Joint Appraisal report 2017 - Pakistan

Country	Pakistan
Full Joint Appraisal or Joint Appraisal update	Full Joint Appraisal
Date and location of Joint Appraisal meeting	July 31st – August 10th
Participants / affiliation[1]	Annex A: List of Participants
Reporting period	July 2016 – June 2017
Fiscal period[2]	July 2016 – June 2017
Comprehensive Multi Year Plan (cMYP) duration	2014-2018

1. SUMMARY OF RENEWAL AND EXTENSION REQUESTS

1.1. New and Underused Vaccines Support (NVS) renewal request(s)

Type of support (routine or campaign)	Vaccine	End year of support	Year of requested support	Target (population to be vaccinated)	Indicative amount to be paid by country	Indicative amount to be paid by Gavi (US$)
Routine	IPV	2018	2018	6,455,317	N/A	
Routine	Rotavirus	2018	2018	6,455,317	*	21,501,500
Routine	PCV	2018	2018	6,455,317	*	48,667,500
Routine	Pentavalent	2018	2018	6,455,317	*	18,290,000

*co-financing portion to be finalized based on the measures foreseen by application of CTA flexibilities

1.2. New and Underused Vaccines Support (NVS) extension request(s)

Type of Support	Vaccine	Starting year	Ending year
NVS	Pentavalent		
NVS	Pneumococcal		
NVS	IPV		
NVS	Rotavirus		

1.3. Health System Strengthening (HSS) renewal request

Total amount of HSS grant	US$ 100 ($84 million grant, $100 million ceiling)
Duration of HSS grant (from…to…)	2016-2019 (effectiveness in Nov. 2016)
Year / period for which the HSS renewal (next tranche) is requested	2018
Amount of HSS renewal request (next tranche)	US$ $41 million ($25 million – next tranche + $16 million remaining up to the full HSS ceiling)

[1] If taking too much space, the list of participants may also be provided as an annex.

[2] If the country reporting period deviates from the fiscal period, please provide a short explanation.

1.4. Cold Chain Equipment Optimisation Platform (CCEOP) renewal request

Similar to the Gavi HSS support, the Cold Chain Equipment Optimisation Platform provides phased support for a maximum duration of five years, which is subject to an annual renewal decision.

Below table summarises key information concerning the amount requested for the next year.

Total amount of CCEOP grant	US$ 50,089,428 (joint investment)	
Duration of CCEOP grant (from…to…)	2017 - 2020	
Year / period for which the CCEOP renewal (next tranche) is requested	2018 (already processed following Board approval of ceilings)	
Amount of Gavi CCEOP renewal request	US$ 10,250,177	
Country joint investment: comes from a multi-donor trust fund where shares of each partner and government is spelled out in the report	**Country resources**	US$
	Partner resources	US$
	Gavi HSS resources[3]	US$

1.5. Indicative interest to introduce new vaccines or request Health System Strengthening support from Gavi in the future[4]

Indicative interest to introduce new vaccines or request HSS support from Gavi	**Programme**	**Expected application year**	**Expected introduction year**
	Measles SIAs*	2017	2018
	MR	2019	2020
	HPV	2019	2020

*****_This application was recommended for resubmission in the June 2017 round of the IRC._

[3] This amount must be included either in an earlier HSS approval or else in the current HSS renewal request in section 1.4 above.

[4] Providing this information does not constitute any obligation for either the country or Gavi, it merely serves for information purposes.

2. CHANGES IN COUNTRY CONTEXT SINCE LAST JOINT APPRAISAL

Pakistan is the 6th most populous country in the world, with an estimated population of 207 million people and an annual birth cohort of 6.95 million children.[5] The infant and under-five mortality rates are 69/1000 and 85.5/1000 respectively. While 72% percent of children receive 3 doses of Pentavalent vaccine per WUENIC[6] estimates, only 54% of children in Pakistan are fully immunised, making it one of the countries with the largest number of under-immunised children.[7] [8] [9]

Administratively, Pakistan is composed of four provinces - Punjab, Sindh, Khyber Pakhtunkhwa (KP) and Balochistan, one autonomous territory/areas of Gilgit Baltistan (GB) and Azad Jammu and Kashmir (AJK), Islamabad capital territory (ICT/CDA), and a group of Federally Administered Tribal Areas (FATA). Health is fully devolved and managed by the provinces, while areas and territories are supported by Federal EPI.

Political context

Two days in advance of the joint monitoring mission, the Prime Minister, Nawaz Sharif was disqualified by the Supreme Court due to allegations of corruption related to the Panama Papers. During the week of the mission, a new Prime Minister, Shahid Khaqan Abbasi, was appointed from the majority party and the cabinet reinstated with some changes. The previous State Minister Saira Afzal Tarar was promoted to the post of Federal Minister of National Health Services Regulation and Coordination. Elections are planned for May 2017.

In 2017, the first nation-wide population census since 1998 occurred in Pakistan. The results were scheduled for release during the week of the mission but faced delays due to the temporary dissolution of the cabinet. Although there are no preliminary numbers, there is expected to be an increase in population and birth cohort. While this may temporarily show a decrease in the percentage of vaccination coverage, it will greatly inform programme planning, improvements in targeting areas of missed children and more accurate dose calculations of vaccines for Routine Immunisation.

Presence of vaccine-preventable diseases

Pakistan is facing outbreaks of Measles in all Provinces and Areas. The last campaign was in 2013-2014 and did not achieve 90% or greater coverage[10]. Further, improvements in MCV1 coverage stagnated in the years following the campaign. Due to epidemiological trends, an outbreak is expected in 2018 and an application was submitted at the Gavi June 2017 Independent Review Committee (IRC) for a nation-wide Measles SIAs campaign in March 2018. The application was recommended for resubmission in September 2017 with further information and clarification requested. The resubmission complicates the purchasing of vaccines and extensive preparation required of a campaign early in 2018 and was the focus of significant discussion during the JA mission.

There were also diphtheria outbreaks in FATA and KP in 2016-2017 in older age children, however, few resources were able to be mobilised for campaigns to contain these outbreaks which were symptomatic of low Pentavalent coverage in previous years.

[5] Estimated figures, Pakistan population survey 2017

[6] WHO/UNICEF Estimates of National Immunization Coverage

[7] Pakistan Health Demographic Survey 2012-2013 http://epi.gov.pk/?page_id=378

[8] WHO http://www.who.int/maternal_child_adolescent/epidemiology/profiles/neonatal_child/pak.pdf

[9] Definition of fully immunised- BCG, measles, and 3 doses each of DPT and polio vaccine (excluding polio vaccine given at birth) [6] Pakistan Demographic Household Survey (PDHS) 2012-13 http://epi.gov.pk/?page_id=378 [7] Punjab Health Roadmap reports and Nielson Surveys. http://www.usefpakistan.org/Alumni/Public/alumniconference/pres/Aneeq_Cheema.pdf

[10] No nationally representative post-campaign survey was conducted for the 2013-2014 measles SIA campaign making it difficult to assess the extent to which the target population was reached.

2017 has been a successful year for the polio programme, with only 5 WPV cases identified.

Country-tailored approach/Flexibilities

Under the previous policy, the Country Tailored Approach, Pakistan requested a number of flexibilities which will expire with their cMYP. The flexibilities currently in place, include;

1. The alignment of timing of Gavi's co-financing requirements with the Pakistani fiscal year
2. Access to the five year program budget of $84 million for its HSS-2 application over 3 years. The funds will be channelled through a World Bank-administered Multi-Donor Trust Fund (MDTF) for Immunisation for 2016-2020.
3. As the Multi-Donor Trust Fund pools resources from both the government and donors, Gavi's funding will be directed towards a larger set of activities funded by the pool and managed under the Trust Fund.
4. Gavi allows flexibility on the utilisation of remaining unspent resources from Measles Supplementary Immunisation Activities (M-SIAs) and Immunisation System Strengthening (ISS) grant, per the findings of the 2015 Joint Appraisal and as agreed by the High-Level Review Panel in October 2015, to cover priority needs of the federal and provincial EPI programs aimed at achieving higher immunisation coverage and equity.[11]

Pakistan does not qualify for the new Fragility policy, whose requirements were approved by the Board in June 2017. However, it is requested for Pakistan to retain the alignment of the co-financing calculations to its fiscal year (Flexibility 1), as provided under the CTA.

3. PERFORMANCE OF THE IMMUNISATION SYSTEM IN THE REPORTING PERIOD

3.1. Coverage and equity of immunisation

Overview of Coverage and Equity Challenges facing Pakistan's EPI programme:

There are substantial social, geographic and economic differences between and within regions and provinces which affect the equitable coverage of immunisation. In Balochistan, the most resource-poor province, only 16% of children are fully immunised, according to the last Demographic Health Survey (DHS) 2012-2013.[6] Punjab, in contrast, has experienced an increase in coverage documented by a Neilson survey from 64% in 2014 to 84% in 2016.[7] In addition to significant differences in population density and geography, the provinces range in their ability and willingness to provide resources for immunisation programmes and in the strength of their existing health infrastructure. Programme oversight and governance remains a big challenge for Pakistan health authorities. Service delivery is unreliable and inconsistent in some parts of the country.

The complex environment for operating the Expanded Programme on Immunisation (EPI) includes reaching to refugees and internally displaced persons, large urban slums and insecure regions of the country.[12] The more than three million refugees (largely from Afghanistan) and internally displaced persons create a challenge for Pakistan's EPI and polio programmes as both populations tend to have reduced interactions with formal government systems and are not easily captured in micro-planning, household mapping or government census used to identify pockets of unimmunised children. UNHCR contributed to the funding of EPI services, including through construction of a vaccine warehouse in

[11] These funds are referred to as "remaining balances" and are reported on the grant progress section of the report.

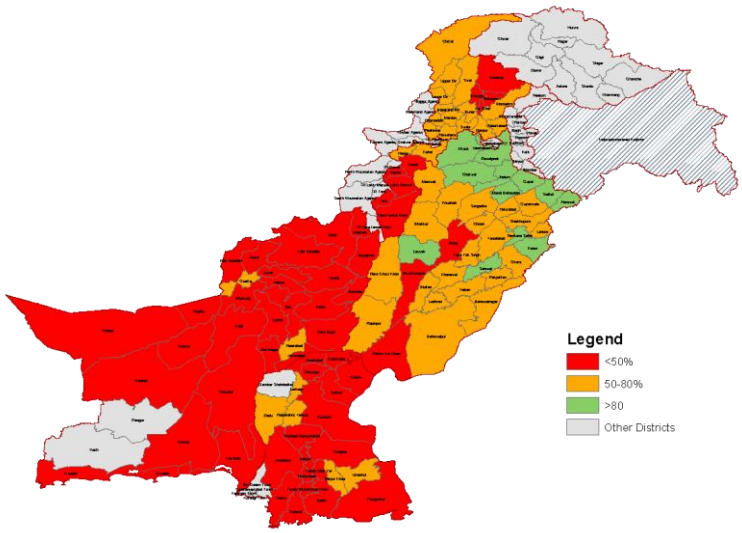
[12] UNHCR http://reporting.unhcr.org/node/2546#_ga=1.237300423.658568454.1487364016

Balochistan and KP province and to support non-governmental organisations offering service delivery in FATA. Country has established immunisation services at transit points, mainly for polio, and there are efforts to introduce a unique identifier for children to track them even when they are on the move (in Punjab).
Through polio and routine collaboration, more zero-dose children are identified through polio SIAs and are linked to routine immunisation services. Reaching missed and zero dose children by routine had contributed significantly to the improved coverage in Punjab.

Urban areas and specifically urban slums are an increasing focus of coverage and equity work as data reveals large numbers of under immunised children living in urban and peri-urban slums. According to the United Nations, 38.3% (70.9 million) of Pakistan's 184 million inhabitants reside in urban areas; of the urban population, 46.6%, or 32 million people, reside in slums, including more than half of infants.[13] [10] The 1998 population census does not accurately reflect the size or location of large numbers of urban poor in Pakistan. Further, government services in cities have not grown with the rate of urbanisation and some urban settlements are unrecognised, reducing availability to basic health services. Unicef, through remaining balances funding is working with CSOs to provide line-listing of urban slums in Karachi and Lahore.

Additionally, security concerns inhibit access to known areas of low-immunisation such as border regions and urban slums. FATA, the location of diphtheria outbreaks in 2015 and 2016 was inaccessible to EPI services at frequent periods during the last decade.

Figure 1: Percentage of children who are fully immunised according to country's EPI programme per district[14]



Progress on the improvement of the equitable coverage of immunisation 2016-2017
Administrative data shows coverage improvements in KP and Sindh and slight decreases in Balochistan and Punjab. However, there is not currently enough data to analyse progress in equity. The planned Coverage Evaluation Study (CES) and upcoming Multi-Indicator Coverage Survey (MICS) and Demographic

[13] Pakistan Bureau of Statistics, Government of Pakistan. Population Census: Population. Gov. Pak. (2016). [10] World Bank. Leveraging Urbanization in Pakistan. Open Knowl. Repos. (2015).
[14] PSLM 2014

Health Survey (DHS) will provide further visibility on immunisation coverage, including more analysis on issues of geographic and social inequities. Tracking of progress is greatly facilitated by the development of sub-national grant performance frameworks for all sub-national entities (Provinces and Areas) which were completed by the respected EPI cells and presented during the monitoring mission.

Table 1: Achievements of Coverage and Equity indicators

Coverage (2016 administrative data)

Indicator	Target	Actual
Penta3 Coverage	77%	87%
PCV3 Coverage	77%	87%
IPV Coverage	50%	73%
MCV1 Coverage	72%	90%
% of districts with Penta3 coverage greater than 80%	35%	64%

Equity – no baseline data available

Indicator	Target	PDHS 2012
Difference in Penta3 coverage between the highest and lowest wealth quintiles	30%	58.1%
Penta3 coverage difference between males and females	3%	4.1%
Penta3 coverage difference between the children of educated and uneducated mothers/care-takers	23%	37.2%

Although difficult to quantify due to data quality issues, all Provinces and Areas are moving forward to address known inequities in coverage and Federal, Provincial and Area managers presented during the monitoring mission the particular challenges and solutions to improve equitable coverage in their provinces and the identification of the lowest performing districts.

Provincial and Area summaries are provided below, including ongoing initiatives to improve equitable coverage of immunisation. Each Province and Area also presented to the mission on their programmatic achievements, challenges and requests for technical assistance from partners.

Punjab through the leadership of the Chief Minister (CM) saw a marked improvement in immunisation from 2014-2016 and the Province contains approximately 50% of Pakistan's population. The successes are linked to the accountability of the project and the innovative use of data in tracking vaccinators. The Punjab Health Roadmap Project, supported by DFID, and its monthly "stock take" exercise where key performance indicators are reviewed by the Chief Minister, technical partners and key stakeholders. This process has fostered a culture of accountability and drove the use of technology in solving key issues. Despite significant improvements, there remain inequities between districts, Penta 3 coverage in Rajanpur, the lowest-coverage district, is only 45%, compared to 4 districts (Nankana Sahib, Gujrat, Sialkot, Sahiwal) with coverage rates of 90% or higher.[15] Coverage rates in urban areas are higher than in rural areas.[16] Mobile and migrant populations also represent a challenge to routine immunisation efforts and the province is reaching those populations through a program to vaccinate at transit points. Tools for

[15] Nielsen (December 2015, December 2014)

[16] PSLM 2013-2014

the management and monitoring of routine immunisation such as e-VACCS, developed by the Punjab Information Technology Board (PITB), are expanding to other parts of the country.

Punjab successfully introduced Rotavirus in six districts in January 2017. It plans to roll-out to the entire province in Q3 2017. Further, the province was certified for the elimination of Maternal and Neonatal Tetanus. They faced a number of challenges to their program – namely challenges in accessing funds from the NISP, the maintenance of their cold chain fleet and the recruitment of qualified HR.

Key Successes 2016-2017	Key Challenges 2016-2017
• Improvement in EPI coverage, confirmed by third party (PHS) survey • MNTe validation • Rotavirus vaccine introduction • DQA at provincial level and all districts • Regular weekly VPD surveillance bulletin • PEI-EPI synergy	• Fund flow under NISP • Uninterrupted and sufficient supply of Vaccines and logistics (Figures may change after census • Arrangement of buffer stock at provincial & district level • Need for new cold chain equipment, ILR etc • Slow hiring of approved PC -1 HR positions • Aging transportation fleet

Recommendation: Punjab has made significant advances in improving the coverage of immunisation services and has implemented numerous innovative approaches to address bottlenecks to program delivery. However, some districts and urban slums continue to have low-coverage despite advances across the program.

- Develop an informed strategy to address areas of inequity (low-performing districts and urban slums).

Sindh is the next largest Province, by population and the location of some of Pakistan's largest slums and urban population. Karachi, the largest city, has an estimated population of 16 million people.[17] Although difficult to quantify, it is estimated that there are more than 400,000 un-immunised children in Karachi. Mapping of urban slums was carried out in Karachi and Hyderabad districts to identify pockets of under immunised children during 2016. During 2017, the Government of Sindh with the technical assistance of Unicef and financial support of Gavi is working with CSOs for the line-listing of urban slums. However, further focus and investment on the urban areas and a wider strategic approach to Karachi is needed.

Sindh has classified 11 Districts as "Hard-to-Reach," requiring additional support. In 2016-2017, Sindh reported the following activities, undertaken to improve the equitable coverage of immunisation;

- Bottleneck analysis on services of routine immunization conducted at town and rural districts of Sindh.
- Completed district EPI profiling to identify services gaps
- Electronic health facility microplans launched in February 2017

[17] World Population Review http://worldpopulationreview.com/world-cities/karachi-population/ [15] PSLM 2015

- ZM digital registry using android phones to be scaled during 2017
- Additional 2,000 vaccinator posts approved
- Quarterly reviews of program performance with DHOs, launching district level monthly EPI meetings
- Implementation of RED Approach in all districts and towns
- Zero dose children were identified and vaccinated through the past three polio SIAs

Despite some progress with new initiatives, more technical and financial support is required to reach missed children. For example, although data on missed children identified during polio campaigns is now available, RI is only reaching between 50 and 70% of children.

Table 2: Number of missed children identified and vaccinated by RI in Sindh [18]

Polio SIA	Number of missed children identified	% vaccinated by RI
NIDs April-17	44,308	59%
SNIDs Feb-17	52,741	67%
NIDs May-17	38,728	61%

EPI Sindh continues to face numerous challenges including the non-rational deployment of vaccinators across Union Councils (UCs) and the need to promote merit-based recruitment within the health and EPI program.

Key Successes 2016-2017	Key Challenges 2016-2017
• Regularization of EPI Review meeting at Provincial & District level • Developed UC wise computerized Microplan • Registration of CBVs areas 143 UCs of Karachi & 8 Districts • Improvement in outreach activities • Data Quality Audit carried out in all Districts & Towns • Developed Coordination Mechanism i-e: PEI/EPI Synergy/Partners • Engaged CSOs & PPAs • Established EPI Acceleration Team	• Funds are not released in time • Lack of Accountability • Data Validity and quality • Lack of supervision • Inadequate Human Resources

[18] Provincial presentation.

Recommendation: While there is progress in programme management and service delivery in the province, Sindh is faced with significant challenges in the management of the program and in the number of children residing in hard-to-reach areas.

- Develop a strategic plan for immunisation in Karachi, including with the political support and involvement of Karachi-stakeholders and engagement with the EOC, private sector and CSOs.
- Address the high turnover of District Health Officers in Sindh which is shown to be a key bottleneck in making sustained improvements in immunisation coverage.

Khyber Pakhtunkhwa has a population of ~26 million and shares a border with FATA and Afghanistan. The province is geographically diverse and hosts an estimated one million Afghani refugees. Measles coverage is lower than Penta-3 in 20/26 districts. There are profound inequities in immunization access and coverage across the districts– Penta-3 coverage in Tor Ghar is only 11%, while there are five districts with Penta-3 coverage above 90%. KP receives support from DFID and JICA for its health and immunization programme.

KP greatly improved the management of the EPI program in 2016-2017 through the establishment of the EVM Secretariat, execution of regular EPI reviews and the opening of 51 new EPI centers. They worked to address equity issues by completing equity profiling of the entire province and the addition of gender information into their R&R tools and EPI MIS.

Key Successes 2016-2017	Key Challenges 2016-2017
• Data quality assessment & IP developed • Integrated Disease Surveillance and Response (IDSRS) • Quarterly program reviews • Monthly EPI review at district level • 51 new EPI centers established • EVM secretariat established • EPI warehouse ground-breaking	• Deficient program management structure in relation to core function • Delay in financial flow Weak accountability at district level • Access issues in some areas (Kohistan, Chitral, Torghar)

Recommendation: KP has made key advances in the last year, including in the development of microplans across the Province and the engagement of Lady Health Workers in Immunisation.

- Assure linkage of vLMIS with KP MIS system to ensure visibility on vaccine stock – nationwide as recommended by the recent vaccine audit.

Balochistan, the geographically largest of the four provinces, constitutes 43.6 percent of the total area of Pakistan with only 6 percent of country's population. Due to highly scattered population and rough terrain, many areas are difficult to reach. Due to the dispersed population, the cost to reach each child is higher than in other provinces. The urban population has a better coverage than the rural population (70% urban/45% rural).[19] In addition to displaced populations, there are nomadic households which are a

[19] PSLM 2014-2015

challenge for the program to immunise. Historically, the Province has less access to financing than other provinces despite the higher cost of service delivery and there has been less engagement of donors and partners in support of Balochistan EPI program. However, in the 2016-2017 program year, support from Alliance partners, increased. WHO added a PEF funded staff and Unicef (through its own resources) added several RED/REC consultants. A significant portion of Gavi remaining balances was reprogrammed for activities to support Balochistan including engagement with Acasus (a consulting firm), through Unicef, to undertake the bottleneck analysis for Balochistan and the procurement of vehicles and motorcycles for immunisation activities through WHO. The bottleneck analysis and managerial support, while still ongoing, has identified bottlenecks to immunisation (including irrational vaccinator distribution and lack of oversight, issues with allocation of fuel allowance and operational expenses, etc.)

The hard to reach population in Balochistan are located in rural areas (30%) and security compromised areas (5%). The Province is actively recruiting Community Health Volunteers (CHVs) and Lady Health Workers (LHWs) in uncovered areas and added more transportation to improve outreach services.

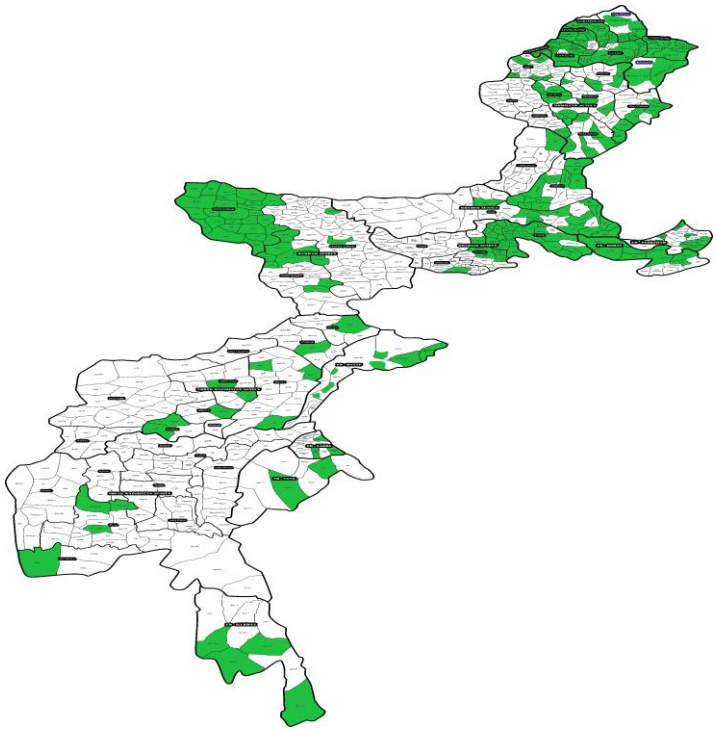
Key Successes 2016-2017	Key Challenges 2016-2017
• Increase in government funding, ownership and partners support • Improving EPI reporting and monitoring system by implementation of data quality improvement plan, regular provincial and district program reviews and feedback • Improved service delivery structure by increasing human resource, outreach teams and cold chain infrastructure • Capacity building of EPI managers and workers on different components of EPI program • Piloting online tracking system (e-VACCS) for vaccinators	• Disproportionate EPI outlets and human resource in relation to highly scattered population, on average; i. one EPI site for about 780 sq km area ii. one vaccinator for about 360 sq km area • Delay in fund releases for operations • Less demand in community for immunization services • Weak management structure and capacity • Sub-optimal monitoring and reporting system

Recommendation: The political commitment demonstrated in the past year by the Balochistan government is exemplary as showcased by prioritizing Routine immunization and increased allocation of resources to EPI.

- Sustain commitment to advancing the EPI program through the establishment of the Monitoring Unit to enable the programme to track pace of implementation and mid-course correction for positive immunization outcomes.
- Convene partners and key stakeholders to review the distribution of vaccinators per geographic area to fine-tune the fixed-site vs. outreach vs. mobile model to more efficiently cover the Province and assure every child has access to vaccines.

The multiple Areas; Gilgit Baltistan (GB), Azad Jammu and Kashmir (AJK), the Islamabad Capital Territory (ICT/CDA), and the Federally Administered Tribal Areas (FATA) are managed by Federal Expanded Program on Immunisation and face significant challenges to equitable coverage. See below information related to the equitable coverage of immunisation for the areas as reported during the Joint Appraisal mission:

FATA: In 2016 and early 2017, FATA reported outbreaks of pertussis, measles and diphtheria due to previous years of inaccessibility in insecure regions and insufficient coverage of service delivery. FATA reported both a significant deficiency in the number of EPI sites and EPI vaccinators (as shown in figure 2.) Of the 599 mission vaccinator positions, 100 are currently under recruitment. More than 648 health facilities are without EPI centers. The program made advances in 2016 and 2017, particularly in their



improvements in management through the development of a Plan of Action for 2017-2018 and improvements in cold chain.

Figure 2: Areas of EPI coverage in FATA

Key Successes 2016-2017	Key Challenges 2016-2017
• Zero Polio Case from the last 12 months • Expansion of EPI Centers from 230 to 302 • FATA Cold Room operationalized • EVM Secretariat established • Centralized Temperature monitoring device installed at Provincial Cold Room • Effective Vaccine Management Improvement Plan (EVM IP) activities are in progress • Plan of Action (PoA) of EPI for 2017-18 developed	• RED/REC strategy training for strengthening RI has been rolled out.(Khyber Agency) • Activity plan for expenditure of GAVI unspent money developed & activities are in progress • PEI-EPI synergy initiative. • Regular EPI review mechanism has been started. • LHWs' training in RI has been initiated. • MLM training is in progress.

GB: The GB EPI program has further focused efforts on improving access to services in hard to reach areas and urban slums. They engaged with Agha Khan Health Services Mosque, schools and Jumat Khana to improve urban immunisation. Due to challenging terrain, more than 70% of vaccination is offered at

mobile and outreach sessions and this was strengthened in 2016-2017. PEI-EPI synergy also progressed with 3,012 of 4,281 missed children identified by EOC, vaccinated by RI. Although quarterly stock of all vaccines are kept in the Area, a severe shortage of BCG was reported.

EVM improvements include the addition of two warehouses, three refrigerated vans and the provision of a sufficient maintenance budget for cold chain equipment.

Key Successes 2016-2017	Key Challenges 2016-2017
• Trained EPI staff on RI. • Recruitment of Vaccinators. • Training of Lady Health Workers (LHW) on Routine Immunization. • Outreach Measles Mop Up Campaigns. • Successful implementation of Annual EPI review & development of Plan of Action • Arranged monthly meeting at District level • Nomination/Notification of District Surveillance Coordinators • Trainings of DSCs on Surveillance & AEFI • Monitors EPI Field activities at district & UC levels • Costed EVM Improvement Plan developed	• Geographically tough terrain • Hostile Environment condition • Sparsely populated areas • Seasonal Migration • Interrupted supply of electricity • Disparity in the number of Fixed Vaccination Sites • Fragmented Cold Chain System • Lack of appropriated Human Resource • Logistics Support to District & Provincial Level • Lack of Supervision

AJK: AJK's EPI program showed significant progress in the management and execution of activities, particularly the development of microplans, the presence of DHOs at monthly EPI review meetings and the improvement of PEI/EPI synergy. Although most Areas reported challenges in accessing funds, AJK successfully opened the assignment account needed to receive funds via the Federal PC-1. They reported a high demand for immunisation. There are further opportunities to expand service delivery with only 358 public health facilities of 729 with EPI services.

Key Successes 2016-2017	Key Challenges 2016-2017
• Regularization of EPI Review meeting at Provincial & District level • Developed UC wise computerized Microplan • Improved the Service Delivery-Outreach Activity • Data Quality Audit carried out in all Districts • Developed Coordination Mechanism i-e: PEI/EPI Synergy/Partners • EVM Secretariat established & Cold Chain Equipment Inventory • Established EPI Acceleration Team • Costed EVM Improvement Plan • Ware House Construction at Provincial level	• Funds are not released in time • Inadequate number and capacity of HR • Lack of Accountability • Data validity and quality • Lack of Supervision • Replacement of CCE

Recommendation: **Federating areas and regions presented individually at the JSAEM, showed progress in the management of the programs and increases in coverage. Partners and key stakeholders to convene a specific monitoring mission in 2017-2018 for Areas to identify concrete technical assistance needs and further develop Area-specific assistance from Federal EPI and other partners.**

3.2. Key drivers of low coverage/ equity

Leadership, Management and Coordination

The successful engagement of provincial leadership in immunisation occurred in Punjab and KP via the Health Road Map initiatives, with support from DFID was replicated by Acasus in Balochistan. Key issues relating to financial flows, rationalisation and capacity of human resources are identified and presented to Provincial leadership and the addition of key monitoring tools such as e-VACCS deployed to monitor progress on recommendations. Sindh and Balochistan are proposed for further technical assistance support in the area of LMC for 2017-2018. Provincial leadership increased its engagement with EPI programs in 2016-2017, with the exception of Sindh province. In Balochistan, the Chief Minister and Minister of Health have attended several meetings and committed to the allocation and approval of 300 additional vaccinators. KP, through the Assembly Act, regularised key resources for EPI, including human resources.

Capacity of Federal EPI

Federal EPI is tasked with the coordination of the donor community in EPI, supports the ICC and Provincial EPI cells in their work and manages immunisation services in the Areas. Further, with the success of the pooled procurement mechanism, they are now coordinating a complicated procurement and financial flow mechanisms (MDTF). The capacities and staffing of the EPI cell are not adequate to fulfil the technical needs required of the entity and further support is required. In addition to a scheduled HR review, support to implement the recommendations of the Functional Review executed by Acasus in 2016 will be provided. Key staff posts remain on UNOPS contracts from a source of funding which ends December 2017. Further, there is no central repository of information to promote information sharing, create a historical record or service as an information reference for the EPI programs.

Recommendation: Development of a central repository for technical information on Pakistan's EPI program to facilitate communication and coordination between Federal and Provincial offices;

- A repository for ICC related information is already under development for 2018.

This repository may also serve to:

- Capture lessons learned from program implementation
- Access to E-learning modules
- Archive EVM committee documents and minutes
- Keep track of achievement against Indicators used in the current monitoring and evaluation system

Recommendation: Develop the capacity of Federal and Provincial EPI programs and district EPI teams in monitoring and supervision, through enabling the program's access to PC-I financial resources and recruitment of human resources

National EPI Policy

As part of the reporting for the Joint Appraisal, clarifications on the implementation of various policies on EPI were provided by provinces such as the application of policies for; vaccinating missed children over 1 years of age, use of open vial and wastage protocols and the availability of vaccines on all weekdays. The need to review and strengthen the National EPI policy was identified and prioritised as a technical assistance need for 2017-2018. Further research into certain policies was also requested under the ongoing implementation research initiative.

Recommendation: Given the evolving immunisation needs, it is critical to review and revise the National EPI Policy and country strategic plan (cMYP), with particular focus on:

- Reaching hard to reach children, urban immunization and recent developments in supply and cold chain;
- This should be done in a systematic way, informed by census and immunisation coverage survey data, updating EPI policy and strategic plan; and
- Explore the possibility of reviewing PC-1s based on the identified issues and gaps.

Recommendation: Develop and disseminate EPI Standard Operating Procedures and make simplified version of policies available to all relevant stakeholders and partners, including CSOs.

Public Financial Management:

Issues of fund flow from PC-1s: Provinces discussed the challenges they had to withdraw funding against their PC-1s which were approved in 2016. The World Bank has offered further technical assistance to Provincial and Federal EPI Managers to assist in an improved understanding of the PC-1 process.

Transparency of budget for EPI: The World Bank, with funding from PEF executed a financial review of immunisation spending and defined bank codes specific to immunisation expenditure in the public financial system. A release of these reports was held during an event on the Joint Appraisal mission.

Sustainability of financing for EPI: A key strategy for the sustainability of the EPI program is the regularisation of EPI-related costs. This assures that funding for immunisation moves from a project-based source (PC-1s) to a permanent budget.

Immunisation Supply Chain:

Pakistan is undergoing a significant change in all aspects of its immunisation supply chain and with the support of a variety of partners. The alignment of these initiatives as well as further capacity building to effectively use a wide variety of new tools and equipment was identified as a need from JA discussions.

Vaccine Audit:

A vaccine audit was conducted in September of 2016, following reforms from the fire and wastage of pentavalent vaccine in 2015. An initial briefing on audit findings was provided by the company to the government and is pending finalisation. The audit;

- Identified no additional incidents of significant shelf-expired or damaged vaccines following February 2015. The holding and movements of the stocks were recorded and tracked by the stock records and the vast majority of vaccines were accounted for.
- Recognized MoNHSR&C's efforts to strengthen the cold chain supply for stores at the federal EPI and select provinces, including improvements in the vaccine storage, handling and recording practices particularly the Federal vaccine store and some of the provincial stores.
- Identified areas of improvement including: inventory management, record keeping; periodic stock counts and stock reconciliation; the use of standardized forms; and the physical storage environment.
- Recommended the full expansion of the web-based Vaccine Logistic Management System (vLMIS) in all provinces and their respective districts.

Temperature monitoring study

A temperature monitoring study is currently in the final stages of finalisation. It outlines key issues – specifically the need to further study the status of cold chain transport across the country and the improvement in Standard Operating Procedures (SOPs) for the transport of vaccines. The recommendations of the audit are outlined for support in the 2017-2018 technical assistance priorities.

Cold Chain Equipment Optimisation Platform

CCE OP support was approved for Pakistan in 2017 and will provide additional equipment (including remote temperature monitoring) with service contracts and the streamlining of the number of equipment in country from >50 to less than 20. At the time of the Joint Appraisal, the following next steps were outlined;

- End-August: UNICEF SD plans to issue Pakistan's CCEOP service tender
- Early November: CCEOP Costed Operational Plan (COP) is shared with Pakistan and Gavi for Year 1 ~7,000 unit procurement
- End 2017: country joint investment including the World Bank share and Gavi joint investment to be disbursed
- 2018: CCE enters country in phases

Supply Chain System Redesign

Unicef, with partners and funded by Gavi, is leading a series of workshops and is gathering data to redesign Pakistan's vaccine supply system. The first introductory workshop was held in October 2016 with representatives of stock managers from all Provinces. The immediate next step is nationwide data collection on the vaccine distribution network. This will complete a nation-wide model of the current supply chain vaccine delivery system and highlight alternative models of vaccine delivery systems. Although the focus of the redesign is to reduce costs and improve efficiency, the key is to ensure that vaccine and cold chain are also reaching previously neglected areas of the country. The next workshop to further define the potential models is scheduled for August 2017. The United Postal Service, through Gavi private sector engagement is also involved to provide further expertise and costing models.

Scale-up of vLMIS

The vLMIS scale-up across the country to every district continues to be delayed by the contracting process underway at WHO. It is currently in use in ~83 districts. The system will provide visibility of the stock in real-time and was a key recommendation from the vaccine audit. However, numerous reviews of the system have recommended some changes in the permissioning ability (to assure integrity of the system) which should be addressed before the scale-up which is scheduled for the end of 2017.

Strategic Training Executive Programme

The Strategic Training Executive Programme (STEP), is planned for 20 participants in Federal and Provincial EPI to build capacity in the area of supply chain/cold chain management and executive leadership skills.

Recommendation: Ensure alignment of various immunization supply chain components (vLMIS, Vaccine Management Committees and Vaccine Management Secretariats, system redesign, asset management, temperature monitoring systems, immunisation supply-chain related trainings, assessment, cold chain equipment deployment and maintenance, etc.)

Recommendation: Provinces to reflect their vaccine needs in the forecast that is jointly developed with the Federal EPI annually. Vaccines to be provided to provinces based on the forecast, with close monitoring of utilisation, in particular for IPV.

Health Work Force:

The rationalisation and capacity of human resources in immunisation in Pakistan has been cited as an issue on previous missions and identified during the Health Roadmap projects in KP and Punjab and in the

Bottleneck analysis recently performed in Balochistan as an area requiring further focus and investment. A part of the JA process, Provinces reported on the number and use of vaccinators and on their required training requirements. Across the country, more health technicians (vaccinators) are being recruited with funding from PC-1s.

Table 3: Status of Training and Recruitment of Immunisation staff by Provincial program

Province	Policy on vaccinator coverage	Involvement in polio	Training requirements	Total number of vaccinator positions	Total number of vaccinators
Punjab	1/union council (25-30k urban, 15-20k rural, 121.5-15.000 hard to reach)	10% of time	Ten year of school + 4 year training at EPI and certification examination by Punjab Health Faculty	6,021 (2,357 reflected in PC-1s)	3,915
Sindh	At least 2 vaccinators per UC. LHWs are other health staff in vaccination supported by non-gov programs	More than 50% of vaccinators are still engaged in Polio	Three month course (15 days classroom, 45 days practical)	2460	2290
KP	At least 2 vaccinators per UC	12 days/month in tier 1 districts (40%)	Matric + 2 year diploma (for technicians) Matric + one the job training (for vaccinators)	3,176	2,731
Balochistan	1/5000 population or 1/28 sq kil	Regularly (no specificity provided)	No training policy – upon requirement they are training at any health facility by senior vaccinators	1850 (per policy of population),	1380
				12,393 (per policy of geographic area)	1,350
				1350 currently sanctioned posts	938

Currently, there are more than 13,500 funded vaccinator posts of which more than 3,000 are vacant.

Across all Provinces, there are a large number of Lady Health Workers (LHWs) involved in immunisation. There is a range in their involvement from performing social mobilisation activities to immunising children. With support from remaining balances of HSS funding, WHO organizing trainings and workshops across the country. Through this initiative more than 10,000 LHWs and 400 Lady Health Supervisors (LHSs) were trained in immunisation, however, a large percentage of LHWs are still not engaged in immunisation. See here a summary of the status of LHW involvement in immunisation across Provinces;

Table 4: Involvement of LHWs in immunisation by Provincial program

Province	No. of LHWs	No. of LHWs trained in immunisation	No. of LHWs involved in Immunsation	No. of LHWs vaccinating	Other comments
Punjab	47,464	20,600			
Sindh	22,565	10,177	10,177	10,177	Role includes surveillance. The vaccinate at fixed and outreach programs
KP	15,050	10,317	7,981	7,981	LHW EPI data shared in monthly report. 20% of total vaccination provided by LHWs.
Balochistan	6,383	2,574 (all are currently under training in 2017)			

A number of issues regarding the involvement of LHWs were discussed in JA discussions including;

- LHWs are part of an integrated health package focused on mother and child health and they do not report into EPI
- Some vaccinators are hesitant to involve LHWs
- Some communities are not accepting of LHWs
- Unavailability of supplies for LHWs to vaccinate

However, it was discussed how LHWs are critical in areas of the country where women are not permitted to leave the house alone (requiring house to house outreach) and improving the coverage of staff able to vaccinate.

Research on the use, acceptability and model of Lady Health Workers in immunisation was proposed for the upcoming year as part of a wider review of human resources at Provincial level. An assessment of LHW involvement is in draft form from the WHO.

Recommendation: To convene stakeholders on Human Resources reform in 2018 following a Human Resources Review currently scheduled for 2017-2018. The review and potential reform should address the following issues;

- Clarity on use of vaccinators vs. health technicians;
- The ability of the EPI salary scale to retain key capacities;
- Involvement of Lady Health Workers in immunisation;
- The qualifications of vaccinators and merit-based recruitment;
- Ensuring rational workforce distribution;
- The provision of appropriate learning and training opportunities based on performance; and
- The ability of programs to quickly address non-performance (length of contract etc.)

Urban Slums

Unicef, through PEF and remaining balances provides technical assistance to the development and implementation of a model for identification, line listing and targeting of poorly performing urban slums with immunization services including partnership with private sector. They completes profiling and mapping of urban slums in 7 main cities of all four provinces (Rawalpindi, Lahore, Multan in Punjab, Karachi, Hyderabad in Sindh, Peshawar in Khyber Pakhtunkhwa and Quetta in Baluchistan).

A concept note on immunization service delivery in urban slums has been developed in consultation with the relevant stakeholders and presented in consultative meetings in Geneva. The concept note will be updated with data from urban slums' profiling in Karachi and Hyderabad. The tool for profiling of urban and peri-urban slums in major cities of Pakistan was developed and used in the profiling in Sindh.

In Sindh, the urban slums mapping was recently completed for 986 urban slums in Karachi and 331 urban slums in Hyderabad city in partnership with a civil society organization. The data from Karachi and Hyderabad is currently under review for quality assurance and engaging with stakeholders for their ownership in the process. The profiling exercise will also began in Rawalpindi, Lahore, Multan, Peshawar and Quetta in July 2017.

Initial findings from Sindh show that only 125 (13%) of the urban slums in Karachi have a vaccinator available within the area. There are 406 urban slums (41%) without an EPI center and another 455 (46%) without any other type of health facility. Private health facilities are providing services in 396 urban slums (40%); however, most do not provide any immunization services. Through the profiling in Karachi and Hyderabad, a list of 1317 urban slums at district, town and Union Council (UC) level has been developed after physical verification and the geographical maps of UCs with urban slums have also been prepared. A database with profile of 1317 urban slums has also been developed.

Demand for immunisation

Pakistan developed a communications plan for Routine Immunisation and these plans were adapted to Provincial contexts. Through the support of Unicef and positions located at Provincial level, the communications and social mobilisation for immunisation improved. There remain a number of challenges to improving demand for immunisation in Pakistan; 1) the lack of trust in the health system (availability and quality of interaction) 2) the polio campaigns which raise the expectation of house-to-house campaigns and 3) the lack of services in some areas of the country. The issues which negatively affect demand need further analysis and actions developed to improve the availability and reliability of services.

Recommendation: Adequate resources are allocated to demand in the PC1. Implement evidence-informed interventions that increase demand, including better interaction between the health care workers and caregiver, address misconceptions and improve quality and reliability of

Implementation research

UNICEF, GAVI and WHO - Alliance for Health Policy and Systems Research (AHPRSR) are working in collaboration with the Health Services Academy (HSA) to undertake quality implementation research to explore immunization service delivery and demand generation bottlenecks in Pakistan with the first introductory workshop held in Islamabad in January 2017. UNICEF recruited a high level consultant to support the Health Services Academy in the process and ensure quality. A call for proposals was issued in March through an online portal and 31 proposals were received. 10 proposals were short-listed for the project by an international review committee (Please see the short-listed proposals in Annex X).. The research agenda, protocols and budget have been finalized by the 10 research grantees in line with EPI requirements on the ground and approved by the review committee. The data collection tools for the research are currently being pre-tested for finalization. The first tranche of funds were transferred to the grantees in June 2017 for implementation. The research teams have also been connected with the relevant federal and provincial EPI managers to ensure ownership in the process. The research partners will submit their final project reports by November 2017.

3.3. Data

In-depth Data Quality Assessment (DQA)

A Data Quality Assessment (DQA) was conducted in 2016 in Punjab, Sindh, KP, Balochistan, AJK, and GB. Findings show an over reporting of children having received the 1st dose of measles and 3rd dose of pentavalent and pneumococcal vaccines. This is partially owing to the lack of updated vaccination cards, ineffective training of vaccinators, and in some areas, infrequent supportive supervision. In terms of training, the current model is a cascading training of trainers. Whilst this approach is cost-effective, ensuring quality at the lowest level is a challenge. A DQA is planned for the second half of 2017 for FATA, CDA and ICT. Ensuing data improvement plans will be developed.

Preliminary findings from the MICS survey conducted in GB (2016-2017) show 25 point difference between administrative and survey estimates which corroborates findings from the DQA.

Annual Desk Review

A desk review was conducted in 2016 as part of the DQA which was partially updated in preparation for this Joint Appraisal.

Data Quality Improvement Plan and Progress to Date

Provinces, AJK and GB have successfully implemented approximately 60%-70% of planned activities in the data improvement plan. WHO has recommended that a DQA be conducted in 2018-2019 to assess improvements in the quality of routine data.

Management Information Systems for EPI data

Although management information systems are showing improvements, the lack of standardisation of content (i.e. indicators, indicator definitions and data sources) across provinces will result in difficulty to analyse data at a national level. For example, KP has launched its Health Management Information System (MIS), in Jan 2017, which captures coverage, vaccine stock levels, disease trends, etc. However, the definition used for tracking the fully immunised child (as estimated by having received first dose of measles vaccines in the MIS) differs from what is being used in coverage surveys (i.e. receiving all doses of BCG, polio, penta and measles vaccines). Interoperability between various tools has also been flagged as a potential issue.

Surveys

The Coverage Evaluation Survey (CES), after a number of administrative delays, will be implemented in Nov and Dec 2017. A total of 152 districts will be surveyed; both coverage and equity metrics will be measured. Recommendations from the revised WHO methodology, including facility revisits, will be piloted.

The Government of Pakistan plans to implement a national MICS survey in 2017-2018, principally to monitor progress against SDGs. Simultaneously, a Demographic Health Survey (DHS) is also planned for the 2017-2018 period. Discussions with relevant Government constituencies (i.e. Pakistan Bureau of Statistics and National Institute of Population Studies) have clarified the diverging objectives of both surveys (and therefore resulting sampling strategy). Consequently, streamlining both studies may be a challenge. Nonetheless, this has been flagged as a recommendation. A census survey was conducted in early 2017. Key findings are expected to be disseminated before the end of the year.

Recommendation: The mission was encouraged with the better and more systematic use of data for decision making and accountability. In addition to the importance of more traditional uses of data (such as EPI reviews), innovations applied by Punjab to address coverage and equity through the work of PITB are outstanding.

- The current M&E system uses a number of tools and information systems, some of which have evolved organically. There is a need to rationalise these systems and clarify governance related implications.
- Linking surveillance to coverage data as well as other data systems (such as supply chain) to add to the accuracy of conclusions
- A number of health surveys are planned for the 2018-2019 period. These multiple surveys can be streamlined with further country leadership and donor coordination, taking into account the respective information and quality needs of different programs, under the leadership of MoNHSRC and in coordination with provincial authorities.

3.4. Role and engagement of different stakeholders in the immunisation system

National Immunisation Coordination Committee

The ICC met more than 5 times in 2016-2017, including for the review and approval of two key applications (CCE OP and Measles SIAs). Further, a Secretariat to support the ICC was established within Federal EPI. Gavi, through the Leadership, Management and Coordination mechanism is supporting the strengthening of the ICC and the Secretariat in 2017-2018. The review of the DLI progress by Provinces and the recommendations from the ICC to the Multi-Donor Trust Fund steering committee is a crucial role played by the ICC in the NISP.

PEI and RI synergy

he use of missed children data provided by the EOCs was reported by most Provinces – although with varying success. Punjab is an example of how the two programs, managed by one person, can efficiently promote synergies. However, the remaining provinces still operate as independent vertical entities, with Polio having significantly more political and financial support.

Recommendation: Pakistan is fighting its final battle against Polio and is under huge pressure to interrupt virus circulation. Polio eradication activities should continue at their maximum strength.

Consider bringing EOC and EPI together at the Provincial level (in Sindh, KP, Balochistan) and maximise synergy between the two programmes by strict implementation of the decisions of PM's Task Force on polio and NEAP 2017-18 RI indicators monitoring and IPV and ensure all updated polio micro plans are utilised by EPI and zero-dose children identified during polio campaigns are reached and enrolled in routine system.

The engagement of Civil Society Organisation in the strengthening of Routine Immunisation

Gavi, as part of the global support for the engagement of civil society organisations, has funded the development and current operation of a civil society platform in Pakistan – the Pakistan CSOs Coalistion for Health and Immunisation.[20] The leadership of the platform attends ICC meetings, regular monitoring missions and has a representative on the Multi-Donor Trust Fund steering committee. The platform continues to grow both in the number of CSOs which apply for membership but also in its governance capacity (regular elections) and the way they leverage their network to improve Immunisation coverage. During the mission, PCCHI reported that through training and use of their network, more than 3 million people were targeted with immunisation-specific social mobilisation with existing funding. Of the 81 member organisations, 48 were trained on equity in immunisation in 2016-2017.

Unicef has engaged numerous CSOs in the mapping and line listing of urban slums in Karachi, Hyderabad and Lahore, however, neither the Federal nor Provincial EPI cells have moved forward to contract CSOs directly. A key technical assistance need, identified during the mission, is to further build the capacity of contracting, monitoring and supervision of EPI management to develop contracts with CSOs. The engagement of CSOs is also part of the performance framework and no progress was reported.

Recommendation: Build the capacity of Federal and Provincial EPI to identify preferred contractual modality for effective outsourcing immunisation-related activities from PC-1 resources to Civil Society Organizations and private sector, in order to address equitable immunisation coverage in hard to reach areas including urban slums.

Private sector and Routine Immunisation Information was requested in advance of the monitoring mission regarding the subcontracting of immunisation services by the government to non-government

[20] http://www.csocoalitionforhealthinpakistan.com/

and private entities. Each province reported on the status of private and CSO sector involvement in immunisation;

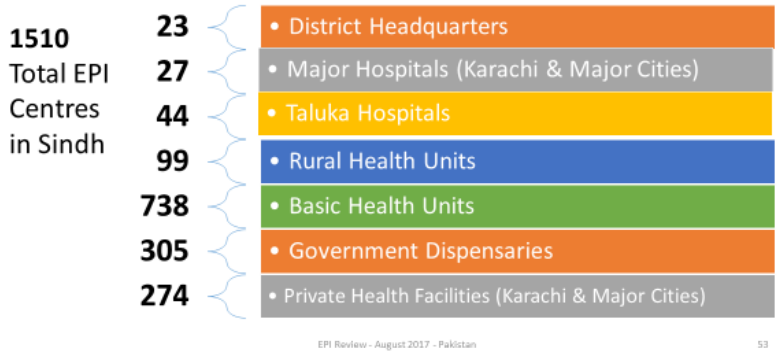
Punjab: Similar to other Provinces, Punjab did not report a strong engagement with non-government entities to offer immunisation services. Excluding private health facilities, there are functional EPI centres at 92% of health facilities in Punjab.

Table 5: Type and number of health facilities with Functional EPI Centre in Punjab

Health Facility	Number of facilities	Functional EPI Centre
Teaching Hospital	37	37
Military Hospitals	26	26
Other Hospitals	54	54
DHQ Hospital	31	31
THQ Hospital	108	108
Civil Dispensary	753	453
RHC	309	309
BHU	2492	2492
Total Public health Facilities	3810	3510
Private Health facilities EPI Centres	NA	21

Sindh: The EPI program in Sindh has contracted a number of non-government entities for the delivery of immunisation specifically, PPHI, IRD, HELP and Frontiers in Public Health. Additionally, more than 225 private facilities have formal agreements in Karachi and Hyderabad. In order to gain further understanding of the location of EPI services in Sindh, the program presented a breakdown of facilities offering EPI services

Figure 3: Number of fixed sites offering vaccination, Sindh [21]



In Sindh, immunisation services in two districts have been subcontracted to the President's Primary Healthcare Initiative (PPHI).[22] It is expected that the contract will expand to include a total of 8 districts. Numerous concerns were raised regarding the oversight and monitoring of this contract. In order to review and assess concerns related to this model, the mission travelled to a number of clinics which are subcontracted to Rural support programme and met with PPHI in Sindh during the second week of the mission.

KP: KP reported a number of non-government contracts available to expand EPI services. There are 65 private centres providing services and 2 CSOs (PRIME foundation in health camp and PCCHI, to perform a micro census in urban slums of Peshawar. UNHCR is also involved in supporting the KP EPI program through the development of a warehouse.

Balochistan: Balochistan, like the other Provinces have not directly contracted any Civil Society Organisations. Doctors Without Borders is reported to work with the government in 3 Districts and PPHU has contracted some private vaccinators. There are 22 private facilities providing immunisation but there is no formal agreement available with the government.

Recommendation: Recognise and determine a strategy to mitigate the missed opportunities for vaccination caused by the verticality of the immunisation program and promote the access of EPI services within wider health system including MNCH, LHWs, hospitals, private facilities and non-government operated programs. This approach is particularly relevant in the expansion of EPI sites and may be a cost-effective approach in urban areas.

Engagement of other sectors (education, etc.) in the improvement of RI

As part of NISP design, departments of Finance and Planning are fully involved in HSS implementation and support. Punjab IT Board (information technology department) has been very much involved in helping improve data and accountability for immunisation. The eVACCS system, developed by PITB is now rolled out in KP and Balochistan with Punjab government's support.

[21] Provincial Presentation, JSAEM 2017

[22] http://pphisindh.org/pphiweb/index.php/what-is-the-pphi/

4. PERFORMANCE OF GAVI GRANTS IN THE REPORTING PERIOD

4.1. Programmatic performance

Pakistan is the largest recipient of Gavi support with over US$1 billion approved since 2002 when the Hepatitis B vaccine was introduced. The pentavalent and PCV 10 vaccines were introduced in 2008 and 2012 and Inactivated Polio Vaccine (IPV) was introduced in 2015, starting from Punjab province and nationally completing roll-out in January 2016 in FATA. Most recently, Punjab introduced Rotavirus vaccine in January 2017 in a phased introduction beginning with six districts. The national roll-out will continue from mid- to-late- 2017 in the remaining provinces permitting the availability of supply. Pakistan applied for the Cold Chain Equipment Optimization Platform (CCE OP) Support in 2016 to replace aging equipment and add new sites, temperature monitoring capability and storage capacity to the EPI program. Their application was approved.

Achievement against GPF targets:

The Grant Performance Framework (GPF) was introduced in July 2016 and subnational GPFs were developed for all four provinces and five federating areas. In order to streamline reporting and reduce transaction costs for country partners, the GPF is used by both Gavi and the World Bank for monitoring and reporting purposes on the National Immunisation Support Project. The GPF tracks a total of 38 indicators which cover both NVS and HSS investments. Of these, nine are disbursement-linked indicators, the targets of which are tailored to each Province and Federating Area. Data sources utilised are primarily those tracked routinely by the programme but also third-party run exercises, including the upcoming district-powered CES.

Figure 4. GPF Indicator Target versus Achievement for Provinces and Federating Areas in Pakistan for 2016

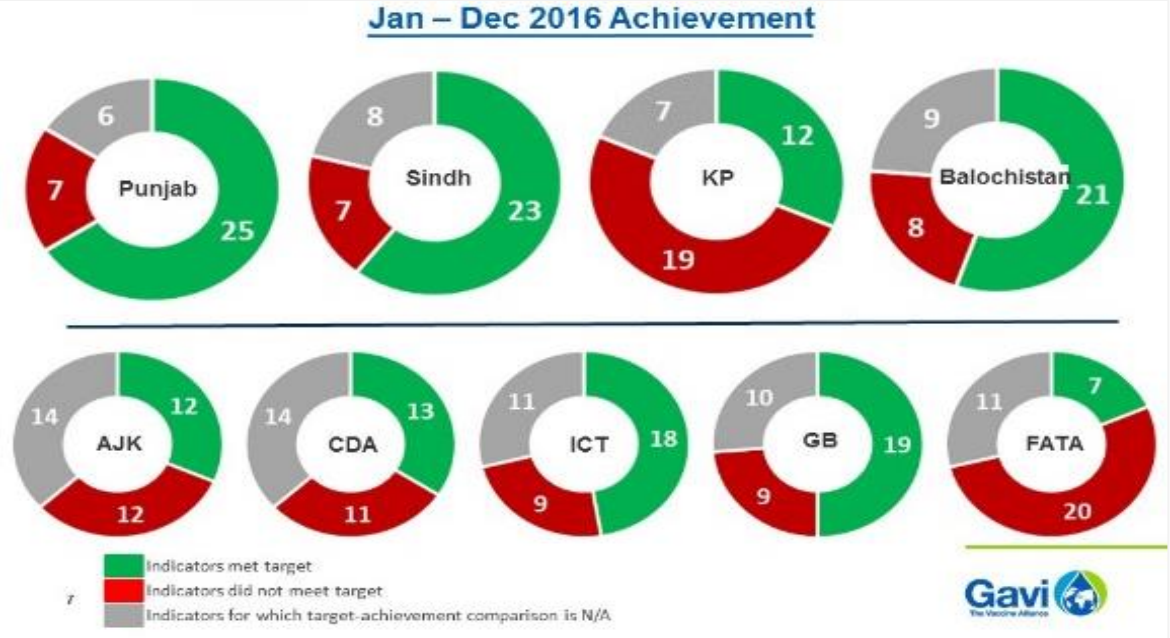
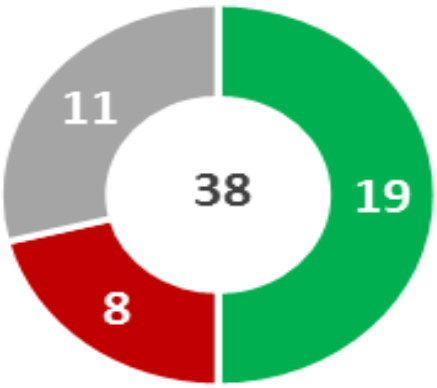


Figure above shows progress achieved by all Provinces and Federating Areas for the Jan to Dec 2016 period. These analyses will be updated with the results of the CES once available (i.e. indicators in grey). For Punjab-specific analyses, results from the Punjab Health Survey, conducted in 2016, were used.

Overall, target achievement is similar for Punjab, Sindh and Balochistan. In terms of KP, targets set were ambitiously high resulting in the non-achievement of 19 indicators. As compared to Provinces, Federating Areas exhibit a lower performance. This is partially owing to limited human resource capacity within the Federal EPI Cell to support the implementation of core activities planned as part of NISP. For example, the electronic tracking of vaccinators and the vLMIS have not yet been introduced in Federating Areas. FATA is particularly underperforming due to insufficient human resource capacity but also the low coverage of both fixed sites and outreach services.

Figure 5. Pakistan GPF Indicator Target versus Achievement for 2016



Results provided by all Provinces and Federating Areas were aggregated to obtain an overall country overview (see Figure 5). Targets were met for half of indicators. Significant delays in core activities, such as the scale-up of vLMIS, contracting of Civil Society Organisations (CSOs) for the delivery of immunisation services for specific populations, upgrade of the VPD surveillance and AEFI monitoring systems, as well as hiring of vaccinators

NVS progress:

Rotavirus

In January 2017, Pakistan (Punjab) introduced the Rotavirus vaccine. Due to issues of supply, the rolling Provincial introductions were delayed and will now occur in Q3 and Q4 of 2017. However, WHO still has the VIG MOU under review which may delay availability of the training budget in Pakistan.

Measles/Rubella

As discussed in earlier sections, the Measles SIA application was recommended for resubmission by the IRC. In March 2017, a consultation on Measles was held with global experts and Federal and Provincial EPI Managers which included inputs into the development of a 5-year Measles strategy with alignment by Provinces. An MR application is expected in 2019, although Punjab expressed its interest to introduce, earlier. The results of the consultation is available in Annex X.

A national working group, in connection with an external advisory body shall oversee the preparedness and implementation of Measles campaign, leveraging and building on the learnings from the upcoming campaign in Karachi which is done with strong engagement of EOC.

Recommendation: Given the increasing trend in confirmed Measles cases, country's decision to conduct a nation-wide supplementary immunisation activity in 2018 seems justified. Technical assistance for addressing IRC recommendations and help preparing for a high-quality campaign can be mobilised through Global Measles Working Group (WG) established for Pakistan.

IPV

In December 2016, the Ministry requested the use of administrative data to determine the target population and requested a raise in the number of doses of IPV by 1.9 million (+32%). In the absence of historic or current risks of stock-outs, Gavi, with partners, responded to the letter with an approach to monitor monthly stock levels, adjust shipments as required and increase the number of IPV doses approved before mid-2017 in case monitored stocks reach critically low levels. This issue was discussed again during the JA, however, due to the insufficient scale-up of vLMIS, visibility on stock at lower levels is not available.

Pneumococcal

There is a potential for change in vial (current 2-dose vial will no longer be manufactured) upcoming. Pakistan, as part of the NVS renewal process has requested the 4 dose PCV10 vial but still needs to discuss the potential switch to PCV 13. Technical assistance is planned from WHO for further support and planning.

Pentavalent

It is suggested to add the reviewing the cost and space savings to introduce 5- or 10-dose vials in urban settings.

HPV

Punjab has outlined the intent to introduce HPV in 2020. Gavi is supporting JPHIEGO for the initial groundwork and research on disease burden in order to inform the decision to apply for support. Currently, only Punjab has a third party survey which shows a Pentavalent 3 coverage above and Gavi does not current solicit sub-national applications.

The National Immunisation Support Project (HSS):

The Multi-Donor Trust Fund for the National Immunisation Support Project (NISP) (2016-2020) is the recipient of Gavi's Health Systems Strengthening support and aims to strengthen the health system for routine immunisation while addressing the sub-national complexities and differences through direct engagement with Provincial governments. The Multi-Donor Trust Fund, managed the World Bank, was established in March 2016 and provides a pooled financing instrument with funding from Gavi ($84 million) and USAID ($10 million) and is linked to $50 million of international development assistance (IDA) which has a partial buy-down by the Bill & Melinda Gates Foundation ($25 million). The total cost of NISP is $377.41 million with a total of $233 million to be provided by Pakistan government resources (62%). Provincial Chief Ministers and Secretaries of Health, Planning and Finance are engaged in programme development and review. Through the structure of the NISP, each Province is incentivized to have sufficient finance and management capacity to manage their programmes.

Provincial programs are disbursed funding based on the achievement of Disbursement-linked indicators, whose targets must be validated by a third party. The third party validation firm for non-coverage indicators is currently under contracting. The Coverage Evaluation Survey planned for 2017 will provide

the Third Party Validation/Verification for the coverage indicators and is also in the stage of contracting. The progress against the first and second year Disbursement-Linked Indicators are as follows:

Figure 6: Provincial progress against Year 1 Disbursement-Linked Indicator (DLI)

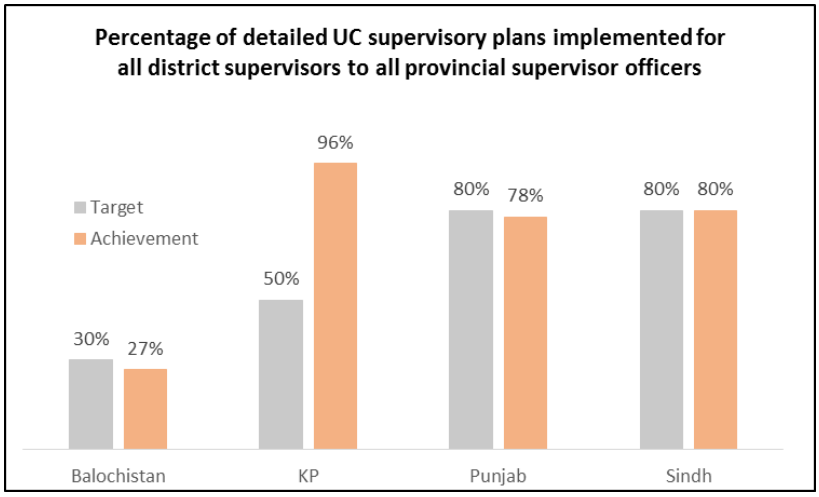
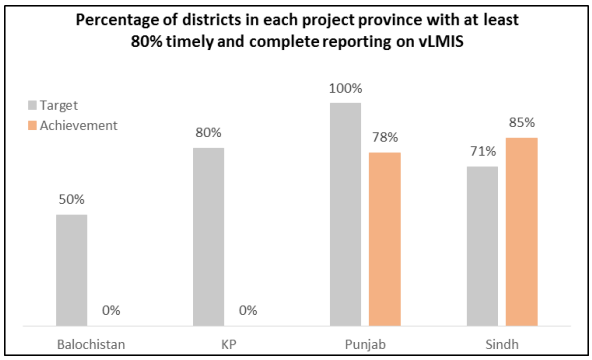
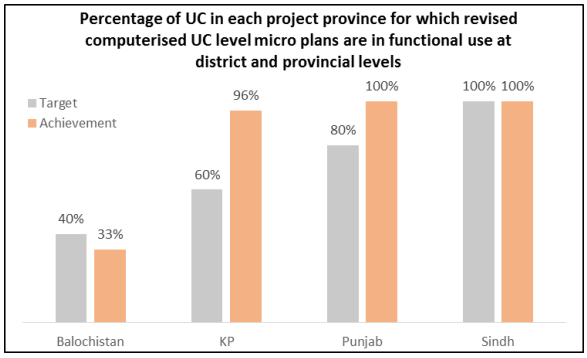
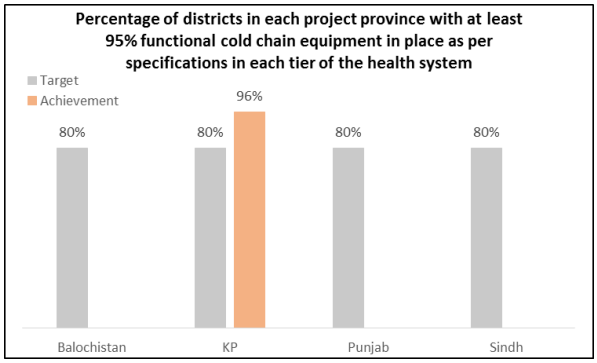


Figure 7: Provincial progress against Year 2 Disbursement-Linked Indicator (DLI)







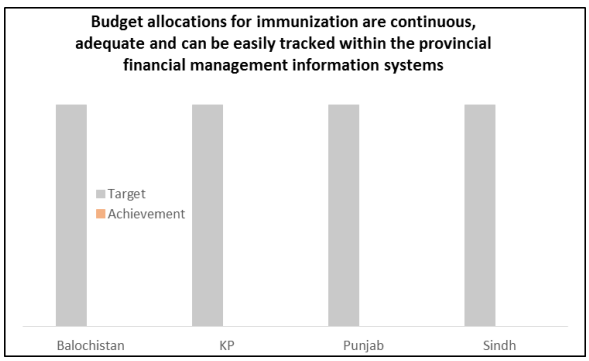


Table 6: Fund allocation, by Provinces NISP PC-1

Province	Allocation (PKR million)	Released (PKR million)
KP	852	220 (quarterly)
Punjab	1699	1699 (by Aug 15)
Balochistan	1200	382 (quarterly)
Sindh	383	348

Recommendation: Challenges in the operationalisation of PC-1 include fund flow for program delivery and technical assistance, as well as the delayed hiring of planned Government posts

- Reinforce and clarify the duties, responsibilities and level of authority of NISP project managers (Federal and Provincial EPI managers) with Ministries of Finance and Health through notified Terms of Reference.
- Streamline reporting burden for partners supported by the MDTF Technical Assistance; through a narrative and financial report on PEF portal, the same to be presented to the NISP monitoring missions (and the MDTF Steering Committee) twice a year.

Recommendation: The World Bank to continue to work closely with Provincial governments on identified significant bottlenecks and blocks to project performance, including NISP fund flow mechanism and further educate key stakeholders on NISP process, and engage in policy dialogue on PC-1 operationalisation.

Cold Chain Equipment Optimisation Platform (CC EOP):
Pakistan submitted an application for CCE OP support for the October 2016, Independent Review Committee. The application was approved and the matching funding is from the MDTF. Only one year of approval is currently active. The country recently completed the revision of the operational deployment plan. Unicef will now place bids for the equipment. Arrival and distribution of the first year of equipment is expected in Q4 2017 or early 2018. There are currently some delays with regards to the procurement mechanism from the MDTF.

Performance-based funding: Through the Performance-Based Funding mechanism for Health Systems Strengthening grants, Pakistan is eligible for up to $50 million of additional funding. The eligibility and amount of PBF will be measured by the upcoming Coverage Evaluation Survey in 2017. Pakistan's eligibility to receive PBF based on progress taking the effectiveness of grant as the start date, would be December 2018. Coverage survey results would inform that.

4.2. Financial management performance (for all cash grants, such as HSS, vaccine introduction grants, campaign operational cost grants, transition grants, etc.)

HSS:

The total amount currently in the trust fund is $69 million ($59 million Gavi and $10 million USAID). The Gavi Secretariat has committed but not approved and additional $25 million. This amount will be reviewed for potential approval during the High-Level Review Panel in October 2017. An additional $16 million, specifically for equity work will also be under review for an additional total amount of $41 million for an overall Gavi contribution of $100 million.

The utilisation of funds from the MDTF has been low to date – with $10.7 million spent. However, the projected spending in the next 12 months may lead to full utilisation of the available trust fund amount, requiring the additional committed funds by the Gavi Secretariat. Further, lead time from the receipt of funds is required to assure time to amend Provincial agreements which is currently limited to the $59 million.

Current expenditure:

- The cost of Year 1 DLI's is $10 million and Provinces have received an advance of the DLI (as outlined in the disbursement details below).

Expected expenditure October 2017-October 2018:

- Year 2 DLI's (total of 4) are valued at $25 million.
- *Risk: Although reporting (quantitative and qualitative) shows the possibility for all provinces to reach their Year 1 and 2 DLIs, the recent change in the population figures and the information gathered by third party validation (required by the grant) may result in different conclusions than reached during the Joint Appraisal 2017*
- Co-investment for CCE OP (Year 1 and year 2) is valued at $20 million
- *Risk: The agreement between Unicef Supply Division and the World Bank has been under negotiation for and number of months. The tender for Year 1 is still to be completed (upon receipt of funds to Unicef SD). The Year 2 approval is currently in the review and approval process at the Secretariat.*

In total, $45 million in programmatic costs (outside of bank-executed activities) have the potential to be disbursed in the next 12 months, leaving $3.3 million available in the trust fund.

Table 7: Disbursement details of National Immunisation Support Project by category (through July 2017)

Disbursement details by Grant

Grant	Grant Name	Executed By	Currency	Grant Amount	07/01/2017 to 07/31/2017	03/03/2016 (date of inception) to 07/31/2017
TF0A2189	National Immunization Support Project - Co-Financing	Recipient	USD	39,680,000.00	2,240,175.00	10,700,000.00
TF0A3438	NISP - Project implementation support	Bank	USD	4,258,000.00	8,947.23	231,667.33
TF0A4182	NISP - Donor Coordination and Communication	Bank	USD	330,000.00	0.00	7,972.88
TF0A4183	NISP - Technical Assistance and Analytical Work	Bank	USD	477,000.00	0.00	0.00
TF0A4443	NISP - Program Management and Administration Activities	Bank	USD	330,000.00	0.00	0.00

Rotavirus Vaccine Introduction Grant: In May 2017, Unicef received a disbursement of the Vaccine Introduction Grant approved in Q1 2017. However, due to a lengthy MOU signature process, WHO's disbursement is still pending. Provinces have requested expenditure for training for rolling launches in September, October and November 2017.

PEF: There was unspent funds from 2016 PEF because of delays in the recruitment of staff. There will be an underspend in 2017 due to the delayed hiring of the P5 (on board in July 2017) at WHO.

Remaining Balances: The remaining balances of HSS, ISS and Measles SIAs were reviewed – specifically the progress achieved and expected balances at the time of closure in December 2017. Unicef does not expect to have any remaining balances of ISS funds, while WHO expects to have $1.5 million remaining (as outlined in Table 8.) See below a chart summarizing the financial reporting on remaining balances grants.

Table 8: Reporting on remaining balance fund utilisation, WHO, August 2017

Total allocation	$17,504,248
Total expenditure/encumbrance	$10,134,976
Balance as of 30 July 2017	$8,466,693
Expected additional expenditure till Dec 2017	$6,426,200
Additional activities (till Dec 2017)	
Intussusception surveillance	$317,000
Rota introduction	$169,618
Expected balance at the end of Dec 2017	**$1,553,875**

In line with the workplan, Provinces and Areas were issued Direct Financial Contributions (DFC) from the WHO. The status of the disbursements and reported utilisation is summarised in the following table. Provinces further reported on the status of activities in their presentation. Any unspent funds will be returned to WHO.

Table 9: Direct Financial Contribution update, Joint Appraisal 2017

Province/area	Total amount disbursed	Not yet settled
Punjab	$698,529	$698,529 (100%)
Sindh	$991,541	$991,541 (100%)
KP	$897,543	$567,567 (63%)
Balochistan	$1,124,570	$636,608 (57%)
AJK	$196,503	$126,112 (64%)
GB	$292,351	$216,448 (74%)
FATA	$128,442	$128,442 (100%)
CDA	$23,207	$23,207 (100%)
Total	**$4,352,686**	**$3,388,454 (78%)**

Upcoming Program Capacity Assessment:

Gavi regularly schedules Program Capacity Assessments (PCAs) in all countries to evaluate program, financial and vaccine management capability of the government and related stakeholders. Pakistan is scheduled to have a PCA in Q3 and Q4 of 2017 to review the capacities at the Federal level. The upcoming PCA was discussed with the Secretary Health during the mission and dates are tentatively set for November 6 to Nov 21st.

4.3. Sustainability

Pakistan's GNP per capita is US$1'410, which means it is in the preparatory transition phase for Gavi eligibility. Prior to 2015, Pakistan met its co-financing share with repeated delays causing the country to fall in default for the past 3 years. To further facilitate country contributions to co-financing, deadlines are aligned to the Pakistani Fiscal year, 1 July – 30 June. Pakistan has met its co-financing commitments for Pentavalent and PCV payment for 2016-17. The release of the population census in 2017 and the Rotavirus introduction will raise the co-financing commitment beyond the standard increase for 2018-2019.

Despite continuous challenges in meeting co-financing requirements, the NISP has helped to institutionalize commitments to financing of vaccine costs. The requirements for co-financing for the next 5 years are fully reflected in the country's budget plans through the PC1s at both Provincial and Federal level.

Additionally, for the first time, provinces are now responsible for paying for their vaccines although the country will continue to pool procurement. Provinces have officially delegated their vaccine procurement role to the federal government and have three options for payment to Federal Level; 1) payment at the time of request, 2) payment within two weeks of procurement or 3) a deduction at source by the Finance Division from the provincial share in case of not meeting the two week period for payment. This model was presented during the mission to Provincial and Federal Secretaries of Health who further showed their commitment for the model the appreciation for the coordination and negotiation required to execute it.

Table 10: Summary of Pakistan's co-financing commitment 2017-2018

Vaccine	Financed by Gavi, The Vaccine Alliance (USD)	Co-financed by Pakistan (USD)
Pentavalent	26,650,500	5,702,000
Pneumococcal	46,899,000	23,743,000
Rotavirus	22,856,500	7,130,500
Total	**101,492,000**	**30,879,202**

4.4. Technical Assistance (TA)

Unicef and WHO reported into the Gavi PEF portal and milestones achieved in advance of the Joint Appraisal. The activities and milestones outlined by both agencies are executed by PEF-funded staff and funded from other sources. No money is allocated to activities from the Pakistan PEF budget with the exception of the World Bank – whose work on financial management strengthening was discussed in the previous section.

50% of the PEF funded positions are embedded in Provincial EPI cells, providing support at a decentralised level. Since the previous JA, the P5, Health Systems Strengthening post by WHO and a replacement of a P4 Immunisation Officer were recruited. In presentations for proposed work in 2017,

both agencies discussed the continuation of the existing model (PEF-funded staff and activity funding from other sources.)

Discussions reflected the need for support of key Federal EPI staff which were temporarily funded by remaining balances until the availability of PC-1 positions.

Recommendation: WHO to expedite the pace of implementation whose delays was one of the factors which affected overall program performance, including the progress of EPI against their Disbursement-Linked Indicators (e.g. Coverage survey, scale up of vLMIS, Rotavirus vaccine expansion, procurement and other activities).

Table 11: PEF-funded positions at Unicef and WHO

Agency	Programmatic area of work	Type of recruitment	Duty station
WHO	EPI (coverage and equity) P5	International	Islamabad
	EPI (coverage and equity)	National	Islamabad
	HSIS (coverage and equity)	National	Islamabad
	Immunisation systems (EPI/HSIS) / data	National	Islamabad
	Immunisation systems (EPI/HSIS) / data	National	Lahore
	Immunisation systems (EPI/HSIS) / data	National	Karachi
	Immunisation systems (EPI/HSIS) / data	National	Peshawar
	Immunisation systems (EPI/HSIS) / data	National	Quetta
	EPI (C&E)	National	Quetta
	Immunisation systems (EPI/HSIS) / data	National	FATA
	Immunisation systems (EPI/HSIS) / data	National	CDA
	Immunisation systems (EPI/HSIS) / data	National	GB
Unicef	EPI - service delivery (C&E) P4	International	Islamabad
	HSIS (C&E)	National	Islamabad
	Communication for Development (C&E)	National	Islamabad
	EPI (supply chain)	National	Islamabad
	EPI (supply chain)	National	Lahore
	EPI (supply chain)	National	Karachi
	EPI (supply chain)	National	Peshawar
	EPI (supply chain)	National	Quetta

5. UPDATE OF FINDINGS FROM PREVIOUS JOINT APPRAISAL

Recommended Action from JA 2017	Progress 2017 Joint Appraisal (provided by the government)
Strengthen the National Interagency Coordination Committee (ICC) to ensure effective, regular monitoring, and oversight of the EPI programme	Gavi has been requested for the Technical Assistance through hiring of a consultant for the re-structuring of NICC ; revision of ToRs and capacity building of the NICC Secretariat staff for strengthening the role of NICC for additional programmatic monitoring and oversight functions. Currently, the NICC Secretariat is housed in Federal EPI. During 2017 there have been three meetings conducted for the endorsement of the Gavi HLM Recommendations; Measles SIA Application and the endorsement of the Gavi New Vaccine Support Renewal Request for 2018 country requirement. Going forward the NICC shall be involved in the review of achievement of programme DLIs validated by Third Party Validation firm.
Strengthen Polio and EPI interaction and synergy	The National Emergency Action Plan 2017/18 aims to stop poliovirus transmission in core reservoir areas by achieving at least 80% vaccination coverage for IPV-1 and Penta 3. The National Task Team (TT) for PEI-EPI Synergy was endorsed in November 2016. A Federal EPI-PEI synergy Task team notified developed a concept note for the synergy after provincial and federal consultations. Efforts are being made for Developing and implementing an integrated work plan on routine immunization improvement in UCs implementing CBV strategy in Tier 1 districts EPI. Updating EPI targets from CBV registry and biannual enumeration that includes all children below 18 months of age by antigen specific immunization status. Ongoing mobilization for RI during HH visits and targeted mobilization and strengthened outreach activities. Existing communication material on EPI/PEI is analysed for development and printing of integrated social mobilization toolkit. Further in Sindh Measles Mop -up the EOC are being involved in the campaign monitoring and quality assurance. There is a plan for establishing the working group for Measles through involving PEI (EOCs) for campaign planning, mobilisation of work force, advocacy and mobilisation of communities and the monitoring for quality assurance of 2018 Measles Campaign.
Federal, Provincial, and District levels create or finalize their annual operational plans, leveraging polio assets, by end of September	
Implement data quality improvement plans	DQA IP are being implemented. There are follow-ups planned in 2017 for the implementation progress. DQA in ICT/CDA planned in August, IP to be developed in September.

	IP follow-up for GB planned in third and fourth weeks of September 2017. DQA in FATA to be conducted in December 2017.
Federal level to provide guidance and a reporting template by end of August	
Routine immunisation is a foundation for Universal Health Coverage, and as such staff vaccinating should be further developed to deliver an integrated package of locally appropriate, primary health care interventions	
Increase engagement with communities to increase demand for quality immunisation services while improving access and availability (including functioning EPI centres, with qualified human resources and available vaccines), as reflected in improved Penta-1 coverage and drop out below 5% in each district, using context specific innovations in communities, such as urban slums, hard to reach, low socio-economic status, and/or low female education	Existing communication material on EPI/PEI analysed, including Bottleneck Analysis (BNA) in some districts in Punjab, Sindh, KP and Baluchistan to look at availability, effectiveness and acceptance of the material at community level. TORs being drafted for development and printing of integrated social mobilization toolkit in line with the analysis. The recruitment process for provincial C4D consultants was repeated in 2017 with revised TORs. The recruitments in Sindh and Punjab have been completed and the process in KP and Baluchistan is near completion. The C4D Consultants were involved in outreach activities, training of vaccinators on IPC skills and celebration of international days related to RI with the provincial EPI teams in Q4 2016 and Q1 2017. CSOs will be engaged across provinces for social mobilization activities and training of frontline workers on IPC skills. A concept note, presentation and survey questionnaire drafted on UNICEF's U-Report tool for feedback from the communities and frontline workers on immunization services. KP, Punjab, Baluchistan and Sindh EPI are interested in utilizing U-Report through targeted short surveys and messaging on RI. A focus group discussion was recently held in Lahore to pre-test the survey.
It is critical for the Secretariat and Alliance partners to accelerate the provision of assistance, and relevant reporting through existing mechanisms.	This year saw progress in the streamlining of reporting through the Gavi portal to meet the requirements of Gavi and MDTF reporting, however, there were significant delays in donor implemented activities - specifically the Coverage Evaluation Survey and vLMIS.
Identify priority Union Councils for intervention and support using equity-based criteria leading to increasing immunisation coverage	Line listing and equity analysis in 6,589 UCs (out of a total 7,060) to identify gaps in immunization service delivery in all provinces and regions were completed. A Bottleneck Analysis (BNA) of the immunisation system is being institutionalized at provincial and district level is completed in Balochistan. A costed action plan for EPI developed and being implemented in response.

	There is a scale-up of RED/REC strategy in 43 districts in all 4 provinces (25 districts in KP, 7 in Punjab,6 in Baluchistan and 5 in Sindh)

6. ACTION PLAN: SUMMARY OF FINDINGS, ACTIONS AND TECHNICAL ASSISTANCE NEEDS IDENTIFIED AND AGREED DURING THE JOINT APPRAISAL

Process of identifying prioritized technical assistance needs:

During the Joint Appraisal, a session was dedicated to the review of provided technical assistance during 2016-2017 and another to the prioritisation of needs to TA identified during the first four days of the mission. The discussion included representatives from Federal, Provincial and Area EPI programs, the World Bank, BMGF, USAID, WHO, Unicef, IVAC, JSI, JPHIEGO and CSOs. The brainstorm of needs were reviewed further in plenary followed by small groups, organized by focus area, which prioritised the needs and outlined potential activities. Due to requests for further clarifications by government of activities, two additional sessions were held in week in order to further define technical assistance needs and their associated activities.

Following the mission, calls with agencies will further define activities to be filled in the One TA plan based off of the prioritisation of Technical needs (outlined below).

In order to further streamline TA needs to avoid duplication and ensure coordination, the TA from all potential funding sources were considered during the discussion and in the development of the One TA plan (including funding from non-Gavi resources).

Table 12: Source of potential funding for technical assistance needs 2017-2019

Funding Source	Timeline	Eligible agencies	Est. Amount
Remaining balances underspend	December 2017	WHO and Unicef (non-transferable between agencies)	~$1.5 million
MDTF Technical Assistance allocation	2018, 2019 (annual requests accepted)	UN Agencies	~$ 5 million
PEF TCA	2018, 2019	Alliance partners	$2 million, annually
PEF TCA Expanded partners	2018	Expanded partners	--
HSS-2 revised ceiling	*2018-2019*	*Government and partners*	*$16 million*
Government PC-1	Current – 2020	All	--
Other funding sources	--	--	--

Prioritised needs and activities prepared by mission:

The following technical assistance needs were identified during the Joint Appraisal. Specific budget and activities will be defined in the coming weeks.

Advocacy:

- Advocacy for RI targeting policy makers and key influencers in health financing
- Media strategy for RI including crisis management plan for communications

Data:

- Implementation (operational) research
- Improving the quality of routine immunisation data
- Further maximise the use of mobile technology to include access to e-learning, mobility tracking and expandion of NFC cards (in Punjab)
- Improving the quality of routine immunisation data
- VPD and AEFI surveillance
- Laboratory support for M/R and expansion of Lab support in Provinces
- Integrated Dashboard with in MIS linked to Provinces and Areas including all components of RI
- Use of data from coverage survey

Demand Promotion:

- Promoting demand for immunisation services
- Improving Polio-RI synergy

Leadership Management and Coordination (LMC):

- Strengthening of leadership and management capacities in Baluchistan and Sindh
- Strengthening of leadership and management capacities at the Federal level
- Strengthening of ICC
- Strengthening of implementation possible revision and understanding of EPI Policy
- Strengthening of implementation possible revision and understanding of EPI Policy
- Support to EPI for engagement of CSOs and private entities
- Revision of cMYP
- Strengthening Public Private Partnerships
- Support to EPI reviews
- Development of quality annual plans of actions
- Development and updating of microplans
- Equity
- Implementation of the recommendations from the Programme Capacity Assessment
- Engagement of Areas by partners
- Support to FATA for improved coverage

Supply chain:

- Implementation of vaccine audit recommendations
- Country wide scale up of vLMIS
- Implementation of temperature monitoring recommendations
- EVM Assessment 2019
- EVM IP
- Support Vaccine Management Committee
- System redesign
- Implementation of CCEOP
- Disposal of Cold Chain Equipment
- Preventive Maintenance of CCE
- Efficient Vaccine Wastage Monitoring Mechanism

Sustainability:

- Integration of immunisation services with in the delivery of other services (i.e. MNCH, family health care, nutrition etc.)
- Integration of immunisation services with in the delivery of other services (i.e. MNCH, family health care, nutrition etc.)

Vaccine-Specific Support:

- Rota sentinel site surveillance
- Establish CRS surveillance
- Intussusception surveillance – proposal sent to Federal EPI from AKU (USD 1.2 million)
- Ensure appropriate level of preparedness for the measles SIA
- Information on HPV prevalence and information for decision-making on new introduction

1.

2. JOINT APPRAISAL PROCESS, ENDORSEMENT BY THE NATIONAL COORDINATION FORUM (ICC, HSCC OR EQUIVALENT) AND ADDITIONAL COMMENTS

The two week Joint Appraisal mission was combined with the regular monitoring mission of the Multi-Donor Trust Fund as outlined in the grant agreement. The name of the joint mission is the Joint Supervisory, Monitoring and Evaluation Mission (JSAEM). The World Bank took the lead on the government communication and agenda development. Gavi led the pre-planning on reporting and preparation with Federal EPI and Provinces and the communication with partners.

The agenda included a presentation on remaining balances and technical assistance planning, provincial and area presentations on progress and challenges, field visits in Sindh, a meeting of the Steering Committee of the Multi-Donor Trust Fund and a meeting of the ICC to review the recommendations of the mission.

There were more than fifty (50) participants on the missions. A detailed attendee list and agenda is provided below.

There was significant progress by Provincial and Federal in mission preparations. The Grant Performance Framework (GPF) was completed by all Provinces and Areas (9 in total) with technical support by Federal EPI and the Secretariat. The submissions were presented and discussed during the plenary. Further, Provinces, Areas and Federal EPI were requested to provide extensive programmatic updates and information in advance of the mission, in a standardized template in order to facilitate the JA discussions and assignment of technical assistance priorities. These were completed by the respective EPI cells in advance of the mission. The alignment of the EPI review with the mission was also regarded as positive and will likely continue in future Joint Appraisals/JSAEMs.

The TA discussion and One TA plan were received well as a transparent way of streamlining and prioritising needs throughout the country.

A number of points were outlined from members to improve future Joint *Appraisals:*

- Presence of Provincial representation and all mission members throughout the JA to further cross-learning and sharing of lessons learned.
- Include representation from additional levels of EPI program (Provincial, a District representative) and the EOC
- Provide more time for Technical Assistance discussions and include more non-plenary sessions for higher engagement
- Further facilitate language barriers
- Provide dedicated time offline discussion/non-agenda issues and satellite sessions
- Improve sound quality at venue

During the ICC debrief, the chair emphasised on the importance of verified reports and indicators for accountability. She requested more engagement with the local body representatives, particularly for demand related matters. CSO representatives shared their concerns about the recent restrictions which

have put on their work in social demand, relationship with international NGOs and working with marginalised

The ICC minutes from the Joint Appraisal mission can be found in Annex B.

Recommendation: The preparation of Provinces and Federal in advance of the mission was a positive advancement and to further the progress, the following recommendations are made for the organisation of next year's JSAEM mission, specifically;

- As it has been so far, JSAEM July/August mission to be more focused on wider EPI programme and with participation of Alliance partners and February/March monitoring missions to focus deeper on NISP implementation and indicators.
- Alignment of time of the July/August mission with the National EPI review and JSAEM will bring additional efficiency
- Include the presence of Provincial representation (in coordination with EOC) and all mission members throughout the JSAEM to further cross-learning and sharing of lessons learned
- Include representation from additional levels of EPI program (Provincial, a District representative)

ANNEX 1: List of attendees

Name	Agency
Lubna Hashmat	Civil Society Human and Institutional Development Programme
Hashim Elmoussad	CDC
Meredith Bradbury	DFID
Asad Hafeez	DG Health MNHSR&C
Sabeen Afzal	Deputy Director (programs), MNHSR&C
Shakir Baloch	EPI, Balochistan
Hamid Alfridi	EPI, KP
Munir Ahmed	EPI, Punjab
Agha Ashfaq	EPI, Sindh
Syed Saqlain Ahmad Gilani	Federal EPI
Arshad Chandio	Federal EPI
Soofia Yunus	Federal EPI
Nosheen khawar	Federal EPI
Dure Samin Akram	Health, Education & Literacy Programme
Huma Khawar	IVAC
Dr. Abdelimalik Hashim	JSI
Kennedy Ongwae	Unicef, Country Office
Anahitta Shirzad	Unicef, Country Office
Khawaja Aftab Ahmed	Unicef, Country Office
Maha Mehanni	Unicef, Country Office
Ayesha Durrani	Unicef, Country Office
Eshioramhe Kelobo	Unicef, Country Office
Kumanan Rasanathan	Unicef Headquarters
Angela Kearney	Unicef, Representative, Country Office
Muhammad Ahmed Isa	USAID
Sangita Patel	USAID
Aliya Kashif	World Bank, Country Office
Waseem Kazmil	World Bank Country Office
Mohammad Assai Ardakani	World Health Organization, Country Office Representative
Quamrul Hasan	World Health Organization, Country Office
Farah Sabih	World Health Organization, Country Office
Jamal Nasher	World Health Organization, Country Office
Alejandro Ramirez	World Health Organization, Headquarters
TBD	Acasus
Orin Levine	Bill and Melinda Gates Foundation
Kaleb Brownlow	Bill and Melinda Gates Foundation
Hamidreza Setayesh	Gavi, the Vaccine Alliance
Michael Thomas	Gavi, the Vaccine Alliance
Rachel Belt	Gavi, the Vaccine Alliance
Riswana Soundardjee	Gavi, the Vaccine Alliance
Afshan Najafi	IVAC
Tariq Masud	JSI
Mari Lundeby Grepstad	Norad

Saadia Farrukh	Unicef, Regional Office
Richard Duncan	Unicef, Headquarters
Robert Oelrichs	World Bank, Headquarters
Irtaza Ahmad Chaudhri	World Health Organization, Regional Office

ANNEX 2

Compliance with Gavi reporting requirements

Please confirm the status of reporting to Gavi, indicating whether the following reports have been uploaded onto the Country Portal.

It is important to note that delayed reporting may impact the decision by Gavi to renew its support.

	Yes	No	Not applicable
Grant Performance Framework (GPF) reporting against all due indicators	X		
Financial Reports			
Periodic financial reports	X		
Annual financial statement	X		
Annual financial audit report			X
End of year stock level report	X		
Campaign reports			X
Immunisation financing and expenditure information	X		
Data quality and survey reporting			
Annual desk review			
Data quality improvement plan (DQIP)	X		
If yes to DQIP, reporting on progress against it	X		
In-depth data assessment (conducted in the last five years)	X		
Nationally representative coverage survey (conducted in the last five years)	X		
Annual progress update on the Effective Vaccine Management (EVM) improvement plan	X		
Post Introduction Evaluation (PIE)			X
Measles-rubella 5 year plan	X		
Operational plan for the immunisation program	X		
HSS end of grant evaluation report **Financial on HSS-1 not yet available*	X		
HPV specific reports			X
Transition Plan			X

In case any of the required reporting documents is not available at the time of the Joint Appraisal, provide information when the missing document/information will be provided.

All documents have been provided.