#	RECOMMENDATION	OWNER	STATUS/UPDATES
PAKIS	TAN & AFGHANISTAN		
1	All partners in the GPEI, and the Afghanistan government, should work with the greatest possible urgency to establish an Emergency Operations Centre (EOC) in Afghanistan that has a level of functionality equivalent to the comparable Centre that has been transformational in Nigeria.	Afghanistan Task Team	National and 3 regional EOCs (Kandahar, Jalalabad, and Herat) now established. The Director of the EOC, Dr. Maiwand, together with other technical support for data management and operations have been assigned to support the EOC. MOH and Partners are supporting full implementation of the NEAP and enhancing data management support for national and provincial EOCs and provincial control rooms. BMGF is providing full operational contract support for EOCs. A NEAP review was recently undertaken and the task trackers are regularly reviewed and updated to ensure that actions are being taken. The NEAP review process informed the development of the NEAP 2016/17 together with recommendations from the TAG and other relevant technical fora. The National EOC strategy working group recently undertook a review of the operationalization of the EOC structures and made some slight revisions to improve its functionality. Task teams have been establish to ensure full implementation of the NEAP as well as emerging priorities. The national EOC has regular conference calls with the regional EOCs to ensure enhanced coordination. Members from the national EOC are also regularly deployed to provide technical support to the regional EOC. A data platform has been established to provide data analysis through dashboards. Four dashboards are now available, to assess data across the campaign cycle.
			Data management in Regional EOCs lags behind national EOCs. Accountability monitoring is in the process of being implemented as part of the updated NEAP for 2016/17. Led by the EOCs, a number of new initiatives to further

			improve SIA quality were put in place during the low transmission season (end of 2015 and early 2016). These initiatives included the roll-out of a new frontline worker (FLW) training curriculum; a modified re-visit strategy; the development of district profiles and district-specific plans; the in-depth investigation of reasons for "lot failure" in Lot Quality Assurance Sampling (LQAS) surveys; the strategic use of IPV; and microplan validation and revision. The Programme has focused the implementation of these initiatives in the 47 prioritized districts. These initiatives are starting to translate into improvements in the quality of SIAs. Between November 2015 and May 2016, the number of failed lots assessed through LQAS in priority 1 and 2 LPDs decreased from 42 to 17%.
2	Non-Governmental Organisations that contribute to polio eradication in Afghanistan should be full members of the new Emergency Operations Centre.	Afghanistan Task Team	The Grants and Commissions Management Unit (MoH GCMU, manages the Basic Package of Health Services partners) is now represented in the EOC also. There are regular meetings with BPHS NGOs to understand their contribution to PEI. BPHS implementing NGOs regularly participate in regional EOC meetings. Partners are engaging the International Federation of Red Cross and Red Crescent Society/ Afghan Red Crescent Society (IFCRIFRC) to assist with negotiating and working in inaccessible districts and other high risk LPDs.
3	The GPEI partners and the government of Afghanistan should rapidly review and redesign leadership, accountability and coordination arrangements for the polio programme in the country to establish a new sense of direction.	Afghanistan Task Team	WHO Afghanistan and UNICEF Afghanistan have designated new team leads (Dr. Hemant Shukla and Melissa Corkum). Both team leads and their team members are working closely together to support the government in implementing the NEAP and EOC functions. Both country offices have scaled up capacity in key areas

			at national and sub national levels, particularly in low performing districts. WHO has 100 new staff assuming
			positions in these districts. UNICEF is moving to introduce full-time mobilizers across the LPDs. Nearly 7000 mobilizers will be deployed full time to engage with
			households on a permanent basis. Leadership of Afghanistan EOC is also now in place (Dr. Maiwand, and support for operations and data management). NEAP
			tasks with timelines, responsibilities and accountability have been established and are being tracked,
1 1 8	The GPEI partners should help the governments of Pakistan and Afghanistan to establish a joint executive and planning body to instigate cross-border polio prevention and control; this should not only address the border crossings but take account of the need to cover communities at some distance from the border itself. One option would be to set up a joint governmental Emergency Operations Centre but leaders of the programme must ensure that the organizational model is much superior to the ineffectual arrangements of the past.	WHO Regional Office for the Eastern Mediterranean (EMRO) In coordination with Pakistan & Afghanistan teams	Improved Coordination: WHO EMRO and HQ, in consultation with GPEI partners, assigned two Medical Officers as advisors to Pakistan and Afghanistan to assist with joint planning and coordinate activities across common corridors of transmission (Greater Peshawar-Nangarhar corridor and Quetta-Kandahar block). Coordination has significantly improved between the FATA and eastern Afghanistan teams with monthly in-person meetings and video conferences since November 2015. The same has further strengthened Quetta Block – Kandahar block. Two video calls have been convened in 2016 so far (January and April) among the senior national political and administrative leadership to review and further streamline coordination on the WPV common reservoirs. Moreover, a face to face to face coordination meeting was held in Kabul in March 2016, co-chaired by the National EOC leadership from both the countries and attended by core national and provincial/regional teams.

The provincial / regional teams are holding fortnightly tele/video conferences while the bordering districts/sub-districts teams are meeting (or having phone interactions) before/after every vaccination round.

National focal points have been assigned by both the Governments/EOCs who are supervising and following up on action points with provincial teams and holding weekly coordination calls.

Improving coordination at the national and sub-national levels focusing on improving the operations:

- SIAs schedules for the second half of 2015 and first half of 2016 were synchronized. The schedule for the second half of 2016 has also been synchronized, as part of the updated NEAP of both countries.
- Two visits of the Afghanistan National EOC team to the Pakistan's National EOC (late 2015 and early 2016) for experience sharing on overall EOC/program management as well as on information/data management.
- Listing and Mapping of bordering villages at Khyber – Nangarhar border completed
- The bordering villages/areas' teams coordinated more closely for the vaccination rounds between December 2015 to May 2016, for joint microplanning, supervision and communication strategies.
- The transit vaccination strategy revamped by Pakistan on Torkham border between Khyber & Nangarhar.

Mohmand Agency, districts of Charsadda and Nowshera and partners' staff in Peshawar district, Khyber Agency, FR Peshawar and FR Koha.

To date all the UCs of Peshawar and the villages on FATA side on the borders have been clearly mapped. Microplans of the bordering UCs/areas have been field validated and all the ambiguities have been removed. Joint trainings for the Area In-Charges and polio teams were organized. The activities on both sides have been synchronized (starting on the same day).

Data use in KP/FATA is quite comprehensive, with the NEOCs supporting analysis of data on a daily basis of LQAS, PCM, ICM, and Market Surveys. ICM, PCM and LQAS are now possible in every UC of Town 4 in Peshawar, and the LQAS pass percentage in the Peshawar corridor has risen to 84% pass (86% in Town 4). From March 2016 NIDs in this region achieved remarkable progress evidenced by the LQAS, PCM and proportion of missed children due to "no team". The percentage of passed LOTS and PCM coverage rate exceeded the NEAP targets of 80% and 90% respectively, while the "no team" went down from 55.9% to 10% and 57.5% to 26% in KPK and FATA respectively.

A special investigation was carried out in Peshawar in March 2016, jointly by the National and Provincial EOCs to find out the reasons of persistent positive samples from one of the environmental sampling sites (Shaheen Muslim Town). The investigation flagged 17 UCS as key contributors towards the persistent local WPV isolation in

towns 1 as well as town-4 and town-3 bordering FATA. A few settlements with migrant populations from FATA were also found with sub-optimal SIAs quality. This was followed by development of UC specific plans and close follow up on their implementation. The LQAS pass rates in these UCs improved from 65% before to more than 80% over the course of two to three months and for the first time Shaheen Muslim Town has negative environmental samples in May and June 2016.

An IPV campaign was conducted in Khyber and FR Peshawar achieving 93% administrative coverage. Permanent transit points have been strengthened at the Pakistan-Afghanistan Border. CCPV have been scaled up in Khyber and HR surge in Khyber has been institutionalized.

The Prime Minister's Focus Group discussed the importance of this region during its meeting in December 2015. The Prime Minister Office has assured the KP and FATA teams of any additional support from the Federal Government and law enforcement agencies to effectively tackle the risk in Khyber – Peshawar Conveyer Belt.

WHO has appointed one Short Term Consultant (STC) for this region; and two High Risk Coordinators, one each in KP EOC and FATA EOC. WHO has appointed two senior staff members as Common Reservoir Coordinators.

Afghanistan-Pakistan teams held videoconferences in January and April 2016 and an in-person coordination meeting in Kabul, March 2016. In addition, the Afghanistan team visited the NEOC Pakistan two times to share experiences.

The CDC should conduct an urgent special review of the pattern and genetic features of the positive environmental samples in different geographical areas of Pakistan. The primary aim of the review should be to identify possible pockets of population that may have been missed in previous microplanning. It is essential that this work is completed in time to be able to inform the current low season vaccination rounds.

CDC Pakistan lab

An analysis and a presentation were provided to Pakistan and Afghanistan prior to February TAG meetings.

Using the nucleotide sequences of VP1 capsid coding region from AFP cases and environmental samples for 2013–2015, phylogeographic inference was made from genetic data and associated temporal and geographic records. Inferred transmission pathways and genetic diversity plots were based on statistical and evolutionary models. Genetic diversity analysis included data from 2012 to 2015. WPV1 genetic diversity fell substantially during the 2015 high season; previously it had sharply risen as each high season progressed. The most intense transmission is Khyber-Peshawar-Nangarhar, forming a common epidemiologic block. Inferred transmission between the identified isolates includes areas that already are considered as high risk (Khyber agency). Most transmission in Nangarhar is local, and it has served as an independent reservoir to seed Peshawar in 2014–2015. Quetta Block has had reintroductions from multiple directions with sustained transmission. Continuous circulation in Karachi remains a major concern and has served as a source for wild poliovirus found in multiple other locations throughout Pakistan. Southern Afghanistan has remained a stable reservoir.

A secondary analysis beyond the IMB recommendation is being considered which will further overlie some epidemiologic and access data to see if that provides any further insight.

			Note: Pakistan National Institute of Health published an article on 28 Oct, 2015 in <i>Clinical Infectious Diseases Journal</i> , "Genomic Surveillance Elucidates Persistent Wild Poliovirus Transmission During 2013-2015 in Major Reservoir Areas in Pakistan."
7	The most senior members of the GPEI should work with the leaders of the polio programmes in Pakistan and Afghanistan to plan a precisely targeted series of campaigns of IPV alongside OPV. The IMB has repeatedly stressed the immunity benefits of this but it is essential, given limited vaccine supply, that it is used to prioritise, through microplanning and microcensuses, hard-to-reach and persistently missed children.	GPEI Eradication and Outbreak Management Group (EOMG)	The EOMG worked closely with country teams, with input from a senior consultant, to define IPV needs in both Pakistan and Afghanistan. Based on this work. the Strategy Committee of GPEI endorsed updated guidelines for use of IPV in campaigns in Pakistan and Afghanistan in the context of a very limited global IPV supply, agreed on additional IPV allocations for use in SIAs in Afghanistan (496,960 doses) and Pakistan (740,220 doses), and allocated 400,000 doses as global emergency stock, to be shipped out based on emerging needs and in strict adherence with the global guidelines on IPV use in SIAs. This decision was communicated to countries on 6 December 2015. There was an emphasis on the need for country teams to ensure IPV SIAs are implemented to achieve at least 80% coverage or pass rate from independent monitoring/LQAS or a clear trend of consistent coverage improvements. Afghanistan: IPV-OPV campaigns were conducted in 23 high risk/infected districts reaching 604,450 children with the vaccine in 2016. Planning, preparation and monitoring of these campaigns was strengthened by mobilizing human resources from other areas.

NICER			Pakistan: The operational combined IPV/OPV SIA plan for 2016 has been finalized, submitted and implemented. The new NEAP 2016-17 contains a plan for IPV/OPV campaigns in Q1 2017. The plan was reviewed and endorsed by the TAG during their June meeting. All children between 4 months and <24 months in Tier 1 (core reservoirs) and Tier 2 districts will be targeted. Ten district-level combined OPV/IPV campaigns have been conducted thus far in 2016, reaching 1,001,546 children. These rounds were conducted separately from the scheduled OPV SIAs.
8	The GPEI leadership should work with the Emergency Operations Centre in Nigeria to strategically review the range and adequacy of data streams to monitor the country's resilience to polio transmission becoming reintroduced. From this, a Polio Resilience Dashboard should be constructed that would become the main vehicle for directing vaccination strategy.	GPEI Strategy Committee Chair	While a preliminary resilience dashboard was developed, it is not updated regularly, shared with partners, discussed at EOC meetings, or used to direct vaccination strategy. However, some elements that would be included in a resilience dashboard are tracked regularly by the EOC. For example, routine immunization data from priority LGAs, data on the number of children immunized through inbetween round activities and special interventions to reach children in security challenged areas, performance results from IPD campaigns, and outbreak response efforts are often reviewed at EOC meetings. However, underscoring this recommendation, with specific guidance on which data points should be included and recommendations for the creation of a feedback loop to address challenges observed at the EOC would be helpful.

	A Discourse (Delia Lee	CDELCLAST	±1
9	A new Director of Polio Legacy should be appointed to lead	GPEI Strategy	The structures to support transition planning have been
	legacy planning in Nigeria and to ensure that programme	Committee Chair	put in place. The National Primary Healthcare
	staff and leaders are not distracted from the task of building		Development Agency (NPHCDA) has appointed a
	resilience to keep the country and the rest of Africa free of		Coordinator for Polio Legacy Planning who has instituted
	polio until official certification.		two transition planning working groups: 1) the Polio
			Legacy Technical Task Team (PLT3), a group of 4-5
			partners and donors that meets on a weekly basis, is
			chaired by NPHCDA, and is tasked with developing the
			transition plan, and 2) the National Polio Legacy Planning
			Committee (NPLPC), a larger group of polio and RI
			partners that meets on a monthly basis, is chaired by the
			Executive Director of NPHCDA, and is tasked with
			providing strategic guidance and input on the transition
			1'.
			plan.
			However, the PLT3 group is well behind schedule on the
			proposed work plan endorsed by the NPLPC in May 2016.
			Additionally, while activities to develop the transition plan
			have commenced, the work thus far has not tackled the
			difficult questions that must be addressed as part of
			developing a transition plan: How do we prioritize assets
			to be mainstreamed vs. those to be sunsetted? For assets
			to be mainstreamed, how do we go about identifying
			robust non-GPEI funding sources? For the assets to be
			sunsetted, how do we develop an orderly ramp-down plan
			that ensures the job of polio eradication in Africa will be
			finished?

10 The GPEI should conduct a new social mobilization and **GPEI Strategy** Substantial efforts have gone into getting the message out communication campaign to raise awareness amongst that polio vaccination is still necessary. These efforts have **Committee Chair** parents and health professionals that polio vaccination is including engagement of community influencers, such as still necessary to protect children from the disease. traditional leaders, village heads, and women's groups, as well as targeting messages directly to parents. Additionally, work has been undertaken to motivate health workers, including additional training events, award ceremonies to recognize strong performance, and sanctions to mitigate poor performance. So while the strategy has been robust, one important note is that the strategy is focused largely on local government areas (LGAs) designated as priority LGAs by the EOC. Historically, a data-driven and inclusive approach, including modelling data on population immunity, was used to determine priority LGAs. This year, the EOC independently determined priority LGAs, without incorporating population immunity data or partner input. Only ~40% of the priority LGAs put forward by the EOC are located in the 11 states in northern Nigeria that have been designated high risk for polio. So while the communications strategy has been strong, it is unclear that it is reaching the areas where it is needed most. A key focus area of the communications strategy going forward will need to be getting the message that the work of eradicating polio is not yet complete to political leaders, who support across all levels has waned and poses a real risk to the program. For example, the Presidential Task Force on Immunization, chaired by the President with all state governors in attendance, is meant to meet on a quarterly basis but has yet to meet since its revitalization in January. The Abuja Commitment

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			indicators, which track the involvement of state and LGA level officials in supporting polio and routine immunization, were down across the board in Q1 of 2016 as compared to Q4 of 2015. As an example, one indicator shows that only 36% of governors nationally appeared at a public event in support of polio or routine immunization in Q1, as compared to a target of 80%. Additionally, the funds included in the Federal Government of Nigeria's 2016 budget to support the polio program (\$50m) have yet to be released. And timely release of counterpart funds from states to LGAs for polio SIAs and RI is not happening consistently. For example, across the past six campaigns, <1/2 of local government areas (LGAs) received counterpart funds on time in states designated as high risk for polio. Over this same time, <1/3 of LGA chairmen chaired evening review meetings to review and address performance gaps during the polio campaigns.
11	The government of Ukraine should ask the GPEI to assist it by establishing an independent international panel to advise on dealing with its polio situation and also to assist with investigating cases of alleged adverse reactions to polio vaccine, an issue that has damaged past public confidence in vaccination. The panel would also be a credible source of public information untainted by vested interests.	GPEI Strategy Committee	In November, 2015, the GPEI Outbreak Coordinator for Ukraine, confirmed that Ukraine MoH would welcome independent international advice on its cVDPV outbreak and alleged adverse reaction to polio vaccine. Inter-agency team of external experts assessed outbreak response activities in December 2015 and April 2016, respectively. The chairman of RCC EURO (David Salisbury) also attended the debriefing and recommendation session of the first assessment in December. In April 2016, the assessment team concluded that current transmission of cVDPV1 is likely stopped. Team also expressed their concerns and provided recommendations to address

			significant programmatic gaps in immunization and surveillance.
			Also in December, 2015, Ukraine reconstituted its national AEFI commission and conducted its first meeting after nearly 6 years. With ongoing technical support by a senior expert from WHO EURO, the commission has formally met three times as of March 2016 and reviewed cases with suspicion of post OPV association with AEFI. Following each review, public messaging was provided de-linking AEFI cases from polio vaccination.
			Given the focused and comprehensive external advice provided by Ukraine's 3 month and 6 month assessments and the ongoing ERUO technical support to strengthening AEFI, the relevant recommendation made by the IMB has been addressed.
12	The International Health Regulations Emergency Committee should be asked to declare the situation in Ukraine a public health emergency. It is strongly recommended that the rules be changed to allow vaccine-derived polio viruses, to fall within the scope of the regulations.	WHO	On 10 th November 2015 and 12 th February 2016, the IHR emergency committee included Ukraine on the list of polio infected countries in its revised recommendations. The Ukraine MoH presented its report to the committee in November. The IHR EC included cVDPV in scope for committee review going forward.
			The recent February assessment of the EC is that the current situation continues to constitute a Public Health Emergency of International Concern (PHEIC), both for countries affected by wild poliovirus and countries affected by circulating vaccine-derived polioviruses (cVDPVs).

REFUC	GEE AND MIGRANT COMMUNITIES		
13	The GPEI, working through the WHO EMRO and EURO offices, should conduct a more detailed risk assessment around polio immunity in migrant and refugee communities from conflict in the Middle East – including those not housed within formal structures. Further supplementary immunization activities should be considered in Jordan, Lebanon, and Turkey and on migratory routes into Europe, depending on their findings.	WHO Regional Office for the Eastern Mediterranean (EMRO) / WHO Regional Office for Europe (EURO)	A high level meeting of ministers of health of European States was held on 23 rd to 24 th November 2015 to discuss issues related to refugee / migrant health, including Polio. EMRO representatives and countries affected by the migration attended the meeting. Additional targeted campaigns planned in Turkey and Lebanon - 2 rounds each. NIDs discussed for Jordan and agreement reach to hold them in Q1 of 2016.
14	Middle Eastern countries with refugees from Syria should advertise free vaccination for children without the need for official registration or identity checks.	WHO Regional Office for the Eastern Mediterranean (EMRO)	According to UNHCR estimate, there are 3.4 million Syrian refugees in various countries of the Middle East (Jordan, Lebanon, Egypt and Iraq). Turkey also hosts more than 2.5 Syrian refugees. All of these countries are already offering free vaccination to Syrian refugees except for Iraq, where there has been a recent shift in policy and a fee charged for services. This applies to the whole population, and is not specific to refugees. Generally, Syrians participate in routine immunization and campaigns and are also thought to have a good immunity profile and good health seeking behavior when it comes to vaccines.
PROG	RAMME-WIDE POLICY AND ACTION		
15	The GPEI should introduce, as a matter of policy, a "Golden Rule" that in all security compromised areas a single integrated plan (incorporating both programmatic and security elements) should be produced before every vaccine round or other polio-related activity in an area. This would have the purpose of tightly coordinating security arrangements with planned polio technical activity. It would be agreed by all parties and communicated to all teams.	WHO Access and Security	In Pakistan, the year was characterised by a sustained reduction in security incidents involving polio workers and a general reductions in levels of fear especially in areas that were previously seen as insecure. The provision of a secure environment in which vaccination teams and other programme staff could operate was a major feature of NEAP 2015/16.

Careful and coordinated security planning involving security services at district, provincial and national level played a significant role in creating a safe environment for SIAs. On average, over the course of the low season, the security forces protected 199,189 frontline workers per campaign.

In addition, the sustained commitment of security services resulted in the delivery of single-phased campaigns across the country particularly in Quetta Block and in Karachi. Additionally, the introduction of Community Based Vaccinations (CBV) in some Union Councils allowed for the provision of adapted security measures that were less burdensome on security services.

However, security remains a constant concern to the programme and while recognising the massive commitment of the security services to the polio programme, these coordinated efforts must be maintained into 2016/17 if campaign quality is to be maintained and further improved.

It must also be highlighted that there has been increased targeting of the security personnel protecting polio workers, rather than the polio workers themselves. These attacks on security personnel is expected to continue, and hence careful consideration should be given before increasing the number of security personnel.

The proposed "Golden Rule" of integrating security and programmatic elements into one single plan cannot be implemented uniformly in all countries, and has to be modified according to the local political and security context.

In Afghanistan, the programme has to maintain strict "neutrality" in its actions and hence cannot engage closely with LEAs and the Military. This is especially critical to vaccinate children in many districts where the majority of the population do not live in Government controlled areas. However, local Security Risk Assessments (SRAs) can help in establishing the scope of the campaigns, in developing alternate vaccination modalities, and provide information that can be utilised in local and high-level negotiations with all parties. Third-party interlocutors, and other channels within the UN are also used to gain advance information of potential security incidents, and help the polio campaign take appropriate risk mitigation measures.

The level of conflict in Afghanistan is at its highest levels in 2016 compared to any previous year for the past 10 years! These conflicts have greatly affected access in three priority regions: South, Northeast, and East. In the last 6 months, on average, close to 200,000 children have not been accessible in the priority regions.

			A clear understanding of the underlying security context has greatly helped the programme develop alternate approaches to reaching and vaccinating children. This is based on the "Access Approaches" that have been endorsed by the Polio Oversight Board (POB). These include: 1) Strategies to enhance Community Acceptance (i.e., the CBV initiative in high-risk areas of Karachi and Peshawar, Health Camps); 2) Opportunistic Vaccination Campaigns (i.e., Transit point teams, IDPs, Nomads, border posts); 3) Protected Campaigns (i.e., use of LEAs and para military to accompany vaccinators and provide safe zones in high-risk areas of Pakistan); 4) Access negotiations (i.e., highlight the neutrality of the health interventions like polio vaccinations and negotiate with all parties to a conflict to secure access to children for vaccinations). The programme has also used multiple opportunities to join with the global health and humanitarian community to strongly denounce any attacks on health workers or health facilities, and call for all parties to respect International Humanitarian Law.
16	The GPEI should deploy its most skilled leadership to organize the response to outbreaks of vaccine derived polio virus in countries other than the Ukraine (where a special initiative is recommended). Currently, these countries are: Madagascar, Lao PDR, Guinea, and South Sudan.	EOMG Outbreak Preparedness and Response Team (OPRTT).	Ongoing. The Outbreak Preparedness and Response Task Team (OPRTT) reports regularly to the EOMG and SC, highlighting risks, bottlenecks and improvements to the outbreak response mechanism. All the countries mentioned in the recommendation now have an experienced outbreak coordinator. All the outbreak coordinators and communication officers are well trained and experienced health professionals.

Some of the challenges encountered with implementing effective outbreak response based on recent experience included inconsistent government ownership and accountability, delays in deployment of capacity and suboptimal SIA quality.

GPEI held an outbreak response meeting from 23-24 March, giving partners the opportunity to discuss openly the challenges over the past year in outbreak preparedness and response. The meeting provided a chance to address the post switch outbreak response protocols. Any polio outbreak/event will represent a major threat for the initiative and will need to be responded to in an effective and timely fashion. The VDPV

outbreaks and events will follow a new protocol including use of IPV in response. It was critical that all preparations for the pre-switch phase were well-aligned and agencies and partners were well briefed and prepared to carry out

post-switch outbreak response.