provincial and national surveillance teams on a real-time basis.
 - With the support of GPEI partners, review current polio and national VPD surveillance strategies and systems and set up a process for the future development of a Beyond Eradication Surveillance Strategic Action Plan, taking into account the global expectations for sustained poliovirus surveillance identified in the Post-Certification Strategy and endorsed by the World Health Assembly.
- Support continuous monitoring and evaluation
 - Carry out at least one survey regarding the status of EI services in CBV UCs of Tier 1 districts by the end of June 2019.
 - On a quarterly basis, share estimates from PCM on Pentavalent 3 and Measles 1 coverage and estimates for OPV3 from the surveillance data.
- Submit a detailed annual Work Plan for 2018/2019 that provides exact timelines for implementation of activities.

Communication for eradication

Pakistan now has one of the highest polio vaccination acceptance rates in the world: over 95% self-declared coverage by caregivers, according to the latest Knowledge, Attitudes, and Practices (KAP) survey. Integrating communications and community engagement into the overall operations of the programme and aligning trust-building with tracking and covering missed children has been critical to this success.

Our investments in recruitment, training, and supportive supervision has been paying off, as the KAP 2017 shows improved trust in FLWs in the majority of polled caregivers (74%).

The next chapter of Pakistan's eradication story will require deeper analysis and an understanding of street-by-street barriers and customized, contextualized responses. At the operational level this will entail more localized UC- and area-level planning and strategies. Hence, as a first step in this direction and in response to TAG 2017 recommendations, the NEOC commissioned Focus Group Discussions (FGDs) to dig deeper into the reasons for refusals in core reservoir areas.

The following are areas of concern highlighted in the FGDs:

- A perception that polio now presents a very low risk
- A very complex set of reasons for refusal, misconceptions
- Increased fatigue within the programme
- Reports of too many campaigns and too many knocks

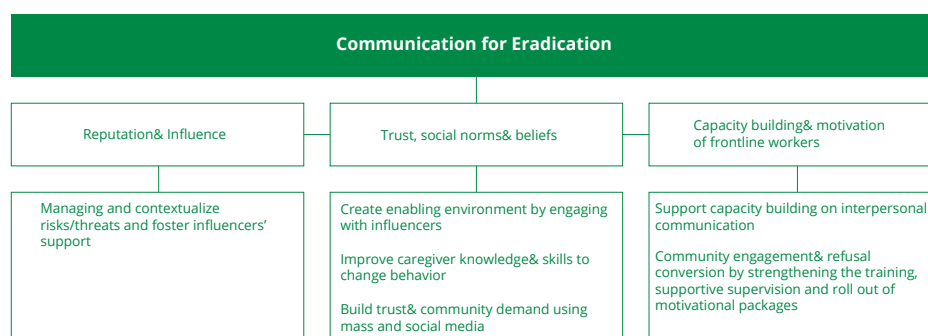
In developing its NEAP 2018/2019 priorities, the programme reflected on the following issues and observations:

- **Vaccine safety and efficacy:** A recurrent theme for refusals, issues around vaccine safety linger and more and more questions are asked around the efficacy of the vaccine as campaign intensity continues. Therefore, the programme messaging and content should focus specifically on the issues related to vaccine safety, efficacy, and the need for repeated vaccination.
- **Refusals and community resistance:** The number of refusals have plateaued or are increasing.
- **Campaign pressure:** During the implementation of the previous NEAP, campaigns took place every four weeks in the core reservoirs, leaving little time for corrective actions, especially communication related ones. Beyond these operational concerns, the programme is testing the limits of caregiver acceptance and goodwill – and this needs to be addressed in the upcoming six-week cycle.
- **Contextual communications:** The planning and monitoring of the program emphasized on operational improvements and little effort was spared for communication aspects. The program requires special focus on improving and streamlining the communication activities. More frontline workers will be equipped with communication skills so that they can effectively respond to the community resistance widely reported, specially, in the core reservoirs. The DPCRs and the provincial EOCs will adopt water-tight accountability framework that focuses on the impact of the communication interventions.
- **Frontline motivation and support:** The local, female profile of the vaccinator remains the cornerstone in establishing trust with caregivers and the community. There is a need to continue motivating vaccination teams, building their capacity to sustain pressure and negotiate with the community and households whilst maintaining a supportive environment within which to work, so problems may be quickly surfaced for action.
- **Refusal and defaulter data:** Granular and systematic triangulation of data in the reservoirs and high-risk areas is essential to better locate pockets of geographical and social clusters of silent refusals and identify the most appropriate influencers to effectively engage and convert.
- **Traditional media:** The current traditional media tonality is overwhelmingly neutral. However, the situation is fragile, and therefore regular and proactive media engagement is required in order to shift the dominant, neutral media tone to a positive one to better handle communication during a crisis.
- **Social media:** The programme's social media engagement to date has been limited and rarely proactive. Moreover, an increasing threat from antivaxxer propaganda, spread through social media (particularly WhatsApp) and occasionally picked up by traditional media, has had a direct impact on the increasing number of refusals. To effectively address these challenges, the programme should strengthen its social media strategy by monitoring, analysing, and adopting an overall more proactive approach towards community engagement and crisis communication on social media, for example with regard to an adverse event following immunization (AEFI).
- **Influencer engagement:** As much as possible, third-party voices including medical practitioners, religious leaders, community elders, prominent figures, celebrities, sports professionals, and polio survivors, as well as relevant institutions, should all be engaged – both offline and online – to support the programme messages.
- **Crisis communication:** The programme's earlier approach to crisis communication, specifically its handling of any type of false or negative information, has been indirect in its approach. The programme has rarely rebuffed, rebutted, or responded to allegations, so as to avoid giving unnecessary attention to adverse or oppositional voices. Whenever such content surfaced on either traditional or social media, the programme

actively started posting and trending positive content, such as the endorsement of medical experts, religious scholars, celebrities, and community influencers who supported vaccines or refuted misconceptions by providing correct, sound, and scientifically-based information. This approach, however, has not been able to bear substantive results in stopping the circulation of propaganda content that is making rounds because of its sensational nature. More importantly, the allegations remain unanswered and pose a risk of re-emergence in other forms, especially as WhatsApp grows in significance and usage in resource-poor settings. In light of the growing challenges to programme operations and reputation, the programme shall revisit its existing *Crisis Communication Strategy* and develop a robust and proactive mechanism to handle crisis, including traditional media, social media, influencer engagement as well as strengthened coordination with EPI (e.g., with regard to AEFI).

In 2018-19, the programme will build on the previous phased approach to implement a comprehensive *Communication for Eradication Strategic Plan (C4E)* via two new task teams:

- Communication for Eradication Task Team, and
- Media and Advocacy Task Team.



Communication for Eradication Priorities for 2018/2019

- Develop communications and community engagement tailored to local issues
 - Build the necessary human resource and other support structure needed to address deficiencies, especially in the core reservoirs.
 - Build communication risk-related analyses and algorithms, similar to one used for LPUCs.
 - Given the critical importance of social dynamics in high-risk areas, establish special investigation protocols with requisite tools that prioritize detailed social analysis and communication factors.
 - Build a Community Engagement Response Team that has the technical expertise to investigate and address challenges at a granular level.
 - Select and train a cadre of staff to specifically deal with repeat refusals in UCs with persistently missed children, as these require increased engagement and understanding
 - Conduct a training needs assessment in priority UCs.
 - Develop context-specific and evidence-based communication approaches and IEC for populations moving across the border with Afghanistan. Ensure the messages strongly resonate with parents and encourage vaccination of children in-transit and guest children at destination points.
 - Roll out motivational packages for FLWs (such as recognition and rewards) to help foster a sense of purpose and mission.
- Address global challenges and maintain high acceptance
 - Integrate social mobilisation tools into the microplanning process and ensure analysis of the reasons for missed children, still missed children, and persistently missed children are carefully reviewed and consistently addressed.

- Respond to emerging issues from messages circulating in social media and establish a comprehensive approach that goes beyond Incident Management to promote regular, strategic conversation on priority platforms.
- Place more emphasis on vaccine safety and efficacy, addressing repeated immunization, repeated knocks, and campaign fatigue and dispelling low-risk perception and misperceptions around vaccination.
- Targeted mobilisation of influencers including health professionals, religious and community leaders, private sector, and celebrities.
- Leverage community-based entertainment opportunities, such as sports and cultural events, to address campaign fatigue and community resistance.
- Ensure the C4E activities are on track to reach programme goals
 - Conduct regular reviews of the Communication for Eradication Strategic Plan:
 - Develop and implement field review and field support mechanisms and capacity for the core National and Provincial EOC C4E teams.
 - Conduct monthly reviews for all core reservoirs at the provincial level and quarterly reviews for all core reservoirs at the national level.
 - Conduct half-yearly C4E internal consultations and yearly consultations involving international communications experts that assess the effectiveness of outlined C4E strategy.
- Submit a detailed annual Work Plan for 2018/2019 that provides exact timelines for the implementation of activities.

Media and Advocacy Priorities for 2018/2019

- To ensure policies and plans address and evolve with emerging programmatic needs, the programme will carefully increase its media visibility via a more proactive communication approach with traditional media, social media, and influencer engagement, while taking into account specific local contexts and conducting a thorough risk assessment before adopting a higher-visibility strategy.
- To address specific concerns around the issues of vaccine safety, efficacy, and repeated vaccination, the programme will review the existing messaging and audio-visual media content and develop any additional required material, in close collaboration with provinces, to meet local need.
- Keeping in mind that a successful strategy is built around reaching the right people at the best time with the most insightful content, the programme will sharpen its listening abilities through comprehensive and systematic monitoring and analysis of traditional and social media.
- Recognizing the importance of social media as a powerful tool to build trust in polio vaccination and address people's concerns, the programme will take a more proactive approach towards social media engagement, community management and social media influencers engagement.
- To effectively respond to any crisis, the programme will shift its approach from response to preparation by building the crisis communication capacity of programme spokespeople at the national and provincial levels; establishing clear SOPs to guide the programme on roles, responsibilities, and response timelines and channels in the time of crisis; developing a set of readily available templates and statements on key themes, such as AEFI, vaccine safety, and polio workers' security, to be used on a 'per need' basis in close coordination with EPI.
- To ensure Media and Advocacy activities are on track to reach the programme goals, the programme will conduct regular reviews of the Media and Advocacy Strategy.
- Submit a detailed annual Work Plan for 2018/2019 that provides exact timelines for the implementation of activities.

Other aspects of programme implementation

Access and Security

A key objective of the programme is to safely and effectively reach and vaccinate every child under 5 years in order to attain the ultimate goal of stopping polio transmission. Pakistan has been able to sustain the access gains in all the security compromised areas in KPTD and Balochistan. Monitoring in these areas can be problematic, not due to structural reasons but rather issues linked to more systematic access with regular programme supervision and monitoring.

Progress 2017/2018

The 2017/2018 campaign season continued to be characterized by a sustained reduction in security incidents involving polio workers due to support from multiple law enforcement agencies (LEA), but the sporadic occurrences including deaths of vaccinators and monitors have reinforced the commitment of the programme to provide a secure environment in which vaccination teams and other staff can safely operate. This commitment necessitates careful, coordinated security planning involving security forces at the district, provincial, and national levels. Over the course of the low season, security forces protected more than 260,000 frontline workers during each campaign. Critical for the programme's success, the CBV approach and close collaboration with security agencies, where necessary, has continued to permit single-phase campaigns to remain the norm.

Priorities for 2018/2019

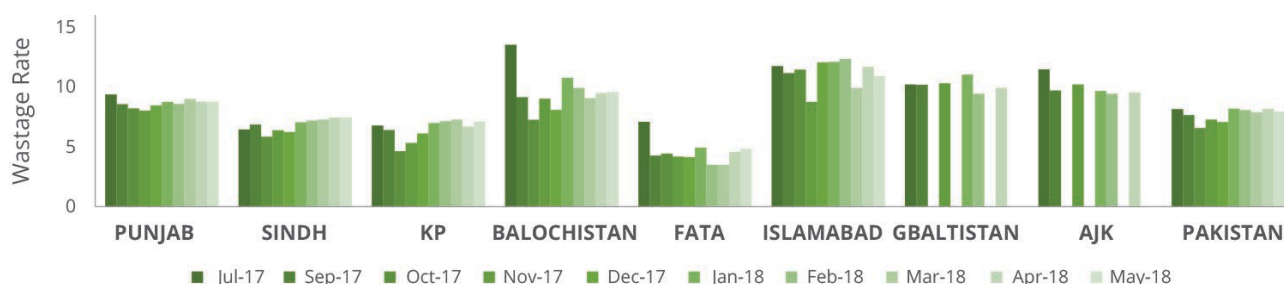
- Work closely with the appropriate government agencies and enable programme monitoring and supportive supervision by national and international polio staff, especially in high-risk districts and districts facing poliovirus outbreaks or events.
- Determine the number of all children in areas with fragile security or ongoing security operations and maintain access for vaccination through sustained engagement and coordination with security agencies.
 - Map these areas and estimate population targets living in the area.
- Continue security planning and coordination before SIAs at UC, district, and provincial levels
- Continue real-time security monitoring and assessment by the National and Provincial EOCs with rapid incident management when required according to SOPs.
 - Work closely with the Media and Advocacy Task Team in establishing clear crisis communication processes and procedures.

Vaccine management

The principal purpose of the vaccine management system is to ensure that quality vaccine is effectively and efficiently delivered and utilised in support of the approved SIA schedule. Forecasting future needs and procuring the necessary polio vaccine remains a critical mission of the polio programme. The management system primarily relies on the national cold chain system to safely deliver and maintain the quality of the vaccine.

The bOPV forecast is prepared on a calendar year basis and includes provisions for all SIAs, case response, and mop-up activities, together with PTP and transit vaccination. The bOPV forecast is subject to periodic review based on the evolving epidemiology with proposed changes subject to endorsement by the GPEI Technical Advisory Group. The revised bOPV target is 357 million doses for 2018. The further provision of IPV and mOPV1 to support the conduct of combined bOPV/IPV SIAs is subject to review and endorsement by the GPEI global bodies.

Figure 13 – Oral Polio Vaccine wastage rates by province, Pakistan, 2017 – 2018



Progress 2017/2018

Pakistan benefited from the priority allocation of 320.6 million bOPV doses for SIAs, 32.2 million doses bOPV doses for event response, 23.6 million bOPV doses for PTPs, 6.2 million doses of mOPV1 and 1.0 million IPV doses to operations in 2017 – 2018.

Overall utilisation and local management of vaccines have continued to improve. Due to ongoing training and diligence by frontline workers and supervisors, wastage rates for OPV remain below acceptable levels in all provinces (Figure 13).

Priorities for 2018/2019

- In close collaboration with the Ops Team, review and update the target population to be used for vaccine forecasting for the remainder of the year and the first half of 2019.
- Review and update forecasts for 2018 and 2019 in accordance with the revised NEAP and TAG recommendations.
- Ensure timely supply of vaccine to support the 2018/2019 SIA schedule and all other activities.
- Continue training on vaccine management for all FLWs on a regular basis.
- Coordinate the expected transition from ice to cold packs with the EPI programme and train all relevant frontline and other polio workers on the revised Vaccine Management SOPs.
- Strengthen the vaccine management of HR&MPs, specifically at the district level.

Complementary Strategies

To sustain the health gains of the polio eradication effort, the programme recognizes the importance of supporting the delivery of comprehensive public health services to the community. In addition to the ongoing synergies with the EPI programme to provide multiple antigens through essential immunization and SIAs, the PEI has promoted nutrition and water, sanitation and hygiene (WASH) programmes which not only complement the goal of polio eradication, but also further other multiple public health objectives.

Progress 2017/2018

- Polio frontline workers delivered 63.6 million doses of vitamin A along with polio vaccine during SIAs
- Polio workers in Karachi and other locations supported community sanitation improvement efforts

Priorities for 2018/2019

- Continue delivery of vitamin A during SIAs, whenever requested.
- Continue collaboration with and support to groups working on WASH interventions in support of PEI, and seek donor support for other supportive interventions.
- Explore opportunities to collaborate with groups working on nutritional monitoring in selected areas.
- Continue collaboration with multi-sector approaches to strengthening public health in Karachi and Peshawar through the Urban Immunization Plan as part of the Mega-Cities Project.

DETECTION AND RESPONSE

As the programme comes closer and closer to 'zero' wild poliovirus (WPV), surveillance efforts will begin to surpass that of programme operations as the speed, scope, scale, and quality of response to polio events will require refinement and precision. In NEAP 2018/2019, an additional area of work has been established to focus on achieving and sustaining eradication-level surveillance in all parts of Pakistan and delivering higher quality response to events.

Detection and response activities include:

- Surveillance
- Laboratory services
- Containment
- Rapid Response Units
- High Risk and Mobile Population

Surveillance

A surveillance system for eradication

Detecting every poliovirus transmission chain in a timely manner is an objective of the programme. To achieve this, surveillance must – at a minimum – meet global standards in all districts.

Under the 2016/2017 NEAP and 2017/2018 NEAP, the surveillance system was enhanced through the implementation of a 'Surveillance for Eradication' Work Plan. Through the concerted implementation of NEAP priorities, surveillance systems have improved across the provinces and districts (Figures 14, 15). In 2018/2019, the surveillance system will aim for an additional performance boost in multiple areas. Sustaining those efforts, whilst innovatively addressing new challenges, is the primary objective for the next 12 months.

Since the beginning of 2018, only three WPV cases have been reported in Pakistan. As the country approaches zero reported WPV cases, the programme will come under external and internal scrutiny and will be required to ascertain whether actually 'zero' is 'zero'. The surveillance team as whole will have to perform at maximum capacity. Comprehensive Work Plans must be developed, and all NEAP priorities must be implemented. Oversight and accountability of the surveillance and laboratory units must be enhanced. Regular in-depth analysis that focuses on the NEAP indicators and review of performance at district and sub-district levels must continue, and potential risk areas identified.

In addition, the surveillance programme must begin establishing the foundation for the post-certification period. Small steps taken today will significantly increase the probability of sustaining good surveillance well into the post-certification and post-cessation era.

Progress 2017/2018

- The concerted implementation of the 'Surveillance for Eradication' Work Plan increased the reporting of acute flaccid paralysis (AFP) surveillance; the non-polio AFP (NPAFP) rate increased from 11.8 per 100,000 children younger than 15 years old in 2017 to 12.6 per 100,000 in 2018 (Figure 15). The programme has also met its target of reducing the number of 'silent' Union Councils by at least 30% over the course of 12 months.
- Conducted external surveillance reviews in 21 districts in KP, 12 districts in Punjab, and 10 districts and 18 towns in Sindh. Reviews were led by Federal Surveillance Officers and conducted once every five weeks. Following each review, extended field support is provided for two to three weeks at a time to help fill identified gaps and improve the surveillance system.
- Increased the total number of collected monthly environmental surveillance samples (ES) to 55 samples per month, from 53 as of the end of June 2017. The number of sites double tested using a bag-mediated filtration system (BMFS) increased from 12 to 15.

- Enhanced oversight of the surveillance system at all levels; 70% of districts have conducted regular District Surveillance Review Committee (DSRC) chaired by the District Health Officer (DHO) or equivalent.
- Good surveillance is impossible without the presence of well-trained field surveillance officers. In 2017/2018, the programme succeeded in:
- Nominating District Surveillance Coordinators (DSCs) in 98% of districts, up from the 38% in the previous year. Additionally, 83% of the notified DSCs have been trained and deployed.
- Maintaining dedicated partner surveillance officers at the district level in Tiers 1 and 2 districts and at the divisional level in Tiers 3 and 4 districts.
- Fully moved from the archaic Information for Action (IFA) surveillance system to a new web-based integrated IFA system, called eIFA. This has enhanced the timeliness of data availability at all levels.
- Improved compliance regarding the use of electronic data collection and collation tools for active and weekly 'zero' reporting.

Overarching Surveillance Priorities for 2018/2019

- Enhance programme self-evaluation and ensure continuous improvements
 - By the end of 2018, conduct a thorough audit of 2017/2018 performance and publish an annual report on the 'Status of poliovirus surveillance in Pakistan, 2017/2018'.
 - Conduct a monthly audit of the progress made on the implementation of the Work Plan.
 - Conduct a quarterly review of deliverables and tasks, and update the Work Plan to ensure necessary adjustments are made in time to support progress toward achieving goals and objectives.
- Further enhance data quality and improve depth of analysis
 - Develop a detailed Case Investigations data entry module within eIFA and, as required by NEAP 2017/2018, retroactively and prospectively enter all 2017 and 2018 detailed case investigation data, including summary data for all 30 household cluster data.
 - Establish dashboards for the continuous review of active surveillance and 'zero-reporting' data on Integrated Disease Information Management System (IDIMS).
 - Carry out quarterly risk assessments by the Risk Assessment and Decision Support Team, to be jointly reviewed and used to develop a list of districts-of-interest. As much as possible, prioritize districts not visited in the preceding 18 months for 'External Surveillance Review'.
 - Develop a system that picks AFP clustering for immediate investigation on a weekly basis, at least at the tehsil/taluka level.
- Ensure the programme utilises the most up-to-date surveillance guidelines and SOPs by end of 2018
 - Complete updating the Pakistan AFP Surveillance Guide
 - Update all protocols and SOPs derived from the Surveillance Guide
- Extend collaboration with EPI to VPD surveillance
 - To ensure real outcomes from this collaboration and also not dilute efforts, focus for 2018/2019 will be the support of measles surveillance.
 - Establish deeper collaboration and clear structures of data sharing with the EPI team.
- On a weekly basis, share both raw data and Powerpoint analysis of measles and neonatal tetanus from data obtained from active surveillance sites and weekly 'zero' reporting sites.
- Establish a mechanism for the continuous sharing of raw data with national and provincial EPI data focal points.

- Explore the training of partner and government surveillance officers in selected districts on measles surveillance, in accordance with existing protocols.
- Update the TORs of specified personnel in selected districts to include measles surveillance.
- Review existing electronic surveillance system and explore opportunities to harness the full capabilities of the new eIFA system for VPD surveillance (starting with measles), which links field, lab, provincial and national surveillance teams availing data on real-time basis.
- With the support of GPEI partners, review current polio and national VPD surveillance strategies and systems, and set up a process for the future development of a Beyond Eradication Surveillance Strategic Action Plan, taking into account the global expectations for sustained poliovirus surveillance identified in the Post-Certification Strategy and endorsed by the World Health Assembly.
- Further enhance oversight and accountability
 - Ensure the continued meeting of the DSRC
 - All DSRCs must be chaired by the DHO or equivalent
- The Surveillance for Eradication Task Team (SETT) will oversee the development and implementation of a revised National Surveillance Work Plan for 2018/2019 in line with the priorities outlined by NEAP 2018/2019.

Figure 14 – Number of Acute Flaccid Paralysis cases reported, Pakistan, 2014 – 2018

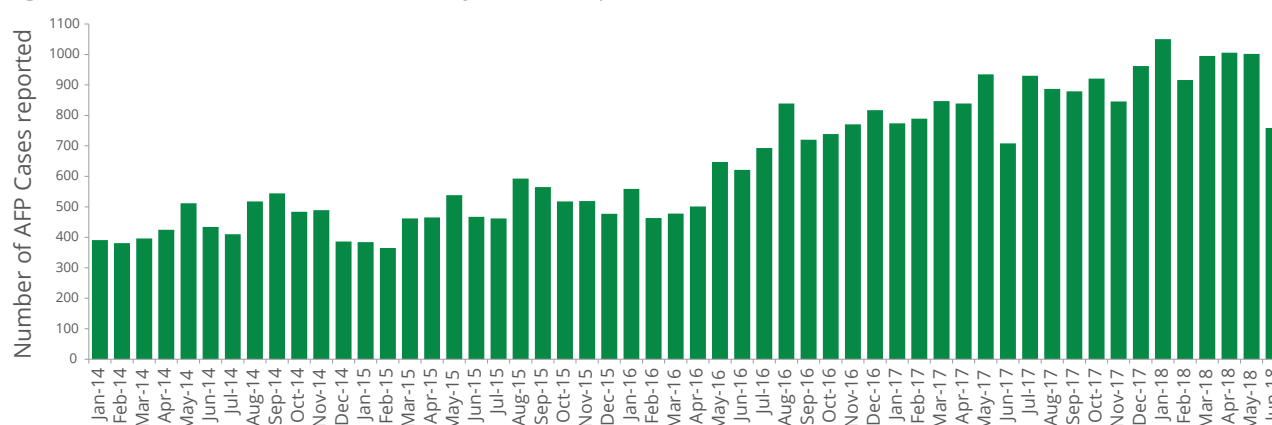
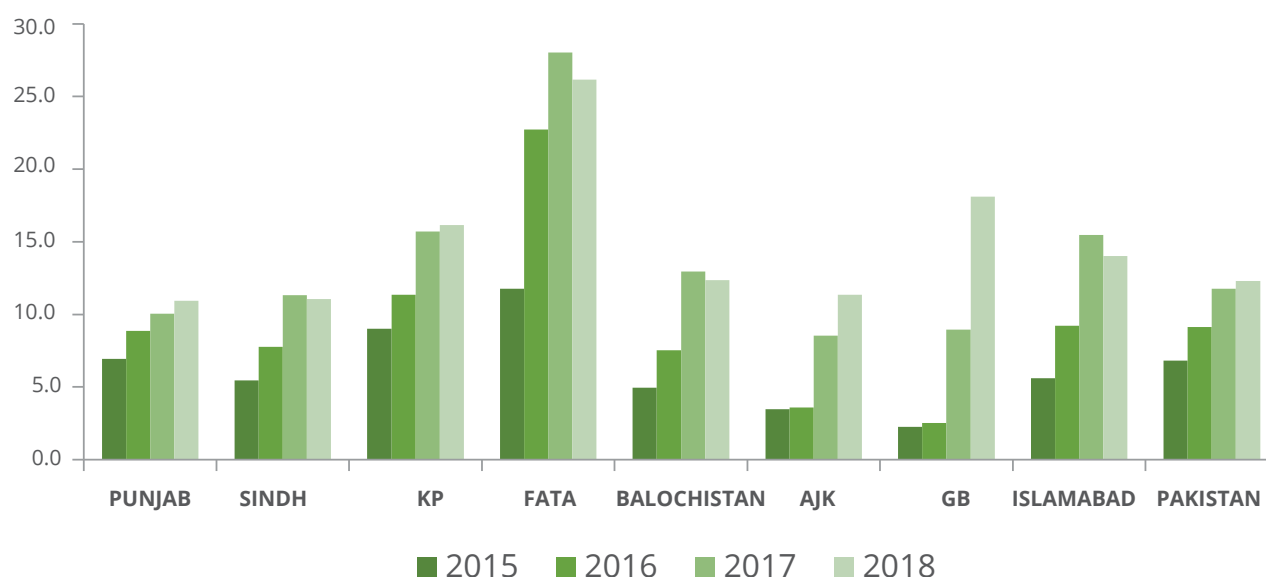


Figure 15 – Non-polio AFP rate by province or region, Pakistan, 2015 – 2018



Acute flaccid paralysis surveillance

The surveillance infrastructure in all districts must be capable of detecting all cases of acute flaccid paralysis (AFP) in a timely manner. In addition, the system should be able to investigate all cases, as well as collect and appropriately store, ship, and test stool specimens at the WHO-accredited, NIH-established Regional Reference Laboratory (RRL) to confirm the presence or absence of polioviruses.

Priorities for 2018/2019

- Complete the implementation of the following unaddressed key priorities from the 2017/2018 NEAP
 - Review and publish an updated AFP surveillance guide and protocols
 - Develop a 'Community-surveillance field guide for Pakistan'
 - Review and update AFP surveillance strategies targeted at high-risk and mobile populations.
 - In close collaboration with the Communications Task Team, draft and publish a Communication for Surveillance Strategy.
- Strengthen the surveillance infrastructure and workforce capacity by maintaining well-trained, capable, dedicated government and partner surveillance staff in all districts
 - Enhance long-term effectiveness of Pakistan's disease surveillance capacity by systematically establishing sanctioned DSC positions. Number and proportion of sanctioned positions to be tracked and reported by province.
 - Complete the notification of DSC in remaining districts.
 - Maintain dedicated partner Surveillance Officers at district level and/or at divisional level.
 - With the special approval of the National EOC Coordinator, consider deployment of additional dedicated surveillance personnel in remote, sparsely populated, geographically expansive tehsils or in tehsils facing access challenges due to security reasons.
 - Schedule trainings on a quarterly basis to guarantee the availability of training opportunities for all newly-hired staff including District Surveillance Coordinators.
 - Enforce proper documentation and filing practices at all levels.
- Ensure timely detection, reporting, and investigation of all AFP cases. In addition to meeting standard surveillance indicators, the programme will aim to ensure at least 75% of all cases are reported by either the first health service provider contact or the community.
 - Continue to implement electronic reporting systems from active and zero-reporting sites and ensure compliance, timeliness, and completion at the lowest level.
 - Review the number and distribution of reporting sites for all districts-of-interest. Districts will be flagged for closer performance review by the National EOC and/or Provincial EOC Surveillance Teams.
 - Enhance community-based surveillance in all districts, especially in areas with poor health infrastructure. Proportion of community reporting will be closely tracked for all remote districts and other districts-of-interest. Special attention to be paid to districts in interior Balochistan with inadequate stool.
- Ensure 'green is green'. Good surveillance indicators are not always equivalent to good surveillance, and detecting districts with poor surveillance system is especially difficult if indicators all point to a strong system. Look beyond the indicators to ensure good, quality surveillance in all districts.
 - Conduct targeted external surveillance reviews by the NEOC. Track the implementation of selected and key recommendations.
 - Conduct quarterly National and Provincial Joint Surveillance Review

- Enhance AFP verification mechanisms. Develop clear SOPs for the verification of AFP cases, active site visits, and 'zero' reporting. The SOPs should focus on supporting and NOT policing field surveillance officers.
- Using the new census data, review and update the denominator target population and address chronic concerns observed in some districts.
- Share weekly surveillance update by the NEOC with all Pakistan Paediatric Association and Medical Association members.

Environmental surveillance

Samples collected from the environment play a critical role in providing insight into the transmission dynamics of poliovirus in Pakistan. As the programme comes closer to the goal of finally interrupting transmission, and as the case-to-infection ratio continues to decline, the importance of environmental surveillance in the timely detection of transmission cannot be underestimated.

Progress 2017/2018

- Under the 2017/2018 NEAP, a complete review and rationalization of all existing environmental surveillance (ES) sites was conducted. In addition, the total number of monthly samples collected increased from 53 to 55 samples per month as of June 2017.
- Considering the impact already observed, opportunities for optimization of the system and enhancement of quality and sensitivity were explored. The programme continue to use new sampling techniques (e.g., BMFS) to further improve the probability of detection in areas of concern.

Priorities for 2018/2019

- Ensure maintenance of high-quality surveillance through the continued implementation of strict supervisory protocols.
- Conduct an annual review of sensitivity of all surveillance sites through careful analysis of data, coupled with field visits to selected sites. Following this, rationalize surveillance network through modification of site location (adjusting location, and/or shifting to composite site collection), or changes in site (closure of low-sensitivity sites).
- Expand surveillance network by 5 new grab sampling sites. By July 2019, total number of grab samples submitted and tested at the National Institute of Health to increase from current 55 to 60.
- Of the 15 sites simultaneously using BMFS, reduce double testing to 5 sites (not more than 1 in any city).
- As a matter of priority, develop new protocols for the temporary deployment of BMFS in areas of concern.
- Conduct a joint quarterly review (surveillance team member and lab staff) of the sample collection procedures of at least 20% of ES sites. Provide field workers with onsite training on sample collection.
- Further improve quality of data by using technology to collect and submit additional data.

Surveillance among patients with primary immunodeficiency diseases

As the programme approaches the interruption of WPV1, more and more of the risk of paralysis associated with poliovirus will shift from the wild type to vaccine-derived polioviruses (VDPVs). This has been seen again and again in all countries that have interrupted transmission. As long as OPV is in use, the primary risk will be circulating VDPV (cVDPV). Another concern for Pakistan and the world is the shedding of polio vaccine virus from individuals with primary immunodeficiency disease (PID), also known as immunodeficiency-associated vaccine-derived poliovirus (iVDPV). PID patients chronically shedding VDPVs have been documented in other countries. This risk is very small, and there are no documented occurrences of community transmission from this source. However, the potential for spread from iVDPV exists, and that risk may increase as mucosal immunity among the population declines after with the cessation of OPV use. In 2018/2019, the programme will begin to plant the seeds for a focused surveillance to proactively identify PID patients who may harbour iVDPVs.

Priorities for 2018/2019

- Establish a pilot surveillance system for children with primary immunodeficiencies in selected areas.

Laboratory services

The Regional Reference Laboratory (RRL) at the National Institute of Health (NIH) in Islamabad, Pakistan is the cornerstone for both Pakistan and Afghanistan's polio surveillance activities. The laboratory has consistently provided timely diagnostic results, including genetic sequencing of all WPVs and VDPVs, for both stool and environmental samples. Senior virologists regularly brief the National EOC and provide detailed interpretation of the results. The RRL also reports on the quality and timeliness of delivery for all samples received.

The increasing number of samples continues to push the RRL to its utmost capacity (Table 7). Environmental samples from Pakistan increased from 439 samples in 2015 to 634 samples in 2017. A sharp increase was also seen with stool testing. In 2017, the laboratory processed stool samples from 9,946 AFP cases and 3,660 contacts, up from 5,649 AFP cases and 1876 contacts in 2015, respectively (Table 7).

Table 7 – Laboratory indicators for 2015 – 2018, Pakistan

Indicator	2015	2016	2017*	2018*
Total No. AFP cases	5649	7652	9946	5617
Total No. contacts	1876	2616	3660	1839
Number of ES grab samples processed	439	529	634	319
Number of ES BMFS samples processed	0	119	126	89
Reported within 14 days (culture Reporting)	97%	98%	99%	88%
ITD Results reported (within 07 days)	97%	99%	99%	100%
Accreditation Results	97%	Accredited	93%	Awaited
Sent to lab within 72 hours	85%	87%	86%	88%
NPEV isolated	23%	21%	24%	18%

*Data as of end of Jun 2018

In response to requests from the laboratory, the programme has worked over the past two years to build the RRL's capacity, so it can meet the demanding workload that comes from pushing to reach a level of surveillance sensitivity needed for the 'last mile' of polio eradication.

Progress 2017/2018

- Space for the construction of a new lab has been designated by NIH and approval obtained from the Board of Governors and the parent Ministry. The process for securing funds from donors is almost complete. In anticipation of a successful conclusion of this process, US\$ 3.2 million has been obtained for purchasing equipment with support from Japan International Cooperation Agency (JICA).
- To temporarily alleviate the acute space constraint, four new rooms have been designated by NIH for RRL, and renovation is underway. A new facility for sample collection and processing of stool samples also has been renovated with support from the Bill and Melinda Gates Foundation (BMGF).
- The laboratory has enhanced technical capacity through the addition of two new assistants and four new technicians.
- The computer-based Logistic Support System (LSS) for laboratory stock management is now in place.
- The new eIFA system fully integrates the laboratory, and all AFP laboratory data is now maintained in eIFA.

Priorities for 2018/2019

- As a matter of urgency, and to avoid wastage of resources, put in place reliable measures to address deficiencies in the vaccine procurement system observed in the past 12 months.
- Secure funds and begin construction of a new laboratory by 2019, to permanently address the programme's laboratory needs for the final phase of eradication.
- Enhance the capacity of the serology lab and prioritize the testing of samples directly contributing to the polio eradication effort.
- Ensure adequate storage and recovery systems for programme data; all necessary back-up systems must also be put in place.
- Continue to move towards a full-fledged electronic information management system through the installation, configuration, and implementation of the laboratory information management system.
- Submit a detailed annual Work Plan for 2018/2019 that provides exact timelines for the implementation of laboratory activities with special emphasis on the priorities for 2018/2019.

Containment

The purpose of containment is to reduce the risk of releasing polioviruses into the community from a laboratory or facility that may handle the virus for the purposes of vaccine production, quality control, diagnostic testing, or research. The WHO Global Action Plan to minimize poliovirus facility-associated risk (GAPII) outlines safe handling and containment measures to minimize the risks of reintroducing the virus into a polio-free environment.

While there are facilities in Pakistan that store specimens which may potentially contain polioviruses, the RRL at the NIH is the country's only laboratory that has met GAPIII requirements for handling materials known to contain poliovirus. The RRL has implemented and achieved the required levels of biosafety and biosecurity measures, through its strict adherence to globally-defined containment practices.

While it is not currently a poliovirus-essential facility (PEF), the RRL will be working in 2018/2019 towards securing certification to become a PEF.

Progress 2017/2018

- The National Authority for Containment (NAC) members have been identified and are awaiting approval from the Ministry of National Health Services, Regulations & Coordination (MoNHSRC).
- Two auditors have been trained on pre-auditing polio laboratories before their submission of applications for PEF certification.
- The laboratory survey for poliovirus materials has been completed, and a list of laboratories is maintained to ensure containment of poliovirus materials. Visits to laboratories with potentially infectious materials in major hospitals and universities are next to be completed.
- A second nationwide verification of tOPV withdrawal and absence of mOPV2 through further systematic searches was conducted. No tOPV was found, and the remaining mOPV2 at the national store was incinerated.
- GAPIII phase 1 report was finalized. The report was submitted to National Certification Committee (NCC) of Pakistan and presented to the Eastern Mediterranean Regional Certification Committee for Polio Eradication.
- Two meetings of the National Poliovirus Containment Committee (NPCC) were held and included participants from WHO and the NEOC.

Priorities for 2018/2019

- Work towards meeting all the requirements to secure globally-recognized PEF status for RRL.
- Complete the NAC notification process.
- By the end of 2018, conduct pre-audit of the RRL.
- Maintain an inventory of biomedical facilities with a view to updating the list of facilities storing materials that contain or may potentially contain WPV or VDPV, and work to ensure a biosafety level 2 in all enterovirus laboratories. The NPCC may visit and ascertain measures taken to ensure compliance with containment requirements.
- By the end of 2018, carry out visits to laboratories with potentially infectious materials in major hospitals and universities.
- Continue to document and report to the NEOC on GAPIII Phase I, Phase II, and Phase III implementation.
- Ensure regular meetings of the NPCC; while the NPCC might meet as frequently as needed, at least half-yearly meetings will be scheduled.
- Submit a detailed annual Work Plan for 2018/2019 that provides exact timelines for the implementation of activities.

Rapid response unit

In 2016/2017, the programme established Rapid Response Units (RRUs) at the National and Provincial EOCs. RRUs have since provided immediate capacity to respond to 'virus' or 'performance' events that threaten the programme's capacity to interrupt WPV transmission. The RRU members are multi-disciplinary and multi-agency, working under the 'one team under one roof' concept that was introduced through the Accountability and Performance Management Framework.

Under the 2018/2019 NEAP, the RRUs will be further strengthened with an expanded workforce to ensure extended field support is possible.

Progress 2017/2018

- RRUs responded to 65 signals and events and spent a cumulative 981 person-days in the frontlines of high-risk districts. The RRU teams at the national and provincial levels were supported by experienced officers of various cadres.

- The support extended to Karachi and Quetta block, and joint investigations in the Northern Corridor, Central Pakistan, Rawalpindi-Islamabad, and many other places contributed immensely to overcoming operational challenges.
- Conducted field assessment and event response training for both government and partner staff at the provincial level.
- Participated in field surveillance reviews in four provinces and facilitated eLQAS, microplanning, and other programme activities in areas of concern.

Priorities for 2018/2019

- To focus the Federal RRU team on response activities, event investigations, and field support at the federal level, ensure responsibilities for tracking and monitoring data (including triggers) is shifted to the EOC Operations Unit with support from the M&E and Information Management teams. Ensure all RRU Officers are aware of revised ToRs.
- Provide response capacity through extended field deployment in areas critical to the programme.
 - A Federal RRU Officer deployed to a district for extended periods of time will be expected to perform responsibilities as determined jointly by the National and Provincial EOC.
 - Joint response with the Community Engagement Team will be encouraged.
 - Joint Federal and Provincial RRU response will be encouraged.
- Conduct event assessment and coordinate joint investigation, if requested and/or deployed by the National EOC or Provincial EOC incident manager.
 - Provide actionable recommendations to the provinces and the National EOC. The implementation and the tracking of the implementation of any recommendation is the responsibility of the National and Provincial EOC Coordinators and respective technical team and/or Area of Work leads.
- Provide immediate capacity to assess and respond to any event of high importance as determined by the EOC Coordinator and respective technical team and/or Area of Work leads.
- Maintain high technical capacity through coordinated training with Programme Operations, Surveillance, Monitoring and Evaluation, and Information Management Teams.
- Submit a detailed annual Work Plan for 2018/2019 that provides exact timelines for the implementation of RRU activities with special emphasis on the priorities for 2018/2019.

Event response strategies

Following the successful global transition from tOPV to bOPV in 2016, Pakistan stopped using tOPV in all essential immunization activities. Surveillance systems have been enhanced to ensure that the circulation of type 2 virus is detected quickly with the appropriate level of response. Between July 2017 and June 2018, no VDPV2 isolates were identified in Pakistan. However, during this period, large outbreaks of VDPV2 have been confirmed in the Middle East and Africa. Therefore, the continued detection of VDPV2 in other countries (with some highly divergent from parent Sabin virus) continues to pose a threat to Pakistan, in addition to local emergence from unauthorized residual use of tOPV or previously undetected type 2. Along with maximizing individual immunity for type 2 through IPV, the risk from a potentially imported virus can be mitigated by early detection, quick evaluation and understanding of the extent of risk, and rapid response if required.

In addition to comprehensive strategies to prevent or respond to WPV transmission through SIAs, essential immunization, or other complementary interventions, there is a growing importance to respond to low-level WPV transmission detected through environmental surveillance. To date, decisions on the advisability and scope of response strategies for positive environmental samples has been dependent on relevant epidemiology, assessed risk, programme capacity, and local infrastructure capacity. Beyond the potential need for further local monitoring,

the option to mount a targeted vaccination response needs to be considered. The importance of this strategy will become increasingly evident as fewer WPV cases are detected with the evolving epidemiology of poliovirus transmission towards eradication. Special consideration should be given for appropriate response strategies for areas with multiple ES positive samples.

Priorities for 2018/2019

- Review and update poliovirus type 2 protocol in accordance with revised global guidance.
- Include all type 2 viruses isolated from a case or the environment in the surveillance team's weekly report. Also, include a month-by-month map of all isolated type 2 viruses, in addition to tables and/or graphs.
- Provide the VP1 nucleotide variations of all poliovirus type 2 including Sabin-like isolates. Share data from September 2016 onwards.
- Review trigger criteria for RRUs and develop a concrete strategy for a comprehensive response to positive environmental samples that include an option to implement a targeted vaccination response.
- By September 2018, publish the updated national guidelines for detection and response to poliovirus events. Updates should ensure alignment with NEAP and as much as possible, global guidelines.
- In areas with confirmed WPV cases, assess implementation progress on a quarterly basis and prepare a final report six months after the last event-associated response activity.

High-risk and mobile populations

As Pakistan nears the 'last mile' of polio eradication, the programme has recognised the importance of reaching and vaccinating high-risk populations, the majority of which are settled and disproportionately live in districts ranked as Tiers 1 or 2, or in specific UCs or other areas. Because the programme is at a point where closing the gap requires engagement at the street level, **the major strategies of the 2018/2019 NEAP all revolve around identifying high-risk populations and driving programme activities towards consistently reaching them.**

Outside the settled high-risk population, there are high-risk and mobile populations (HR&MP) in need of special attention because, as the overall risk across the general population decreases in the final stages of eradication, the relative risk posed by these populations grows incrementally.

HR&MP sub-groups include:

- Vulnerable special populations that move regularly for economic reasons or due to weather conditions – e.g., nomads, seasonal migrants, brick kiln workers, agricultural migrant labour, or other vulnerable economic migrants
- Displaced populations (internally-displaced, Afghan refugees, or returnees).
- Guests who are visiting from outside the province or from a core reservoir district
- Populations who live along the borders between Pakistan and Afghanistan and along interprovincial boundaries.

In 2016/2017, the programme began to focus on HR&MP through vaccination at permanent transit points (PTPs). A year later, to help districts and provinces address the HR&MP challenge in its totality and to update the operational planning appropriately, the NEAP 2017/2018 developed a special five-point plan:

1. Fostering inclusion of **HR&MPs in all microplans.**
2. **Targeting vaccinations of HR&MP groups**, including special mop-up vaccinations
3. Systematically investing in collecting **new primary data to be used to gauge risk posed by HR&MP groups.**
4. **Appropriately analysing this new data and presenting it** to the districts and provinces in an actionable manner.
5. **Closely collaborating with Afghanistan** on addressing risks associated with cross-border movement.

Progress 2017/2018

- Completed a thorough review of the HR&MP strategy with the specific aim of addressing challenges posed by all major HR&MP groups.
- Integrated all critical HR&MP concepts and pillars into all aspects of the programme, including surveillance, social mobilisation, and communication.
- Conducted extensive surveys to ensure full understanding of the true risk posed by HR&MP groups. Also conducted HR&MP assessments in 61 districts in Balochistan, KP, Punjab, and Sindh. Shared outcomes with districts and provinces immediately after the conclusion of surveys and with all other stakeholders. Used secondary analysis of data to refine risk analysis by the NEOC.
- Fostered inclusion of all HR&MP populations in revamped microplans by revising templates and unambiguously including HR&MP groups. Simultaneously, enhanced the assessment of HR&MP-related components through internal and external validation processes. Collected contact information for heads of groups to enable future tracking and vaccination.
- Conducted PTP assessments in Karachi and all interprovincial posts in Punjab.
- Strengthened staff numbers and capacity to deliver on the priorities outlined. Provided additional staff and, from among staff, notified and trained HR&MP focal persons at the district and UC levels and included specific HR&MP deliverables in the TORs of all partner staff at the divisional, district, and/or UC levels.
- Established an inter-EOC National Working Group on High-Risk and Mobile Populations, explicitly tasked with ensuring coordination in all aspects of HR&MP operational planning and risk mitigation. Conducted regular video conferences and weekly teleconferences between the NEOC and PEOCs.
- Aligned tools and strategies with Afghanistan, to the extent possible.

Priorities for 2018/2019

- Update current HR&MP Vaccination Strategy document to ensure the strategy is aligned with NEAP priorities; share current strategy with provinces by July 2018 with the updated version finalized before September 2018.
- Foster inclusion of HR&MPs in all microplans.
 - Ensure full utilisation of the HR&MP focal persons at the district and sub-district level in supporting the implementation of all aspects of the HR&MP strategy; use existing oversight structures and put in place clear accountability structures.
 - In collaboration with the Programme Operations and the M&E teams, continue inclusion of all HR&MP populations in microplans, and the external validation of this process.
- Target vaccinations of HR&MP groups in special mop-up SIAs, transit vaccination, and catch-up essential immunization
 - In coordination with Programme Operations, ensure coordinated targeted HR&MP vaccinations in North KP, Gilgit Baltistan, AJK, and North Balochistan in summer months before they return to central Pakistan in the autumn and winter months.
 - Ensure EI vaccination of eligible children staying more than 3 months, and conduct catch-up IPV for all children born after 2015 who have no record of IPV vaccination.
 - During the campaigns, focus on expanding the deployment of transit teams to all transit sites, including all train termini, bus termini, and other major points of transit. Work with the Programme Operations team to improve this part of the HR&MP activities.
 - Review all high-value PTPs and assess their effectiveness in covering children moving between major hotspots.

- Prioritize the collection and analysis of HR&MP-related data for populations moving between Afghanistan and Pakistan; ensure detailed demographic information and vaccination status is collected and reviewed.
- In coordination with the DPCR, strengthen the administrative structure to ensure LEA and other support at transit sites (e.g., check posts, bus stations, etc.)
- Work with the communication and/or training teams to:
 - Help enhance the understanding of provincial and field staff on the objectives of the HR&MP strategy and on which groups are considered HR&MP.
 - Develop materials and communication tools to ensure broader community acceptance and normalization of vaccinating children on the move between hotspots.
 - Ensure emphasis on the community engagement for the tracking of the HR&MP.
 - Develop context-specific and evidence-based communication approaches and IEC for populations moving across the border with Afghanistan. Ensure the messages strongly resonate with parents and encourage vaccination of children in-transit and guest children at destination points.
- Considering the rich data now available on HR&MPs from multiple sources, triangulate the data, conduct in-depth analysis, and tease out micro-information that may support adjustments of the strategies at the district and sub-district levels.
 - Further enhance primary data by reviewing tools and data available with the provinces and by developing a standardized format that may be adopted by PEOCs.
- Continue the functions of the inter-EOC National Working Group on High-Risk and Mobile Populations and enhance coordination pertaining to interprovincial population movement. For areas with high HR&MP group movement, encourage the establishment of local inter-DPCR working groups that can nurture collaboration.
- Submit a detailed annual Work Plan for 2018/2019 that provides exact timelines for the implementation of activities, with special emphasis on the priorities for 2018/2019.

RISK ASSESSMENT AND DECISION SUPPORT

Risk assessment and decision support includes all activities focused on ensuring that programme operations are driven by the best available data and operational research, with information reaching decision makers and frontline staff in a timely manner and in a format that helps drive programme priorities, performance, and accountability.

Risk assessment and decision support activities include:

- Monitoring and evaluation
- Information management systems
- Innovation and operational research

Monitoring and evaluation

The programme has made tremendous progress in ensuring thorough monitoring of SIA performance. Tools used for pre-campaign, intra-campaign, and post-campaign monitoring (PCM) are now standardized in an electronic format. Data is analysed immediately after each campaign phase, and results are provided to provinces on a real-time basis for their corrective action. Third-party PCM has been and will continue to be held as an independent estimate of campaign coverage in each district, providing assessment and analysis for any missed children. Post-campaign lot quality assurance sampling (LQAS) monitoring is well entrenched and continues to provide valuable data. In the past two years, there was an increasing emphasis on pre-campaign and intra-campaign monitoring, which has resulted in additional insight into the quality of campaigns and overall programme performance. The combination of all these measures and the triangulation of resultant data has successfully heightened the quality of programmatic performance evaluations and enhanced quality in every aspect.

Progress 2017/2018

- Progressively placed additional focus on pre-campaign and intra-campaign assessments. In 2017/2018, the programme conducted 229 pre-campaign external microplan evaluations, instituted self-evaluation of microplans by all Areas in Charge (AICs) and UC-level staff, and expanded intra-campaign supervisory assessments. Actionable data was provided immediately to the UCs, districts, and provincial EOCs.
- Continued to implement post-campaign LQAS and third-party independent monitoring. Between July 2017 and May 2018, an average of 700 and 525 UCs were assessed on every NID and SNID, respectively. Similarly, third-party PCM was carried out at the district level during all NIDs and SNIDs.
- In accordance with 2017/2018 NEAP implementation, which redirected resources to carry out pre-campaign assessments, the number of partner staff conducting LQAS was decreased by 19% in 2017/2018, resulting in an average reduction of UCs assessed from 665 to 571 UCs. The resulting gap was, however, partially covered by third-party surveyors.
- Completed serosurveys across multiple high-risk districts across the country.
- Completed the second essential immunization survey in Tier 1 districts in two years.

Priorities for 2018/2019

- Complete the implementation of the following unaddressed key priorities from the 2017/2018 NEAP
 - Align the admin units of PCM with that used by all other collected data and update the sampling frame. Going forward, collect primary data using current administrative units.
 - Prepare province-wise, division-wise, and district-wise key performance summaries on a monthly-basis (including social data) by the M&E team, together with the Operational Team.
 - Draft manuals for district-level staff on the proper use and interpretation of SIA and surveillance data and conduct trainings of staff on M&E priorities at all levels.
- A systematic quality of microplan assessment protocol was developed and implemented in the preceding NEAP. In 2018/2019, review the successes and challenges of implementing the protocol with the aim of adjusting the strategy and/or methodology whilst maintaining focus on pre-campaign activities assessment.
 - Develop a max of three benchmark indicators that can be used to flag UCs.
- Considering the difficulties faced in assessing campaign quality in challenge areas, develop a monitoring strategy for parts of KP, Balochistan, and other provinces with areas not continuously accessible to external monitors.
- Conduct at most two data quality and collection assessments, with an initial focus on CBV UCs.
- Share lists of low-performing Union Councils (LPUCs) after every NID and SNID by the National EOC. Review currently used LPUC-flagging algorithm and make adjustments as necessary.
- Carry out at least one survey regarding the status of essential immunization services in CBV UCs of Tier 1 districts by the end of June 2019.
- Continue GIS tracking in Sindh province through intra-campaign monitoring.
- Define criteria for classifying newly created districts and develop SOPs to address potential gaps and improve supervision, monitoring and support.
- Submit a detailed annual Work Plan for 2018/2019 that provides exact timelines for the implementation of M&E activities with special emphasis on the priorities for 2018/2019.

Information management system

During the implementation of the 2017/2018 NEAP, the programme built on the previous year's progress and further improved the utility of the EOC online platform and the Integrated Disease Management Information System (IDIMS). As of May 2018, pre-campaign, intra-campaign, and post-campaign data is fully accessible to the programme

through the online platform. These platforms have ensured the availability of data when and where it is needed. Investments in the system have resulted in a process of continual improvement. However, the growing needs of the programme require further refinement of the available tools.

For the development and support of 2018/2019 NEAP goals, Information Management shall continue to respond to the growing needs of the programme by developing time-bound milestones for each quarter. Continued integration of all programmatic data into IDMIS and the EOC online platform will be pursued, step by step. All data will be continually accessible and available in a meaningfully usable format to all who need it.

Progress 2017/2018

- Shifted from the archaic AFP surveillance data system to a new web-based integrated surveillance reporting system. Successfully added historical data for the last five years. Work on the reporting modules still in progress.
- Finalized tehsil-level, district-level, and divisional-level shapefiles.
- Developed new modules for microplan validation and Open Data Kit (ODK)-based HR&MP assessment tool.
- Completed GIS mapping in approx. 70% of Sindh; the remaining areas to be completed by the end of the third quarter of 2018.
- Improved internal EOC file-sharing mechanisms through the configuration of FTP shared drives for the file sharing system.
- Trained all federal and provincial data management teams on the new AFP Surveillance System.

Priorities for 2018/2019

- Conduct full review of IDIMS and EOC dashboard including assessing ease of use, graphic interface and key challenges faced by users and make necessary modification.
- Enhance utilisation of already available data
 - The lack of harmonization of admin data with standard programme admin data continues to hamper the full use of PCM data; as required by the 2017/2018 NEAP, prioritize the alignment of third-party PCM admin-levels with that used by all other data sources.
 - As a matter of immediate attention, enhance the utility of support centre data through careful review of available data, establishment of standardized monthly outputs, and triangulation with other data sources.
 - Complete UC-level shapefiles. Update the divisional-, district-, and tehsil-level shapefiles as necessary.
- For the new eIFA
 - By end of 2018, complete the reporting module, the environmental surveillance module, and the detailed case investigation.
 - Explore options to maximize the use of the eIFA system for other vaccine-preventable diseases by collating information on existing systems in the country and where possible seeking synergies.
- On the National EOC dashboard
 - Develop an additional module on vaccine stock management system within the EOC dashboard.
 - Using data from weekly 'zero' reporting and PCM develop a dashboard for measles surveillance.
- Support the Ops Team in providing alerts to the EOC management, RRUs and other units.
- Coordinate and support the training of all DPCRs on data management and reporting tools.
- Submit a detailed annual Work Plan for 2018/2019 that provides exact timelines for the implementation of activities with special emphasis on the priorities for 2018/2019.

Innovation and operational research

To ensure the best available data is fully utilised for all decision making, the National EOC formed an Innovation and Operational Research Working Group. The goal of the group is two-fold: 1) to ensure the programme efficiently harnesses appropriate, significant (consequential), and operationally feasible innovations, and 2) to research findings in support of its efforts to eradicate polio in Pakistan.

Progress 2017/2018

- Completed multiple serosurveys in multiple districts.
- Conducted modelling work with various international institutions. Risk models for programme prioritization supported NEAP development and reviews; infection models for hotspots supported understanding of epidemiology; assessments to guide the use of IPV in targeted age groups in targeted geographies helped to define targeted areas for IPV and mOPV1 use.
- Completed assessments of type 1 immunity for all districts; also developed type 2 immunity models to help guide VDPV2 risk assessment.
- Expanded use of BMFS techniques in ES and continued to collaborate with the University of Washington.
- Continued to enhance the use of technology to improve efficiency in the programme.

Priorities for 2018/2019

- Work closely with the NIH and the Agha Khan University to conduct serosurveys in selected districts.
- Work closely with the Agha Khan University to support primary immunodeficiency surveillance work in selected areas.
- Identify underutilised data and support research activities to maximize its outputs to inform operational strategies. Examples of some of the underutilised data sources include HR&MP and genetic sequencing data.
- Support, facilitate, and encourage publication by polio staff as much as possible, whilst keeping in mind accepted publication practices, such as author contributions.
- Continue to work with scientists at the Institute of Disease Modeling, Kid's Risk and the Imperial College to use various modelling techniques for monitoring risk and testing the potential value of various strategies. Develop specific deliverables with clear timelines for the next 12 months.
- Collaborate with other institutions on research activities as needed, as long as it contributes towards the strategic objectives of the programme outlined in this NEAP.
- Continue to review innovative proposals from field staff and partners with the aim of identifying potential tools to complement or improve operations and surveillance.

MANAGEMENT, OVERSIGHT AND ACCOUNTABILITY

The objective of the management, oversight, and accountability function is to ensure that NEAP goals, objectives, and targets are met through effective management support and coordination, transparent oversight at the appropriate level, real-time performance management, and clear accountability.

Progress 2017/2018

During the implementation of the 2017/2018 NEAP, this area of work achieved the following:

- Oversight mechanisms were fully established and active across the national, provincial, divisional and district levels.
- International advocacy remained a priority of the programme. Several meetings at the international forums and teleconferences were arranged with the Prime Minister, key political leaders and Chief of Army Staff.
- The National Task Force (NTF) headed by the Prime Minister met once and provided strong oversight, reviewed progress and ensured implementation of the decisions of the NTF.
- Provincial Task Forces benefitted from the sustained engagement of provincial governments and Chief Secretaries and Divisional Task Forces (DTFs) continued to ensure oversight.
- District Polio Eradication Committees (DPECs) delivered high performance under the leadership of Deputy Commissioners in the country especially in Tier 1 districts and priority high risk districts.
- The EOC network remained fully functional under the guidance of the National Polio Management Team (NPMT), consisting of the National and Provincial EOC Coordinators.
- The Accountability and Performance Management Framework was implemented with tracking and monitoring of accountability measures taken by both Government and GPEI partners.
 - Appreciation has been given in all provinces to the good performing areas.
 - In KP and what was then FATA, reward money to good performing districts and agencies was given.
 - Action due to poor performance such as transfers, contract termination, warning and explanations notices issued to government and partner staff, including 165 in Punjab, 940 in Sindh; 733 in KP, 991 in Balochistan and 614 in what was then FATA.
- Financial planning and donor management was administered effectively by a multi-disciplinary, multi-agency Resource Management Task Team.
- Systematic coordination was established with the Afghanistan Programme at every level (national, provincial, and cross border districts of northern and southern corridors).

Priorities for 2018/2019

For NEAP 2018/2019, the Management, Oversight, and Accountability will redouble its efforts to sustain professional management and oversight where it is adequate and focus primarily on improving management, oversight, and accountability where it is inadequate, weak or absent. The principles guiding this process are outlined in Panel 3.

Panel 3 – Principles Driving the Oversight, Management, and Accountability Process

- **“One team under one roof”**
 - The Government and GPEI partners (WHO, UNICEF, Rotary, BMGF & N-STOP) have come together to ensure that—across the National, Provincial and District levels—all activities are planned, coordinated and evaluated using a single operational platform.
 - At the National and Provincial levels, EOCs are fully functional and provide a platform for all partners and stakeholders to work as one team under one roof.
- District Polio Control Rooms (DPCRs) have been further strengthened in Tier 1 and Tier 2 districts to provide a similar platform.
 - These platforms provide management and coordinate support to all aspects of NEAP implementation
- **“What gets measured gets done”**
 - “Risk Assessment and Decision Support” drive “Programme Operations.”
 - The Programme is focused on key deliverables and performance indicators rather than rigid structures.
 - Performance management is the key to success.
- **“All operational phases matter”**
 - The Programme measures performance in all operational phases: pre, intra and post-campaign.
 - The Programme seeks to immediately implement corrective action before and during campaigns.
 - The Programme ensures that post-campaign monitoring drives corrective actions.
- **“Accountability for all”**
 - Individual and team accountability has been placed at the heart of the programme.
 - An “Accountability and Performance Management Framework” has been developed and implemented.
 - Everyone and every team in the programme is accountable to deliver its assigned tasks and ensures that performance targets relevant to them are reached.

Essential management and oversight structures

The oversight and management objective for NEAP 2018/2019 is that each level of the system will have:

- A functioning oversight mechanism with comprehensive oversight from the levels above (Figure 16). A defined operational centre that has adequate resources and workforce to deliver on NEAP implementation.
- Effective leadership that will manage the operational centre and provide the essential link to oversight mechanisms.

Programme oversight

The objectives of PEI oversight are to:

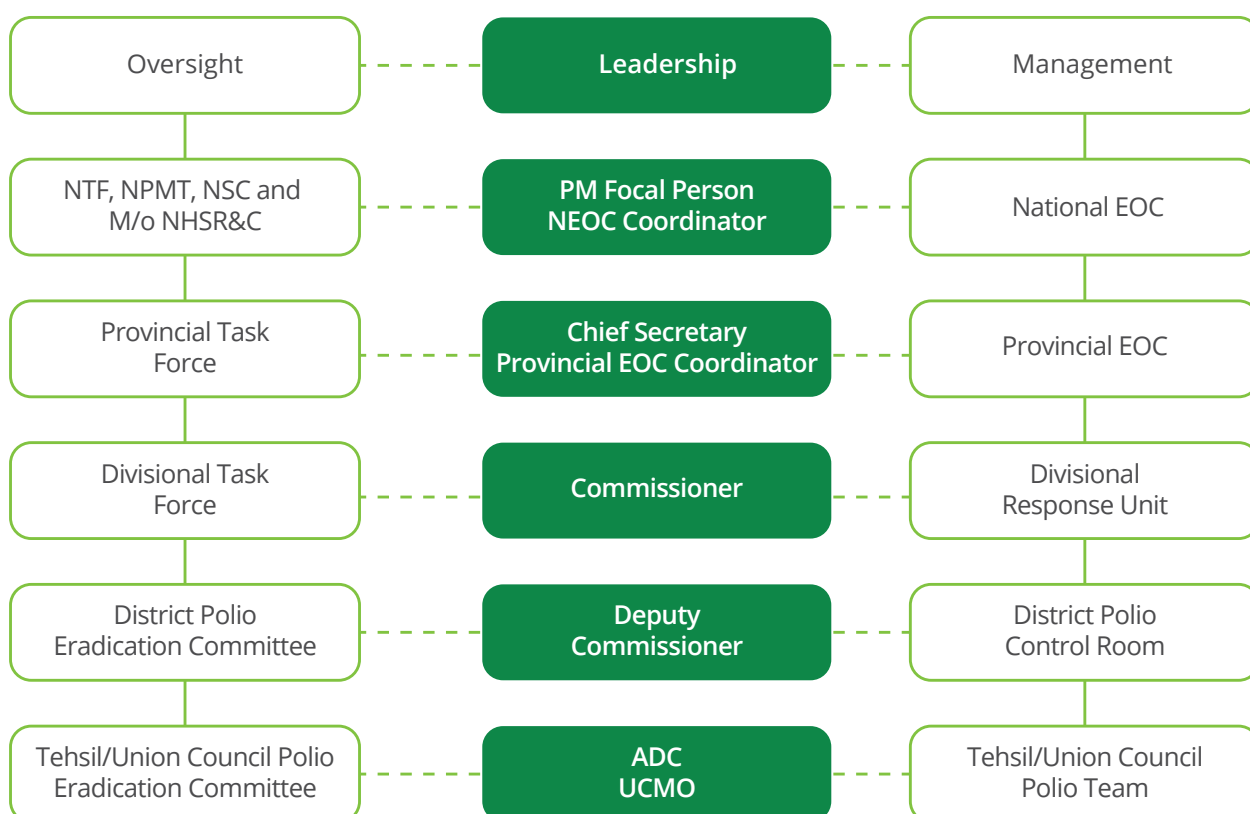
- Review and approve strategy, implementation work plans, and SIA microplans
- Ensure that adequate resources (e.g., financial, human resources, security) are available for implementation
- Drive individual and team performance and accountability (Figure 16)
- Advocate and communicate on behalf of the programme

The key oversight bodies with Terms of Reference are highlighted in detail at Annex 3.

Priorities for 2018/2019

- Maintain strong management structures with clear priorities and fine tune, where required.
- Maintain effective programme oversight at all levels.
- Include EPI performance reviews at all levels.
- Quality work planning and implementation, focusing on fixing the remaining gaps.
- Ensure timely issuance of blanket NOCs for Balochistan and KP so GPEI partners can deploy staff in key high-risk areas.
- Provincial governments to facilitate granting No objection certifications (NOCs) and Extra Ordinary Leave (EOL) for trained national polio staff so they can continue their work in GPEI partner agencies.
- Partners (WHO, UNICEF, BMGF & N-STOP) to actively review their staffing and by July 2019 ensure that in all locations team size, personal and professional profiles, competencies, and standards of performance are and remain fit-for-purpose.
- Ensure implementation of the Accountability and Performance Management Framework in letter and spirit.
- Timely financial planning, resource mobilisation, and payments to FLWs.
- Sustained engagement with international oversight bodies.
- Maintain focus on Afghanistan – Pakistan strategic and risk management coordination.

Figure 16 – Pakistan Polio Eradication Initiative (PEI) Oversight and Management Structures



Programme management

Overall management of the PEI rests with the Prime Minister's Focal Person (PMFP) who serves on behalf of the Prime Minister. The PMFP oversees the management of a network of five EOCs: one at the national level and four others across the four provinces of Pakistan including the coordination unit for KPTD under EOC KP. The National EOC Coordinator is a head of the technical team that facilitates implementation of the NEAP.

Role, Structure, and Functions of Emergency Operations Centres

The NEOC and PEOCs provide a platform for all Government and GPEI partner activities. As such, they effectively follow the 'one team under one roof' concept that drives coordination across vaccination activities and eradication efforts. Each EOC is managed by an EOC Coordinator who has day-to-day responsibility for management and implementation. The PMFP, five EOC Coordinators and the coordinator for coordination unit for KPTD form the National Polio Management Team (NPMT), and together they are primarily responsible for delivering the objectives and targets in NEAP 2018/2019.

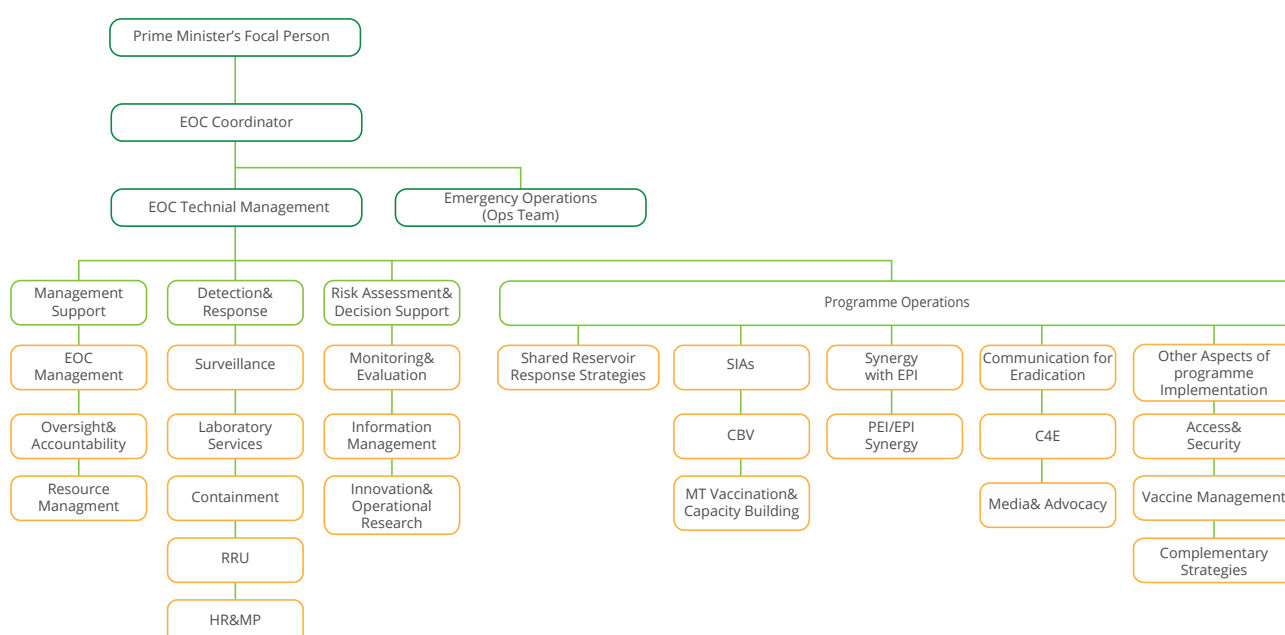
Starting with the NEAP 2018/2019, the Emergency Operations Team (Ops Team) shall be linked directly with office of the National EOC.

EOCs have a functional management structure (Figure 17) that is focused on the four NEAP 2018/2019 Areas of Work (AOWs) that include:

- **Programme Operations** that plans and delivers quality immunization activities
- **Detection and Response** which focuses on surveillance and rapid response
- **Risk Management and Decision Support** that concentrates on assessing epidemiological and programmatic risks and provides support to risk management
- **EOC Management Support** which integrates key strategic management and support functions

Focusing on areas of work, each EOC have a minimum of four multi-disciplinary, multi-organisational teams that focus on planning, implementation and tracking of the key tasks and activities required for NEAP 2018/2019. Each of these Area-of-Work Teams are being supported by a number of existing "Task Teams" and "Working Groups," some of which are time-limited in nature and others of which have ongoing functions and tasks.

Figure 17 – Functional Structure of National Emergency Operations Centre (EOC)



Priorities for 2018/2019

- **Assess** epidemiological and operational risks as well as the programme performance on a real-time basis.
- **Plan** for implementation of all the NEAP components, including the SIAs, surveillance and PEI/EPI synergy
- **Implement** planned activities in an efficient and effective manner with respect to performance and timelines.
- **Support** Divisions, Districts, Tehsils and Union Councils as they implement work plans and activities
- **Monitor** the performance of all individuals and teams with respect to performance targets and key performance indicators and institute appropriate response in areas with under-performance
- **Evaluate** the implementation of all SIAs after each round as well as overall NEAP implementation on a quarterly basis and ensure that all recommendations/actions points are implemented and tracked
- **Communicate** within and outside the programme effectively

District Management Structures

At district level, the District Polio Control Room (DPCR) is the critical platform for NEAP implementation. Under the leadership of the Deputy Commissioner (DC) and District Health Officer (DHO), the DPCR is responsible for all aspects of campaign planning and implementation.

During previous NEAP implementation periods, DPCRs in Tier 1 and Tier 2 districts were strengthened with upgrades of the working environment. Through the deployment of additional staff to high-risk districts, a focused surge in human resources was undertaken by the GPEI partnership. However not all DPCRs are functioning at the level required to deliver high-quality rounds in all Union Councils. It is critical that the “one team under one roof” concept be fully implemented at this level.

For NEAP 2018/2019 to be effective, and in order to reach the endgame of zero cases and the interruption of transmission, further efforts will be made by DCs, DPECs and Provincial EOCs to improve DPCR performance.

Priorities for 2018/2019

- Ensure execution of the agreed / endorsed Standard Operational Procedures for DPCRs
- Ensure that DPCR provides a platform for all the members to act as a well-jelled one team, with clearly assigned roles / responsibilities and accountability
- DC, Assistant Deputy Commissioner (ADC) and DHOs/CEO-H to perform their notified management and support roles.
- Ensure strong support for comprehensive UC and area level microplanning, with special focus on high risk and mobile populations and persistently missed children.
- Maintain the attention on DPCRs of Tier 1 and 2 with PEOCs continuing to provide technical and managerial support

Tehsil and Union Council Management Structures

PEI management structures need special attention at the tehsil and Union Council levels. The role of the AC/ADHO and UCMO is central to success at tehsil and UC levels, respectively. However, it has been noted during the implementation of NEAP 2017/2018 that the capability and commitment of UCMOs in some UCs is below par. Additionally, the tehsil-level administration and health management are yet to be effectively engaged for polio eradication emergency.

While community-based vaccination (CBV) addresses many of the management shortcomings in targeted areas, it is not a feasible solution for the vast majority of UCs. The programme is therefore still heavily reliant on mobile teams and on the quality of the ‘basics’ at this level. It is therefore of utmost importance to ensure appropriate UC teams’ functioning in the mobile team areas.

The leadership and support of the UC polio team is central in all phases of campaign planning and implementation.

- Microplanning, including micro-census/target population adjustment, resource estimation and planning, and workload assignment
- Selection, training, and supervision of Areas in Charge (AICs)
- Selection training and supervision of frontline workers (FLWs)
- Community mobilisation
- Vaccine management

Over the implementation of NEAP 2017/2018, the critical importance of the AICs in delivering vaccines to every child has emerged time and time again. While major efforts have been made to improve AIC training, issues have emerged in every campaign regarding the quality of microplans, the absence of route maps, poor team selection, inappropriate or uneven workloads, inadequate supervision, and suboptimal same-day follow up and four-day catch up.

Therefore, implementation under NEAP 2018/2019 will seek to address AIC performance as a special priority, especially in high-risk districts and low-performing Union Councils (LPUCs). In circumstances such as these, tehsil-level management and oversight structures are very useful. Where there are LPUC clusters and where UC management is sub-par, a tehsil-based management structure led by the AC may provide for better accountability, oversight planning, and implementation.

Priorities for 2018/2019

- Implement a mechanism to consistently and continuously **identify and track low-performing UCs**
- Develop and implement comprehensive **District Action Plans** to improve SIA performance in LPUCs through revision of microplans, as well as selection, retention, and training of UCMOs, AICs, and FLWs.
- Increased **DPCR supportive supervision** to campaign preparation and implementation through specific assignment of UC support functions across the DPCR, with the same DPCR staff providing ongoing support to performance improvement in one or more UCs.
- Focus on ensuring that the **Union Council Polio Team** is clearly defined with assigned responsibilities and accountability
- Extend the work cycle at the UC level by reviewing and modifying the payment duration for field workers (e.g., AICs) as necessary to reflect the additional time needed to ensure adequate pre-campaign preparations, including microplan revision and validation.
- Improve mobile team composition by forming a 'team selection task team' at the UC level. The task team will consist of the UCMO, AICs, UCPWs, Union Council Communication Officers (UCCOs), and community representatives.
- Each province and district will determine whether a **tehsil management structure** would provide a boost in planning, supervision, and performance, especially where there is clustering of low performance. These tehsil units will be led by ACs and report to the DPCR.

Emergency operations

The National EOC Emergency Operations Team (Ops Team) is the driving force of the daily operations of the programme. The Ops Team reviews all incoming information and presents a daily brief for the EOC Coordinators at the national and provincial level.

Progress 2017/2018

- Tracked SIA data from all sources and prepared daily summaries for the national leadership, and reports for the EOC Coordinator at the end of each SIA. Shared feedback with all relevant stakeholders.
- Tracked low-performing Union Councils (LPUCs) and communicated details to the DPCRs.

- Tracked all epidemiological and non-epidemiological events of importance to polio eradication and provided timely briefs to the EOCs.
- Reviewed all official letters and other formal communications from the government and/or partners and prepared appropriate response.
- Coordinated with Law enforcement agencies for security related coordination/matters.
- Ensured timely provision of vaccines and logistics required for NIDs, SNIDs, and other immunization activities to all districts.
- Facilitated and coordinated high-level meetings including from foreign governments, donors, and partners.
- Tracked electronic and print media for all incidents related to PEI and followed up with relevant entities for appropriate response and/or action.
- Worked closely with Afghanistan counterparts on aspects requiring coordination between the two countries.

Priorities for 2018/2019

- Track and monitor data from all sources in order to detect events with potential epidemiologic or programmatic risk; share information with the EOC Coordinator and the RRU.
- Review currently used LPUC-flagging algorithm and make adjustments as necessary.
- Provide additional analytic support and share pre-campaign and intra-campaign data through the daily morning briefing.
- In order to ensure further utilisation of admin data, support the PCM team in updating the admin data in the PCM sampling frame.
- Support all aspects of Pakistan-Afghanistan coordination in line with outcomes of the cross-border interactions.
- Continue to support all other activities as required by the EOC Coordinator.
- Submit a detailed annual Work Plan for 2018/2019 that provides exact timelines for the implementation of Information Management activities with special emphasis on the priorities for 2018/2019.

Work planning, implementation and evaluation

NEAP 2017/2018 was implemented through the translation of the strategic document into dedicated NEAP Work Plans at the national, provincial, and district levels. The implementation of these plans was then tracked through a network of NEAP focal points identified by the National and Provincial EOCs. In addition, quarterly reports on NEAP implementation were developed and reviewed at meetings of the National Polio Management Team (NPMT).

However, despite the positive impact of these activities throughout the 2017/2018 NEAP, this process was not implemented systematically at the district level due to weaknesses in management capacity and other overriding priorities, such as SIA planning and implementation.

Priorities for 2018/2019

- Convert the 2018/2019 NEAP strategy into **NEAP Implementation Work Plans** at the national and provincial levels and track their implementation status regularly.
- The **NEAP implementation focal point** should continue to function and assist the provincial coordinator. Focal points from the National and Provincial EOCs will coordinate this process to ensure that implementation planning is done in a timely manner and that the plans are tracked for implementation.
- Review NEAP implementation quarterly with the NPMT, publishing a formal report that outlines and tracks key actions.

- Conduct a comprehensive review for NEAP 2018/2019 at the end of the annual period, which will feed into the subsequent planning process. All actions emerging from NEAP reviews will be tracked to implementation.

Accountability and performance management

Accountability is a process by which responsibilities are upheld and roles are aligned in order to ensure support, supervision, and success on the ground and through all levels of work in the fight against polio in Pakistan. In a fundamental sense, the work of creating a polio-free Pakistan is one that is dedicated to—and, as such, accountable to—the children of Pakistan, their parents, and the communities that nurture them.

The implementation of the Accountability and Performance Management Framework was fine-tuned and rationalized with a clear objective of 'accountability for all' and with special focus on the district and sub-district levels to ensure that the programme reaches its objectives and delivers on NEAP Work Plans. The framework was particularly aligned to support frontline workers. The Framework also helped to bridge across the roles and responsibilities of a multi-level programme that is also multi-disciplinary and multi-organisational.

The Framework supported the NEAP by effectively building on the 'one team under one roof' concept. It did so by defining the accountability of individuals, teams, districts, provinces, federal-provincial government, and partners to each other—and by providing a basis for oversight, measurement, evaluation feedback, and performance improvement. Its overall aim was to drive accountability through the identification of both good and bad performance with associated mechanisms for recognition, rewards, and sanctions, as required.

In this Framework, everyone in the programme is accountable and the programme itself is accountable to the government, the nation and its people.

The Framework operates under three guiding principles:

- Accountability: everywhere and for everyone.
 - All levels: Union Council (UC), district, provincial, national, and international
 - All individuals and teams: political, managerial, and operational
 - All partners: government, GPEI, and donors
- Performance must be regularly monitored, measured, and evaluated.
 - Both quantitatively and qualitatively
 - For individuals, teams, and the programme as a whole
 - In real time and through analysis of key performance indicators (KPIs)
 - With progress measured towards completion of agreed tasks and activities, KPIs, and NEAP implementation objectives and targets
- Responsive feedback processes must be put in place to ensure accountability.
 - Performance evaluation will be fed back in a systematic way.
 - Rewards for good performance will be the backbone of the system.
 - Poor performance will be subject first to investigation and assessment, with a performance improvement process put in place before sanctions are applied.
 - Such responsive processes will be administered with full transparency.

Progress with implementing the Framework has been satisfactory thus far, with programme and GPEI partners (WHO, UNICEF, Rotary, BMGF & N-STOP) now tracking accountability measures taken with staff at all levels. Oversight bodies have taken on the responsibility of ensuring accountability, which is supported by regular reports and performance data. Linking measured performance to accountability has improved transparency within the programme and has allowed problems and risk to be surfaced in a timely fashion.

KPIs will remain under constant monitoring and accessible to all relevant stakeholders through the upgraded EOC dashboard. This will support timely response to emerging risk or poor performance. The balance of such measures remains both on punitive actions for poor performance as well as recognition and rewards for excellence. The provincial- and district-level programme management is encouraged to also focus on recognizing good performance, particularly that of FLWs, to maintain their motivation towards the cause.

Priorities for 2018/2019

- Better processes for performance monitoring, evaluation, and feedback for both individuals and teams
- Better recognition mechanisms, rewards, and incentives for good performance
- Better processes for investigation and intervention (support and sanctions) for poor performance
- Improve available online tools for monitoring performance against NEAP Objectives (EOC dashboard).

Resource mobilisation and management

Polio eradication is managed and supported through the Government's PC-1 framework for 2016-18 and the GPEI's Financial Resource Requirement framework (FRR) for 2016-19. Resource requirements are determined through the annual NEAP planning and quarterly review process. Resource mobilisation is updated monthly, or more regularly if required, to identify and quickly close funding gaps that would impede programme implementation. No such impediment was recorded in 2017/2018. Timely FLW payment, an issue in previous years, is now the norm with payments processed within stipulated days. Budget utilisation is tracked and reported quarterly to both the Economic Affairs Division through the M/o NHR&C and to the GPEI Strategy Committee through its financial management task team.

The polio partners (WHO, UNICEF, Rotary, BMGF & N-STOP) and all donors who generously support the programme, are briefed quarterly on the polio situation and emerging priorities at the National EOC and participate at the GPEI TAG and Independent Monitoring Board (IMB) meetings, in addition to compliance with bilateral grant reporting requirements.

Priorities 2018/2019

- Monthly or more regular tracking and follow up of funding gaps against programme requirements to ensure no delays, postponements, or cancellation of any activity.
- Compliance with the quarterly review and reporting of resource requirements, mobilisation, and utilisation to government and GPEI
- Regular situational updates to polio partners (WHO, UNICEF, Rotary, BMGF and N-STOP) and all donors as well as GPEI Pakistan Task Team.

Polio legacy transition planning

The Pakistan polio programme is demonstrating steady progress in eradicating polio and works relentlessly towards stopping transmission during 2018. The country deploys thousands of health workers, social mobilisers, and volunteers to carry out various eradication activities. There is strong evidence that the programme delivered additional services to support other health benefits, including health systems strengthening, VPD outbreak investigation, and vaccine logistics. As Pakistan moves towards eradication, it becomes critical to document and transition the knowledge, lessons learned, assets, and infrastructure accumulated by the programme to address other current and future health goals and priorities. This process (Polio Transition Planning) is endeavoured to sustain a polio-free Pakistan and to ensure that the long investments in polio eradication will contribute to other health goals after polio eradication.

As the PEI approaches its completion in Pakistan, and without distracting from the focus on completing the task, the country must take steps to initiate the polio transition process. **The government must be more directly involved in not just the transition activities of documenting lessons learned and capacities but also financial decision making and timelines for an orderly and responsible transition – and to avoid being potentially left on the edge of a cliff.**

There are three main aspects of the polio transition planning.

- Maintaining and mainstreaming essential polio eradication activities into ongoing public health programmes in a polio-free Pakistan following the end of the initiative. These functions will still be required to continue after Pakistan is certified polio-free. The government and GPEI partners (WHO, UNICEF, Rotary, BMGF & N-STOP) must ensure that these functions continue and are mainstreamed into ongoing public health programmes.
- Ensuring that the knowledge generated and lessons learned during more than two decades of polio eradication activities are documented and shared with other functioning health initiatives.
- Transitioning the capacities, assets, and processes—including human resources that the initiative has created and engaged for polio eradication—to support other health priorities, where feasible, appropriate, or required. This activity is important to ensure the sustainability of the programme established by the initiative and to build on its success.

As Pakistan is still in the phase of polio eradication, the planning for the polio transition is expected to start in the first quarter of 2019 at the earliest.

Engagement with international polio oversight bodies

The Programme has enhanced engagement with important international polio management and oversight bodies, including:

- The Independent Monitoring Board for Polio (IMB)
- The GPEI Polio Oversight Board (POB)
- The GPEI Strategy Committee
- The GPEI Pakistan Task Team
- The WHO Regional Committee (RC) and World Health Assembly (WHA)
- The Emergency Committee for polio eradication under the International Health Regulations (IHR)
- The Technical Advisory Group (TAG) on polio eradication for Pakistan

The programme prepares carefully for each engagement with transparency, surfacing key challenges and risks and proposing innovative solutions. The programme is grateful to these bodies for their continuous advice and input and looks forward to similar engagements in the 2018/2019 NEAP year.

ANNEXES

Annex 1 – Key performance indicators

Programme operations

Objective	Indicator
No child is left unvaccinated because of poor planning.	<ul style="list-style-type: none"> • Microplanning: ≥ 75% of UCs pass desk and field external micro-plans validation with HR&MP population fully incorporated • Still missed children: ≤0.75% of children missed against target population, and ≤5% against recorded missed children remaining unvaccinated at end of campaign. • Still and persistent refusal children ≤5% against recorded refusal children. • Verifying covered 'NAs': 0% unvaccinated children among covered NAs. • 0% unvaccinated children in locked or 0/0 houses. • 0% intra-campaign household clusters conducted by area in-charges and/or supervisors. Direct supervisors of teams must be left to do their supervisory duties. • Area in charge should supervise a team at least twice a day. UPEC chair/UCMO should supervise AICs at least once a day during campaign. • 10% of intra-campaign household clusters targeted at HR&MPs and bordering areas.
Team composition supports the greatest possible access to all households	<ul style="list-style-type: none"> • 100% of teams have at least one adult team member in each campaign. • 100% of teams have at least one local team member in each campaign. • 80% of teams have at least one female member or one female support in each campaign; in areas facing special cultural obstacles, a 25% reduction in the number of all-male only teams with no female support • ≥ 80% area-in-charges and ≥ 50% of TTM/TTSPs are females.
Workload of teams is rationalized in such a manner that revisits to vaccinate missed children are possible.	<ul style="list-style-type: none"> • All vaccination teams are able to revisit households with recorded missed children and vaccinate at least 40% of recorded missed children on the same day. • ≥90% of UCs pass the “team workload rationalization” evaluation in the external microplans validation.
Overall campaign quality ensures high population immunity	<ul style="list-style-type: none"> • At district-level – as measured by third-party post-campaign monitoring, all districts reach vaccination coverage above 95%. • At district-level, 100% of UCs flagged as low performing assessed and where necessary, corrective measures taken • As measured by third-party post-campaign monitoring, Market Surveys and other post-campaign indicators, at least 95% of districts in each province have vaccination coverage ≥95%. • Less than 10% of Union Councils in any division, or province are flagged as Low-Performing Union Councils • At Divisional and Provincial level – at least 90% of Union Councils pass LQAS. • At Union Council level – UC passes post-campaign LQAS assessments. • In serosurveys, at least 97.5% of children are seropositive for poliovirus type 1.
All infants in all divisions obtain full protection from the poliovirus as soon as possible.	<ul style="list-style-type: none"> • A half-yearly reduction in the proportion of children who have not received Penta 3 and OPV3 of at least 33% from current baseline measurement. Third-party PCM and NPAFP data will be used to assess performance.
Communication in the mass media and social media enhances vaccination acceptance	<ul style="list-style-type: none"> • Positive media tonality reports ≥15%

Detection and response

Objective	Indicator
The surveillance system as a whole is made fundamentally strong	<ul style="list-style-type: none"> • 100% of all required staff trained and deployed – All districts have a formally notified District Surveillance Coordinator; all DSCs are trained and fully participate in AFP surveillance activities. – DSC investigates at least 30% of AFP cases, and makes at least 30% of active sites visits. – All Tier 1 and Tier 2 districts and all divisions in Tiers 3 and 4 have dedicated surveillance officers hired. – At least 30% of cases to be re-validated by Area Coordinator, and/or Divisional Surveillance Officer. • 100% of all Detail Case Investigations including all previously conducted investigations for the calendar year 2017, and all 30 household cluster data, entered electronically into a centralized national database • 100% of the lists of facilities in the database carefully reviewed and all critical data updated correctly • 100% compliance in electronic submission of active surveillance site visits. Completed original hard-copies to be carefully filed and stored. • 100% compliance in electronic submission of weekly zero-reporting. Completed original hard-copies to be carefully filed and stored.
Surveillance and reporting of cases is improved at the lowest administrative levels	<ul style="list-style-type: none"> • All standard surveillance indicators are met (see Surveillance Guide for details). • 33% reduction in the number of silent Union Councils over 12 months in all provinces, Islamabad, and Azad Jammu Kashmir. • All tehsils in all provinces have reported at least 1 case of AFP in the preceding 12 months.
AFP surveillance sensitivity is improved such that all chains of poliovirus transmission in Pakistan are detected in a timely manner	<ul style="list-style-type: none"> • At least 75% of all AFP cases are reported by the first health provider (1st contact); and at least 90% are reported by the first or second health provider (1st or 2nd contact). • AFP cases are reported with 7 days of onset of paralysis: ≥80% • In line with the revised contact sampling protocol, >90% of expected number of contact samples are collected and shipped to the laboratory in a timely manner. • 100% of cases reviewed by Expert Review Committee (ERC), and 80% classified within 90 days of onset. • <10% of isolated polioviruses from any source is divergent from its closest genetic relative by >1%. • 0% of isolated polioviruses from any source is divergent from its closest genetic relative by >1.5%. • 0% of type 2 isolates is divergent by more than 10 nucleotides from its closest genetic relative.
Environmental surveillance reporting is strengthened	<ul style="list-style-type: none"> • 100% of Environmental sampling is verifiably sampled • 100% of Environmental surveillance results report either a poliovirus or a non-polio enterovirus (NPEV); 100% of sites reporting no virus isolated (NVI) are thoroughly evaluated • Preliminary lab results for all environmental surveillance samples is provided to the National EOC within 28 days of collection and intratypic differentiation (ITD)/sequencing results provided within 35 days of collection.
Poliovirus type 2 transmission is interrupted	<ul style="list-style-type: none"> • Lab to maintain and share on a monthly-basis a database with 100% of all SL2 and VPDV2 isolated. Database must include all required data for careful risk analysis including divergence from Sabin (nucleotide difference from Sabin).
Poliovirus events are investigated in a timely manner	<ul style="list-style-type: none"> • 80% of all and 100% of newly emerging poliovirus events are investigated jointly by the Federal and Provincial EOCs.

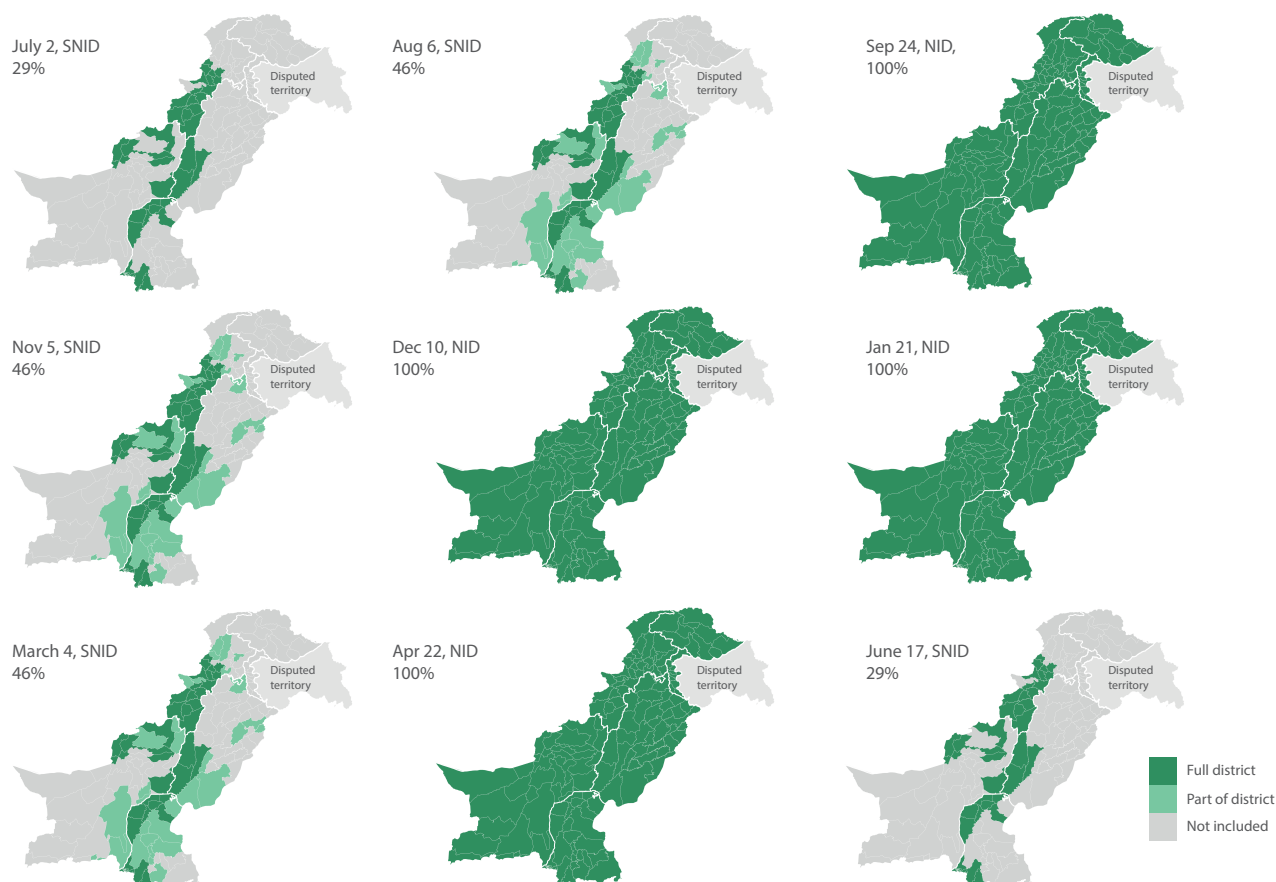
Risk assessment and decision support

Objective	Indicator
Ensure the scope and scale of monitoring activities is good enough to detect performance shortfalls in a timely manner.	<ul style="list-style-type: none"> An external pre-campaign, intra-campaign, and post-campaign monitoring plan for all SIAs (NIDs and SNIDs). All pre-campaign tools are collectable and/or can be submitted electronically into a centralized database.
Provide detailed UC level data and granular analysis highlighting areas of concern	<ul style="list-style-type: none"> UC profiles on EOC dashboards for monitors to access before deployment and for DPCRs to track on a regular basis Updating LPUC list on the dashboard every month Utilizing Third Party Monitoring data on dashboard for action
Develop a systematic way to look at the quality of data which informs program risk and identifies gaps	<ul style="list-style-type: none"> Perform two data quality assessments with the goal of <5% difference between assessor and field results on key indicators such as number of still NA and refusal children, campaign coverage, and same day catch-up coverage
Increasing transparency of monitoring in security compromised areas of KP Tribal Districts and Balochistan	<ul style="list-style-type: none"> Involve more TPM in critical pre- and post-campaign activities Utilize tehsil level staff to conduct LQAS and approved national staff to monitor activities in these areas

Management, oversight& accountability

Objective	Indicator
Overall implementation of the Emergency Plan is closely monitored.	<ul style="list-style-type: none"> The National Task Force meets twice a year to review progress of NEAP implementation. The National Polio Management Team meets and reviews implementation status of the NEAP on a quarterly basis.
Frontline and supervisory workforce is supported and held accountable at all levels.	<ul style="list-style-type: none"> Provincial Task Force reviews performance on quarterly basis The Divisional Task Forces headed by the Commissioners review performance after every campaign
District level leadership and oversight is active before and during all campaigns.	<ul style="list-style-type: none"> The Deputy Commissioner reviews the campaign preparedness and implementation during pre, intra and post campaign phases at district level. 100% of Union Councils have a qualified UCMO. ADCs chair 100% DPCR meetings during pre-campaign phase 100% UCs readiness presented by respective AC during DPEC.
The surveillance system as a whole is made fundamentally strong	<ul style="list-style-type: none"> District Surveillance review meeting under District Health Officer or equivalent is held every month; a copy of the signed minutes is shared with the PEOC.

Annex 2 – Supplementary immunizations calendar 2018/2019



- This figure reflects current geographic boundaries following the merger between the formerly Federally Administered Tribal Areas (FATA) with Khyber Pakhtunkhwa province in May 2018
- The combined bOPV/IPV SIA will be conducted in two phases. Tier 1 districts and depending on availability of IPV vaccine, selected Tier 2 districts will be targeted

Annex 3 – Essential committees for polio eradication

National level

National Task Force for Polio Eradication

In pursuance of the Prime Minister's Office notification No. 881/M/SPM/2014 dated 18th April 2014, the Prime Minister has approved the National Task Force for Polio Eradication with the following composition:

- Prime Minister Islamic Republic of Pakistan (Chairman)
- Governor, Khyber Pakhtunkhwa
- Chief Ministers of all provinces
- Prime Minister, Azad Jammu & Kashmir
- Minister In Charge, Ministry of National Health Services, Regulations & Coordination (MoNHSRC)
- Prime Minister's Focal Person for Polio Eradication (Secretary)
- Secretary to the Prime Minister
- Secretary, Ministry of National Health Services

- ix. Chief Secretaries of four provinces
- x. Representative of Chief of Army Staff

The task force shall meet two times a year and perform the following functions:

- a) To oversee and monitor the progress on NEAP implementation and direct necessary remedial measures
- b) To ensure interprovincial and intersectoral coordination and give direction on issues
- c) To ensure adequate resources are secured for the implementation of National Emergency Action Plan for Polio Eradication

National Polio Management Team for the Polio Eradication Initiative and Expanded Programme on Immunization

The National Polio Management Team (NPMT) is directly responsible for the day-to-day management of the Pakistan Polio Eradication Programme. It is responsible for continually monitoring and reviewing programme performance and implementation against targets set and the NEAP.

The Prime Minister's Focal Person is the chair of the NPMT while the National EOC Coordinator is the co-chair. Other members include the Provincial EOC Coordinators, the coordinator for coordination unit for KPTD, Federal and Provincial EPI Managers and team leads of WHO, UNICEF, BMGF and N-STOP.

Terms of Reference

- NPMT will guide the programme implementation based on decisions of the NTF, and advice of Technical Advisory Group (TAG), and Independent Monitoring Board (IMB) for the Global Polio Eradication Initiative
- It will report periodically on the current epidemiological status of polioviruses
- Will be responsible for all PEI activities
- Determine the scale and frequency of SIAs
- Review vaccine and logistics requirement and for the forthcoming campaigns
- NPMT will also be responsible for evaluation of all SIAs and conducted during the quarter. Campaign evaluation results and feedback to the provinces
- EPI Manager will report on EPI performance, especially in Tier 1 and Tier 2 districts, provide updates on the vaccine supply situation for both PEI and EPI as well as on other vaccine preventable disease outbreaks

National Emergency Operations Centre

Pursuant to decisions of the NTF meeting chaired by the Prime Minister on November 5, 2014, the National Emergency Operations Centre (EOC) for Polio Eradication was established with the following ToRs:

- a) To act as national hub for planning, coordinating, information gathering, surveillance, and monitoring of polio emergency activities in accordance with NEAP
- b) To provide technical inputs and situation analysis, as well as the other information, on regular basis to the Prime Minister's office, Ministry of National Health Services, Regulations and Coordination and all relevant stakeholders, highlighting issues and challenges for information and required interventions.
- c) To coordinate and develop effective liaison with all Provincial Task Forces for Polio Eradication on a regular basis with a view to monitor progress against set targets.
- d) To instil a sense of urgency in the implementation of polio eradication activities and thereby stopping poliovirus transmission by end of NEAP 2018/2019.
- e) To review monitoring and surveillance data and give feedback to the provinces and districts for remedial measures to improve the quality of polio campaign and control polioviruses.
- f) To act as apex body at the national level coordinating amongst the provinces to ensure standardized immunization service delivery for Polio Emergency and sustained availability of technical and material resources.

g) To prepare forecasts of project requirement for the Ministry of National Health Services, Regulations and Coordination to generate resources and provision of security for polio teams in high-risk areas through the Cabinet Committee on Immunization.

h) To review regularly the progress of essential immunization and advise relevant offices for prompt action.

Led by the Prime Minister's Focal Person and under the daily management and leadership of the National EOC Coordinator, the National EOC is a central point for all polio eradication activities and it brings together the government and the partnership. The National EOC will continue its assistance to the Prime Minister's Focal Person and will be responsible for monitoring NEAP indicators and tracking effective implementation of the strategic decisions and guidance provided by the National Task Force and the Technical Advisory Group.

The daily morning meeting of EOC

The National EOC coordinator chairs daily meeting at 9.30am, which is attended by team leads of partner agencies (WHO, UNICEF, BMGF & N-STOP) and senior technical staff housed at the NEOF. The ToRs of daily morning meetings are to share the details / status of on going and planned activities as well as review updates on surveillance, SIAs, and activities coordinated by different task teams.

National Steering Committee Meetings through Video Link with Provincial EOCs

The NSC is chaired by the PM Focal Person on monthly basis. The National EOC Coordinator is a co-chair of the NSC and all Provincial EOC Coordinators, team leads of partner agencies, and National and Provincial Technical senior officers are members of this committee.

Terms of Reference

- a) To share surveillance update and discuss actions required
- b) To review preparation, implementation. and post-campaign monitoring results of SIAs
- c) To agree on new initiatives, such as CBV, health camps, etc
- d) To share updates of ongoing and upcoming activities.
- e) To deliberate on any other issue requiring consensus

Provincial and divisional level

Provincial Task Force

The Chief Minister/Chief Secretary leads the Provincial Task Force for Polio Eradication and oversees implementation of the NEAP in the respective province.

The Provincial Task Force comprises of the members/representatives from home Department, law enforcement agencies, Education department, Information department, Local Government, Auqaf, Chief Minister Office, Health department, EPI, EOC, partner agencies (WHO, UNICEF, BMGF, N-STOP) as well as commissioners and deputy commissioners of all districts. All meetings of the PTF are facilitated by the PEOC Coordinator while the Health Secretary acts as the Secretary of the PTF.

The PTF reviews and monitors overall progress against quarterly milestones and key performance indicators against each area of work:

- a) Progress made in province against National Emergency Plan of Action for eradication of polio and guidance on challenges faced by each district.
- b) Involvement of the district and sub-district levels to assume the responsibility of ensuring implementation of district-specific plan.

- c) Involvement of the line departments and assigning specific roles and tasks to each department for successful campaign implementation.
- d) The plan and progress for advocacy and social mobilisation activities at provincial and sub-provincial levels and ensure availability of adequate resources and their optimal use
- e) The plan and progress for surveillance at provincial, district, and sub-district levels and ensure availability of adequate resources

There are several sub-committees to report to the Provincial Task Force including the following:

- a) The Provincial Security Coordination Committee of the PTF reviews the security situation of all districts before implementation of campaigns. This committee takes appropriate action to ensure safe implementation of polio immunization campaigns.
- b) Provincial Vaccine Management Committees headed by EPI Managers should improve their functioning to maintain all stock positions at the provincial stores and to gather information from the districts, provide feedback to them, and present input to the Federal Vaccine Management Committee. These committees reviews the available vaccine stocks in the province on a regular basis and monitor vaccine distribution versus utilisation on a daily basis during the campaign. The committees take corrective action to address any discrepancies while ensuring adherence to vaccine distribution based on microplan requirements, avoiding any vaccine wastage and accounting for all doses distributed in the field.
- c) Provincial Emergency Operations Centres established with the concept of 'one team under one roof' and led by the government. A full-time dedicated senior government officer is deputed in each province to lead the provincial EOCs with the assistance of partner agencies (WHO, UNICEF, BMGF & N-STOP). The Coordinator is the main facilitator of the Provincial Task Force and reports directly to the chairperson of the Provincial Task Force.

Provincial Emergency Operations Centre

Pursuant to decisions of the National Task Force on Polio Eradication meeting chaired by the Prime Minister on November 5, 2014, the PEOCs were established by the provincial governments with the following TORs:

- a) To act as the provincial hub for planning, coordinating, information gathering, surveillance, and monitoring of Polio Emergency activities in accordance with National Emergency Action Plan for Polio Eradication.
- b) To provide technical inputs and situation analysis, as well as the other information, on a regular basis to the Provincial Task Force and all relevant stakeholders, highlighting issues and challenges for information and required interventions.
- c) To coordinate and liaise effectively with the divisions and DPCRs on regular basis with a view to monitor the progress against set targets.
- d) To instil a sense of urgency in the implementation of polio eradication activities and thereby control poliovirus transmission.
- e) To review monitoring and surveillance data and give feedback to the districts for remedial measures to improve the quality of polio campaigns and to control poliovirus circulation.
- f) To act as apex body at the province level, coordinating amongst the divisions and districts to ensure standardized immunization service delivery for Polio Emergency and sustained availability of technical and material resources.
- h) To review regularly the progress of essential immunization and advise relevant offices for prompt action.

Divisional Task Force

The Divisional level structure has been fundamental in ensuring that the progress is made on oversight and management deficiencies in Karachi, Larkana, Sukkur, Peshawar, and Islamabad. The Commissioners chair Divisional Task Forces (DTF) and have regular meetings with the Deputy Commissioners who are responsible for a programme implementation at district level.

The DTF is the primary organ with oversight responsibility and meets after every SIA to monitor performance against KPIs for each area of work. The DTF meets under the leadership of the Commissioner and with participation of the respective Deputy Inspector General, Deputy Commissioners, DHOs, EPI Coordinators, and partners (WHO, UNICEF, BMGF, N-STOP and Rotary International) of all districts within the division.

District, Tehsil, and Union Council level

District Polio Eradication Committee

Each district has a District Polio Eradication Committee (DPEC) to oversee Polio eradication and essential immunization activities at district level and coordinate with all line departments and local partners to ensure high quality implementation of vaccination campaign strategies and plans to achieve all targets set out against KPIs in the National Emergency Action Plan.

The DPEC headed by the DC/DCO meets:

- 29 - 25 days before the campaign to review the previous campaign performance, take corrective actions and to develop count down of activities for the campaign
- 05-04 days before campaign to review the readiness of district for the campaign
- Daily during the campaign days to review the campaign implementation and address issues on real time basis
- 2-5 days after the end of catch-up to review the outcome of the campaign against the set of standard indicators, assign officers to follow the remaining gaps including in reaching the still missed children and review the progress of actions taken against the poor performance in the previous campaign(s).

The participation of the Chairperson and Secretary of the Committee is mandatory with binding attendance of all concerned departments – Health, Police, education, Revenue, local government as well as representatives of partner agencies, district heads of public health programs, private sector organisations, community representatives (parliamentarian) and district Khateeb (Religious preacher).

In addition, the DPEC also reviews the status of surveillance and results of UPEC meetings (including completeness and timeliness) to take corrective actions where required. The meeting of the DPEC must the following in its agenda:

- a) Follow-up of actions / decisions from the last meeting.
- b) Appropriateness of plans for pre, intra and post-SIA phases with focus on completeness of microplans including transit strategy with supervision plan, training quality and effective house to house visits to all families with follow-up of those having absent children.
- c) Specific tasks assigned to the DPEC members in relation to the next SIA
- d) The Secretary of the DPEC must maintain record of all approved meeting minutes for sharing, whenever required.
- e) The health department and local law enforcement agencies must submit a jointly prepared district security plan for implementation of the campaign to the DC for reviewing it in the DPEC. It is the responsibility of the DC to ensure that the necessary security arrangements are in place to ensure safety of the front line workers.

Tehsil Polio Eradication Committees

There is occasionally a management gap between the district and UC level, therefore it is proposed to fill such gaps with the involvement of Tehsil/taluka administration and health departments to ensure supervision and monitoring support for the UCs. It is therefore imperative that the Tehsil Polio Eradication Committee is fully functional at the tehsil level. Four member teams, headed by the Assistant Commissioner (AC) should be in place to assist the UCMOs in implementation of polio campaign activities as well as to monitor progress. The AC should also represent the tehsil in the DPEC meetings.

The Assistant Commissioner (AC) is the chairman while the Deputy District Health Officer (DDHO) is the secretary. The police officer is also an integral part as in charge of the Tehsil.

The meeting of the TPEC should be conducted at least 1-2 days before the UC level staff meeting. The DDHO should hold a meeting with the TPEC chairman in Tehsil/taluk of his / her assignment before the DPEC meeting and present UC wise information on his assigned Tehsil/taluka during the UC team training. The district team should ensure training of the DDHO (Tehsil focal person). A review meeting chaired by the TPEC chairman should be held with all chairpersons of UCs and should bring the particular challenges to the DC for resolution before the start of preparation of microplan.

Union Council Polio Eradication Committees

The UPECs formation, composition and functionality have been varying in all the provinces. The UPEC must function with the designation of a full-time Union Council Medical Officer as Chairman and the Revenue Officer as Secretary, with binding membership of important UC level stakeholders. Each UPEC is expected to develop UC specific campaign and surveillance work-plans.

The meeting of the UPEC should be conducted 11 days before the campaign with an agenda including the following:

- the review of the implementation status of the previous meeting's decisions
- the review and endorsement of the integrated microplans including composition and quality of vaccination transit teams strategy along with supervision plans
- the engagement of the community influencers for information and motivation of the community
- plans for quality training, supervision and real time process data transmission on a daily basis

The UCMO will ensure that all Area In-Charges in the UC meet their teams daily at the end of each day's assignment. The Area In-Charges will collate and compile the data/information from the tally sheets of the teams and report to the UCMO; who will collate and compile all of the data for the UC and report to the DPCR. The Area In-Charges and the UCMOs will critically analyse the tally sheets of the teams on a daily basis and strategize the interventions accordingly. The partners UC level staff (where available) will assist with the tally sheet analysis and strategizing field interventions.

Office bearers of the local bodies at the Union Council

Local Bodies is the system of Government that provides the facilities to the people in specific areas to solve problems at local level and allow public participation in decision-making. It has three levels i.e. district, tehsil and UC in each district under the administrative control of provincial local government. The essence of this system is that the Local Governments would be accountable to the citizens for all their decisions.

The lowest tier, the Union Council is a corporate body covering the rural as well as urban areas across the whole District. It consists of Chairman, Vice Chairman, 8–13 members (general council members and representatives of ladies, farmers/labourers and minorities).

In every union council, the local government has placed the Union Council Secretary to coordinate and facilitate the elected body of the union council in community development, functioning of the Union Committees and delivery of municipal services. The UC Secretary is also responsible to manage work of births, marriages, death registration and security system through chowkidars.

The UC Secretary has been assisting the health department in essential vaccination of children by providing list of registered births to vaccinators as well as playing role as the Secretary of Union Council Polio Eradication Committee. They can also bridge the gap between UPEC and local police in security risk areas, monitor campaign activities and assist in vaccination of missed children.

There is a need to establish official agreement with the local government to use the services of the UC level Secretaries for Essential Immunization and Polio Eradication.

Annex 4: Union Council-level score card

	Area of Work	Task and Indicator	Outcome	NEAP target
1.	Oversight, management	UPEC Planning meeting occurs 11 days before each SIA (Y/N)	Y	
2.	SIA – preparation	Area-in-charge microplans desk reviewed and field validated by responsible UC staff before each SIA (Y/N)		100%
3.	SIA – preparation	Microplans to be prepared as new before each NIDs and all micro-plans to be updated before SNIDs (Y/N)	Y	
4.	SIA – preparation	Number of vaccinators completing training with standardized national Interpersonal Communication (IPC) Module before each SIA (# and %)		95%
5.	SIA- preparation	Vaccination Teams with at least one female member (# and %)		80%
6.	Access and security	Security plan completed with local law enforcement and integrated with microplan (Y/N)	Y	
7.	SIA – missed children	Missed children tracked for up to 14 days from start of SIA and vaccinated (# and %)		95%
8.	Communications – refusals	Refusals converted among recorded		95%
9.	Monitoring and evaluation	Low-performing UC (Y/N)*		N
10.	Monitoring and evaluation	SIA report sent to DPCR on daily basis during campaign and within one week for final report including post-campaign data (Y/N)	Y	
11.	Surveillance- AFP	AFP Zero reporting completed weekly (Y/N)	Y	
12.	NEAP overall	Monthly updated UC-level scorecard posted at UC office	Y	

*Low-performing UC is flagged using a composite index derived after modelling of UC-level performance overtime. It is defined as a UC failing LQAS; OR with an intra-campaign monitoring coverage (by recall) of <90% and ≥20% of children missed due to “team didn’t visit house”; OR with 2 or more children reported as missed due to “Team not visiting” in LQAS; OR same day coverage <30% and still missed children >2%; OR in districts with PCM coverage <95%, the worst performing Union Councils in those districts regardless of whether they are otherwise meet key performance indicators. In 2018/2019, a UC will have to be flagged twice on two consecutive campaigns to be deemed an LPUC. Indicators are developed by the National EOC Emergency Operations (Ops) Team and may be revised as necessary. After every NID or SNID, the National EOC Coordinator will formally share the list of LPUCs with Provincial EOCs and DPCRs.

Annex 5: District-level score card

	Area of Work	Tasks and Indicators	Outcome	NEAP target
1.	Oversight, coordination	UCs completing UPEC Meetings 11 days before SIA (# and %)		100%
2.	Oversight, coordination	DPEC meets 29-25 days before SIA (Y/N)		Y
3.	SIA – preparation	UCs with revised microplan before SIA (# and %)		100%
4.	SIA – preparation	UCs where microplan validated by responsible district staff (# and %)		30%
5.	SIA – preparation	UCs completing vaccinator training and meeting NEAP targets before each SIA (# and %)		100%
6.	SIA – preparation	Number of vaccination teams with at least one female vaccinator (# and %)		80%
7.	SIA – vaccine, logistics	Number of UCs receiving vaccine supplies at least 4 days before SIA (# and %)		100%
8.	Access and security	District security plan completed before each SIA (Y/N)		Y
9.	Access and security	UCs with security plan completed before each SIA (# and %)		100%
10.	SIA – missed children	Missed children tracked and vaccinated at district level in each SIA (# and %)		95%
11.	SIA – missed children	UCs tracking and vaccinating 95% of missed children (# and %)		100%
12.	Communications – Refusals	Refusals converted each SIA among targeted		95%
13.	Monitoring and evaluation	Low-performing UCs* (# and %)		<10%
14.	Monitoring and evaluation	Still missed children against target, and against recorded missed children		<0.75%, <5%
15.	Monitoring and evaluation	District vaccination Coverage by PCM in each SIA where applicable (%)		95%
16.	Monitoring and evaluation	CBV UCs flagged as low-performing LQAS (# and %)		<10%
17.	SIA – payments	Vaccinators paid within 14 days of campaign completion (# and %)		100%
18.	Oversight, coordination	Campaign readiness meeting within 3 to 5 days of SIA (Y/N)		Y
19.	Monitoring and evaluation	Final District SIA report sent to P-EOC within two weeks of SIA (Y/N)		Y
20.	Surveillance –AFP	Number of active surveillance site visits (# and %)		80% for each priority level
21.	Surveillance – AFP	Number of weekly zero reports submitted (# and %)		80%
22.	Surveillance – AFP	Number of silent Union Councils in past 36 months (# and %)		Reduce by 30%
23.	NEAP overall	Monthly updated district level scorecard posted at DPCR		Y

*Low-performing UC is flagged using a composite index derived after modelling of UC-level performance overtime. It is defined as a UC failing LQAS; OR with an intra-campaign monitoring coverage (by recall) of <90% and ≥20% of children missed due to “team didn’t visit house”; OR with 2 or more children reported as missed due to “Team not visiting” in LQAS; OR same day coverage <30% and still missed children >2%; OR in districts with PCM coverage <95%, the worst performing Union Councils in those districts regardless of whether they are otherwise meet key performance indicators. In 2018/2019, a UC will have to be flagged twice on two consecutive campaigns to be deemed an LPUC. Indicators are developed by the National EOC Emergency Operations (Ops) Team and may be revised as necessary. After every NID or SNID, the National EOC Coordinator will formally share the list of LPUCs with Provincial EOCs and DPCRs.

Annex 6: Divisional- and provincial-level score card

	Area of Work	Tasks and Indicators	Outcome	NEAP target
1.	Oversight, coordination	UPEC meetings completed 11 days before SIA (# and %)		100%
2.	Oversight, coordination	DPEC meets 29-25 days before SIA (Y/N)		Y
3.	Oversight, coordination	Task force meets as per guideline (Y/N)		Y
4.	SIA – preparation	UCs with revised microplan before SIA (# and %)		100%
5.	SIA – preparation	UCs where microplan validated by responsible district staff (# and %)		30%
6.	SIA – preparation	UCs completing vaccinator training and meeting NEAP targets before each SIA (# and %)		100%
7.	SIA – preparation	Number of vaccination teams with at least one female vaccinator (# and %)		80%
8.	SIA – vaccine, logistics	Number of UCs receiving vaccine supplies at least 4 days before SIA (# and %)		100%
9.	Access, security	District security plan completed before each SIA (Y/N)		Y
10.	Access, security	District security plan completed before each SIA (# and %)		100%
11.	SIA – missed children	Missed children tracked and vaccinated at district level in each SIA (# and %)		95%
12.	SIA – missed children	Districts and UCs tracking and vaccinating 95% of missed children (# and %)		100%
13.	Communications – refusals	Refusals converted each SIA among recorded		95%
14.	Monitoring and evaluation	Low-performing UCs* by district (# and %)		<10%
15.	Monitoring and evaluation	Still missed children against target, and against recorded missed children		<0.75%, <5%
16.	Monitoring and evaluation	Vaccination Coverage for division/province by PCM in each SIA where applicable (%)		95%
17.	Monitoring and evaluation	Districts with vaccination Coverage ≥95% PCM in each SIA where applicable (%)		90%
18.	Monitoring and evaluation	CBV UCs flagged as low-performing LQAS (# and %)		<10%
19.	SIA – payments	Districts with all vaccinators paid within 14 days of campaign completion (# and %)		100%
20.	Oversight, coordination	Districts where campaign readiness meeting held within 3 to 5 days of SIA		100%
21.	Oversight, coordination	100% districts carrying out DPEC review meetings after SIA (# and %)		Y
22.	Monitoring and evaluation	Final SIA reports compiled within two weeks of SIA (Y/N)		Y
23.	Surveillance – AFP	Number of active surveillance site visits (# and %)		80%
24.	Surveillance – AFP	Number of weekly zero reports submitted (# and %)		80%
25.	Surveillance – AFP	Number of silent UCs in past 36 months (# and %)		Reduce by 30%
26.	NEAP overall	Monthly updated district level scorecard posted		Y

*Low-performing UC is flagged using a composite index derived after modelling of UC-level performance overtime. It is defined as a UC failing LQAS; OR with an intra-campaign monitoring coverage (by recall) of <90% and ≥20% of children missed due to “team didn’t visit house”; OR with 2 or more children reported as missed due to “Team not visiting” in LQAS; OR same day coverage <30% and still missed children >2%; OR in districts with PCM coverage <95%, the worst performing Union Councils in those districts regardless of whether they are otherwise meet key performance indicators. In 2018/2019, a UC will have to be flagged twice on two consecutive campaigns to be deemed an LPUC. Indicators are developed by the National EOC Emergency Operations (Ops) Team and may be revised as necessary. After every NID or SNID, the National EOC Coordinator will formally share the list of LPUCs with Provincial EOCs and DPCRs.

Annex 7: SIA activity calendar NEAP 2018/2019

S#	Activity	Schedule	Responsible
1.	NEOC decide/sets date of SIA and implementing districts/UCs	45-40 days before SIA	Head/s co-chairs NEOC AoWs
2.	Provincial EOC to review previous SIA and sets calendar of activities by assigning responsible officers	39-35 days before SIA	PEOC coordinator
3.	Divisional Task Force coordination meeting	34-30 days before SIA	Chair divisional TF
4.	DPEC meeting to Review previous campaign and Set calendar of activities by assigning responsible officers	29 - 25 days before SIA	DPEC Chair
5.	Training of UC level staff including UCMO/zonal supervisor, UC team (partner and other staff) and AIC	24-20 days before SIA	DPEC chair and UCMO/zonal supervisor
6.	MP preparation and self-assessment by AIC	20-17 days before SIA	Zonal supervisor/UCMO and UC level partner workers
7.	AIC MP review and field validation by UC staff	17-15 days before SIA	UCMO/zonal supervisor
8.	UC level MP preparation by UC team; Review and revision of influencer mapping and social profiling completion and update of the social mobilization template of the micro plan.	15-12 days before SIA	UCMO/zonal supervisor
9.	UPEC meeting	11 days before SIA	UPEC Chair
10.	Meeting with key Influencer for supporting community mobilization	11 days before SIA	UPEC Chair
11.	MP submission to DPCR and Desk Review by DPCR including the social mobilization template	10 days before SIA	UPEC chair/ UCMO
12.	District level MP field validation	10-07 days before SIA	DPEC Chair
13.	National/Provincial level MP quality assessment	06-05 days before SIA	NEOC/PEOC
14.	Team training	07-05 days before SIA	UCMO/zonal supervisor/UC level partner workers/ AIC
15.	Logistics distribution to team support centres	05 days Before SIA	UCMO/zonal supervisor
16.	Readiness meeting; Readiness indicators to include Social Mobilization activities, initial IPC questions, Same day refusal conversion, influencer mobilization to accompany teams, mosque announcements	05-04 days before SIA	DPEC Chair
17.	Campaign	1-4 or 1-7 days including catch up days	All
18.	Campaign implementation. Teams deployment as per MP	1-4 or 1-7 days	DPEC chair/ UCMO/zonal supervisor/AIC/UC level partner workers
19.	Missed Children Coverage	Up to 14 days after SIA	
20.	Community engagement for catch up refusal conversion, and influencer mobilization	Up to 14 days after SIA	DPEC chair/ UCMO/zonal supervisor/AIC/UC level partner workers
21.	AIC chairs campaign evening meeting with the team members and compile data from Tally Sheet	1-5 or 1-7 days	AIC
22.	UCMO/Zonal supervisor chairs campaign evening meeting, discuss issues, compile daily coverage from AIC form 2A and submit the data to DPCR using form 2B with back up of form 2A as well.	1-5 or 1-7 days	UCMO/zonal supervisor
23.	DC - chairs District level evening meeting including review of IDIMS data and discussion on Issues identified by monitors	1-5 or 1-7 days	DC/DPEC chair
24.	Covering left over areas	Upto 7 days after SIA	All
25.	Market Survey	5 th or 7 th days	DPEC chair/PEOC and NEOC M&E team lead
26.	LQAS	Within one week after SIA	NEOC M&E team lead
27.	PCM	Up to 7 days after SIA	NEOC M&E team lead
28.	Submission of Catch Up Report and filled DDM CARDS	Up to 7 days after SIA	UCMO/DDM focal persons at all levels
29.	Missed Children Coverage	Up to 14 days after SIA	All
30.	UC members led by Revenue staff, review and record any new settlements construction/new arrival families until the next MP preparation day	Until the next MP preparation is completed	UCMO/zonal supervisor/UC secretary
31.	Validation of missed children coverage	Up to 14 days after SIA	UCMO/zonal supervisor DPEC chair
32.	Vaccine utilization report submission	14 days after SIA	DPEC chair/PEOC coordinator/NEOC VMT team lead
33.	Tally sheet analysis	Upto 14 days after SIA	UCMO/zonal supervisor/ DPEC chair

*Zonal supervisors are deployed in place of UCMO in Islamabad

*PEOCs are requested to prepare the countdown of activities by including the responsible officers for each round. The Countdown should be shared with the NEOC for monitoring and assignment of officers for facilitation.

- Each district should prepare district specific countdown based on PEOCs SIA specific countdown by assigning officers for each activity.
- In districts conducting SNID/case response the full preparatory period may not be feasible. In such a situation, the PEOC and districts should prepare the countdown that suits the situation. The changes made need to be communicated to the NEOC for information & further planning to assign supporting officers.
- Photocopying resources for MP preparation for NIDs starting from Jan 2018 will be provided to AIC and UCMOs directly through DDM.

