



Comprehensive Multi Year Plan (2014-2018)

**Expanded Program on Immunization
Directorate of Health Services
FATA Civil Secretariat
Government of Pakistan**

Comprehensive multi-year Plan

Immunization Program of Federally Administered Tribal Areas (FATA)

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List of Acronyms

ACS	Additional Chief Secretary
AD	Auto-destruct
AEFI	Adverse Events Following Immunization
AFP	Acute Flaccid Paralysis
AHQH	Agency Headquarters Hospital
BCG	Bacillus Calmette-Guerin
BHU	Basic Health Unit
BPS	Basic Pay Scale
CHC	Community Health Center
cMYP	Comprehensive Multi-year Plan
DGHS	Director General Health Services
DHS	Director Health Services
DPT	Diphtheria Tetanus Pertussis
DQS	Data Quality Self-Assessment
DSV	District Superintendent Vaccination
EPI	Expanded Program on Immunization
EVM	Effective Vaccine Management
FAP	First-Aid Post
FATA	Federally Administered Tribal Areas
FMT	Female Medical Technician
FTE	Full Time Equivalent
FR	Frontier Region
GAVI	Global Alliance for Vaccines and Immunization
GAVI HSS	GAVI Health System Strengthening
GAVI ISS	GAVI Immunization Services Support
GAVI NVS	GAVI New Vaccine Support
GDP	Gross Domestic Product
GGE	General Government Expenditure
GGHE	General Government Health Expenditure
GHE	Government Health Expenditure
HMIS	Health Management Information System
HR	Human Resources
ICC	Inter-agency Coordinating Committee

ICS	Immunization-system-component-specific
IEC	Information, Education and Communication
ILR	Ice-Lined Refrigerator
IP	Immunization Practices
IPV	Inactivated Polio Vaccine
KAP	Knowledge, Attitude and Practice
KM	Kilometer
KPK	Khyber Pakhtunkhwa
LHS	Lady Health Supervisor
LHV	Lady Health Visitor
LHW	Lady Health Worker
LoC	Line of Control
M&E	Monitoring and Evaluation
MCHC	Maternal and Child Health Center
MDG	Millennium Development Goal
MICS	Multiple Indicator Cluster Survey
MIS	Management Information System
MLM	Mid-Line Manager
MMR	Measles, Mumps, and Rubella
MNCH	Maternal Neonatal and Child Health
MNT	Maternal and Neonatal Tetanus
MT	Medical Technician
NIPS	National Institute of Population Studies
NITAG	National Immunization Technical Advisory Group
OPV	Oral Polio Vaccine
P&D	Planning and Development
PC-1	Planning Commission Performa No.1
PCV-10	Pneumococcal Conjugate Vaccine - 10
PDHS	Pakistan Demographic and Health Survey
PEI	Polio Eradication Initiative
PKR	Pakistani Rupee
POL	Patrol Oil Lubricants
PSDP	Public Service Development Program
RED	Reaching Every District

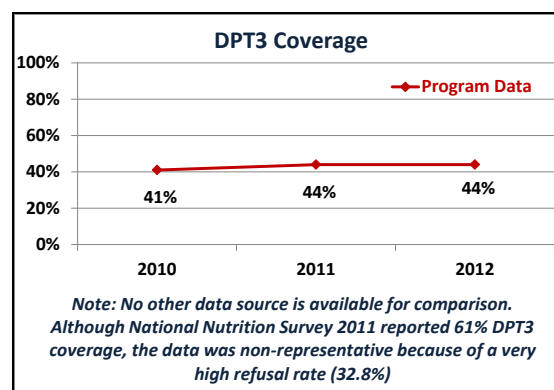
RHC	Rural Health Center
SIA	Supplementary Immunization Activity
SIS	Skilled Immunization Staff
SOPs	Standard Operating Procedures
SWOT	Strengths, Weaknesses, Opportunities and Threats
THE	Total Health Expenditure
THQH	Tehsil Headquarters Hospital
TPM	Third Party Monitoring
TT	Tetanus Toxoid
UC	Union Council
UK	United Kingdom
UNICEF	United Nations Children's Fund
USD	United States Dollar
vLMIS	Vaccines Logistics Management Information System
VPD	Vaccine Preventable Disease
WHO	World Health Organization

Immunization Situation Analysis Summary 2010-2012

Immunization Achievements

- Continuation of immunization services despite precarious law and order situation
- 50% fully immunized children
- Above 90% coverage in Polio Eradication campaigns

Immunization Coverage



Immunization System Analysis

- Failure in bringing number of Polio cases to zero
- No FATA-specific immunization policy
- Target setting primarily limited to passing on immunization targets set by Federal EPI Cell
- Absence of qualified technical staff for surveillance, monitoring and evaluation and cold chain management
- Outdated cold chain equipment

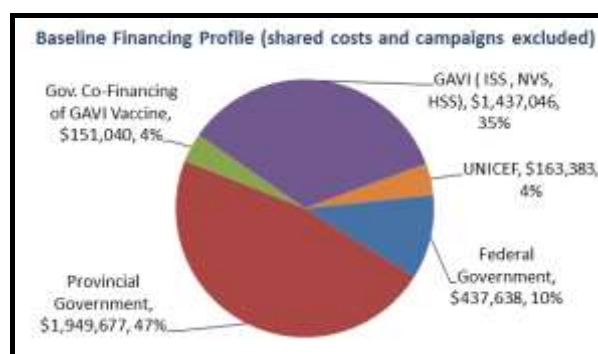
Health System Constraints

- No practice of developing annual health plans
- Poor monitoring and supervisory systems on account of precarious law and order situation
- Dependence on Federal government for resource allocation
- No policy for human resource management
- Fragmented health information system

Baseline Costing Profile

Baseline Indicators	2012
Total Immunization Expenditures (\$)	6,502,255
Campaigns (\$)	2,363,471
Routine Immunization only	4,138,784
per capita (\$)	0.96
per DTP3 child (\$)	67.69
% Vaccines and supplies	32%
% Government funding	58%
% Total health expenditures	3%
% Gov. health expenditures	32%
% GDP	0.08%
Total Shared Costs (\$)	528,592
% Shared health systems cost	8%
TOTAL (\$)	7,030,847

Baseline Financing Profile



cMYP Summary: 2014 - 2018

Immunization Priorities

- Polio eradication
- Increasing immunization coverage and reducing vaccine preventable disease
- Increasing the share of immunization through fixed EPI centers
- Extending the reach of immunization services to remote area populations
- Improving the quality of immunization through improved cold chain and logistics
- Introducing new vaccines (IPV/Rotavirus)

Immunization Goals & Objectives 2014-18

- Measles incidence reduced to less than 5 case per million population by 2018 with optimally functioning surveillance system
- Polio incidence reduced to zero by 2015 and sustain Polio free FATA afterwards
- Neonatal death caused by neonatal tetanus reduced to less than 1 case per 1000 live birth by 2018
- Increase DPT3 coverage to 75% by 2018
- Increase the % of children fully immunized to 70% by 2018

Programme Monitoring Framework

Indicator	2012	2018
• DTP3 coverage	• 44%	• 75%
• Measles 1 coverage	• 50%	• 73%
• PCV-10 coverage	• 0%	• 75%
• % of children fully immunized	• 50%	• 70%
• % of districts that have at or above 80% DTP3 coverage	• 7%	• 77%
• Dropout rate - % point difference between DTP1 and DTP3 coverage	• 13%	• 4%

Priority Immunization Programme Strategies

- Develop and institutionalize performance management system
- Introduce mechanisms of accountability through third party monitoring
- Increase the number of skilled immunization staff
- Upgrade/maintain adequate cold chain equipment
- Develop and implement evidence based communication strategies

Partnerships & Sustainability Strategy

- Enhance efficient utilization of human resources by developing synergies with other health initiatives
- Minimize wastage of resources under immunization program
- Advocacy for ensuring financial sustainability of immunization program
- Introduce mechanisms of accountability through third party monitoring

Health and Development Impacts

- Reduce funding gap for immunization
- Improve child survival through contribution to achievement of MDG Goal 5
- Reduced disability in the community associated with vaccine preventable disease (Polio)
- Contribute to poverty reduction goals through reduction of preventable hospitalization for childhood illnesses

Cost and Financing projections

	2014	2015	2016	2017	2018
	USD	USD	USD	USD	USD
Total Resources Required	18,189,544	14,786,714	11,983,183	14,205,119	14,393,413
per capita	2.6	2.0	2.2	2.4	2.6
Total Secure Financing	12,805,198	11,616,721	7,278,747	8,281,222	8,337,322
Funding Gap	5,384,346	3,169,993	4,704,436	5,923,897	6,065,091
Total probable Financing	66,280	129,918	1,459,104	2,458,697	2,354,188
Funding Gap	5,318,066	3,040,075	3,245,332	3,465,218	3,701,903

1 Situational Analysis

1.1 Background information

1.1.1 Administrative and political structure

Federally Administered Tribal Areas (FATA) is one the four federally administered territories in Pakistan. It is located in the northwest of the Capital Islamabad and separates Khyber Pakhtunkhwa (KPK) province of Pakistan from Afghanistan.

These semi-autonomous tribal areas are governed by the Constitution of Pakistan but through the same rules that were put in place in the British era in 1901 as Frontier Crime Regulations; therefore, do not fall under the jurisdiction of Supreme Court and High Court of Pakistan. Similarly, the laws approved by the National Assembly are not applicable in FATA unless specifically ordered by the President of Pakistan.¹

Historically, FATA's semi-autonomous status can be traced back to the 19th century when in order to settle a long standing dispute; the British Government of India signed an agreement with the Amir of Afghanistan.² The Durand line was established as an international border between Afghanistan and British-governed India. The British wanted to have free access to the major routes of the old Silk Road but the frontier area always remained a source of trouble and threat to stability. In return for free road access by the British, the tribal areas along the Durand Line were given a semi-autonomous status. These political and economic objectives were achieved by offering substantial allowances and subsidies to the Tribal head and elders.

After its creation as an independent country, Pakistan continued with the sub-autonomous status of the tribal areas. Therefore, these tribal agencies were retained as one of the Federal territories titled as Federally Administered Tribal Areas (FATA).

More recently, since Russian invasion of Afghanistan in 1979, the strategic location of these tribal areas has been exploited in international Geo-political conflicts that have resulted in serious implications for health care interventions, especially for the immunization campaigns.³ The local militant groups have banned Polio vaccination and health workers involved in immunization campaigns have also been killed. Consequently, the global push towards Polio eradication has been severely jeopardized.

FATA is divided into two administrative categories: Tribal Agencies and Frontier Regions. There are 8 Tribal Agencies and 6 Frontier Regions (FRs). Each tribal agency is administered by a Political Agent, a Federal Civil Servant.⁴ The political agent oversees the working of government line departments including agency health department. He also serves as project coordinator for rural development schemes. In comparison, an FR is administered by the district coordination officer of the adjacent settled district, who exercises the same powers in an FR as the political agent does in a tribal agency.

¹ Government of Pakistan. Post crisis needs as post crisis needs assessment: Khyber Pakhtunkhwa & Federally Administered Federally Administered Tribal Areas, 2010.

² Naveed Ahmad Shinwari. Understanding FATA: Attitudes towards Governance, Religion and Society in Pakistan's Federally Administered Tribal Areas Volume IV. CAMP. Islamabad, Pakistan. 2010.

³ Seye Abimbola, Asmat Malik, Farooq Mansoor. The final push for polio eradication: addressing the challenge of violence in Afghanistan, Pakistan, and Nigeria. PLoS Med. 2013;10(10):e1001529.

⁴ FATA Civil Secretariat (2014) Administrative System. Government of Pakistan. Accessed on 5 Feb 2014 (http://fata.gov.pk/index.php?option=com_content&view=article&id=50&Itemid=84)

FATA has a complex governance system. Its political and administrative matters are directly controlled by the Governor of KPK province, which is answerable to the President of Pakistan. On the other hand, the Ministry of States and Frontier Regions, the Government of Pakistan looks after the matters pertaining to finances and development. FATA is represented by elected representatives in the National Assembly and the Senate of Pakistan. However, no such representation exists in the Provincial Assembly.

Administratively, Tribal Agencies and FRs in FATA are divided into Tehsils which are further sub-divided into Union Councils⁵ (Figure 1).

Figure 1: Details of the administrative units in FATA

Administrative Unit	Number	Average Population (2012)
Tribal Agency	8	The system of UCs is yet to be formerly established.
Frontier Region	6	53,062
Tehsil	54	79,662
Union Council ⁶	416	10,341

This contextual information is important to understand the complexities involved in planning and implementation of cMYP for FATA.

1.1.2 Landscape and climate

The territorial boundaries of FATA are spread over an arc-shaped geographical area, 27220 square kilometers, where topography is mainly hilly and mountainous with valleys, and plains at some places (Figure 2). There are number of border passes between Pakistan and Afghanistan. The territory has an extreme climate that ranges from hot and sultry in the plains to extreme cold in the snow clad mountains. Rainfall is generally low. Only 7% of the geographical area is cultivable.

The average yearly rainfall varies from is 1300 mm. Means of communication and infrastructure are less developed. Road density in FATA is 0.17 KM per square kilometer as compared to the national average of 0.26 KM.⁷ Due to absence of comprehensive roads network, healthcare education are affected because schools and hospitals are rarely built in remote areas. Inaccessibility has also created insecurity due to which healthcare staff is generally reluctant to serve in remote areas.

The geographical and climatic characteristics pose challenges to the health care delivery including immunization services. The long stretched structure results in long distances to be covered for monitoring and supervision especially for the program managers who are based Peshawar, the Capital of KPK. For example, it takes more than 8 hours to travel a distance of nearly 400KM from Peshawar to South Waziristan. The hilly and mountainous terrain and harsh weather create problems in maintaining supply and cold chain systems.

⁵ The system of UCs is yet to be formerly established.

⁶ A single document shows that 536 UCs could be established in FATA. However, UC delimitation could nt be implemented. The FATA health department, for its own working, has divided FATA into 416 areas. All the local planning for immunization including PEI activities are based upon the micro-plans for these 416 areas, commonly kwn as Union Council. Hence, for the planning purposes under the current cMYP, these 416 areas are considered as Union Councils.

⁷ Government of Pakistan. FATA Sustainable Development Plan (2006-2015)

Figure 2: Map of FATA



Source: Wikipedia 2014⁸

1.1.3 Demographic

According to the 1998 census, the total population of FATA was 3,176,331 million. In 2012, as per the projections estimated by FATA's Planning and Development (P&D) department, the total population has grown up to 4.301 million. It is pertinent to highlight that this population projection is different from the estimates (3.802 million) that have been projected by National Institute of Population Studies (NIPS). The main reason is that NIPS and P&D have used different population growth rates, 1.78% and 2.19% respectively. In order to maintain consistency with the FATA Civil Secretariat's demographic profile, the population figures used in this document are based on the population projections estimated by P&D department.⁹ The average population density has been estimated as 158 persons per square kilometer, ranging from 26 persons/sq.km to 624 persons/sq.km in FR Dera Ismail Khan and Agency Bajaur respectively. More than 97% population lives in rural areas where as remaining 2.7% is settled in urban areas. Further details are presented in Figure 3.

Birth registration is essential for maintaining accurate vital statistics. However, birth registration is not common in FATA. According to the recently promulgated Fata Local Government Regulation 2012, the municipal committees have been made responsible for birth and death registrations. However, this system is yet to be made functional because primarily FATA is a rural area and importance of birth registration is only realized when it is required for official purposes, for example, issuance of Passports etc. The findings of the Multiple Indicator Cluster Survey 2009 (MICS) indicate that only 1% children of age under five were registered. More than 87% of the respondents had not even heard of birth registration. This is one of the main reasons why government health officials can face difficulties in estimating the realistic targets for health care interventions.

⁸ Wikipedia 2014 Accessed on 6 Feb (http://en.wikipedia.org/wiki/Federally_Administered_Tribal_Areas)

⁹ This decision was made by the FATA Team during meetings at Peshawar.

Figure 3: Demographic profile of FATA for the year 2012 (baseline)

Demographic Profile	Urban	Rural	Total
Population	116,147	4,185,585	4,301,732
Surviving Infants	3,752	135,215	138,967
Pregnant Women	4,146	149,425	153,572
Women of Child Bearing Age	25,552	920,829	946,381

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Seasonal migration is common in FATA. Livestock holders migrate to upper pastures in summers and return in winters. Similarly, communities living on higher levels migrate towards plains in harsh winters. In 2009, on average, 4.3% of the families had migrated to other areas.¹⁰ The highest percentage (12.8%) was found in South Waziristan. Another important reason for migration is escalation of ongoing war between security forces and militant organization which forces local communities to migrate to secure areas across Pakistan. This situation also creates problems for local health authorities to provide health services in the conflict affected areas.

It is also pertinent to mention that a number of tribes have their family members living on both sides of the Durand line. There is frequent movement of population across the border. It creates problems for the immunization services because it becomes difficult to locate them as per a given schedule for immunization.

1.1.4 Social and political context

(1) Poverty

Farming and livestock are the major sources of livelihood in FATA. Nearly 90% households keep livestock for milk and sale. We few industries and other formal job opportunities, many seek employment as un-skilled workers or travel to find jobs in cities across Pakistan and in abroad, especially in Middle East countries. Once they get settled over there, they take their families and children along with them. It is quite common that such families do not return to FATA. Consequently, it has led to acute shortage of skilled staff and workers in FATA, especially female teachers and health care staff. Post Crisis Need Assessment Report (2010) indicates that 60% of the population in FATA is living below the national poverty line.¹¹

On account of their poor socio-economic status, the general population in FATA is vulnerable to health-related financial catastrophes. In addition, it makes them more dependent upon public sector health services.

¹⁰ FATA Multiple Indicator Cluster Survey 2009

¹¹ Government of Pakistan. Post crisis needs as post crisis needs assessment: Khyber Pakhtunkhwa & Federally Administered Federally Administered Tribal Areas, 2010.

(2) Education

FATA has traditional society which has low economic development and limited facilities; therefore, education is not a priority.¹² This situation has been further compounded by the prevailing security situation. The findings of MICS 2009 show that the primary net enrolment rate was 28.3% for 6-10 years age of children. The net enrolment rate for males was 39.9% and 17.3% for females. The overall literacy of 15+ years of age was 22%. Of this age group, female literacy was 6.7% as compared to 35.8% of males. In FR Tank, FR Bannu and FR Lakki, the female literacy rate was found below 1%.

Maternal education is considered a cornerstone in health and development. Therefore, poor female literacy rates in FATA point towards difficulties and obstacles that the health program managers and implementers have to face in demand generation and social mobilization for health promotion in an effective manner.

(3) Culture and traditions

FATA is characterized by a very strong tribal structure and very rich ethnic diversity and cultural heritage.¹³ The people living in the tribal belt are called Pashtuns or Pathans. Pushto is the local language but dialects are very different. They are practicing Muslims and could be easily excited by their religious leaders.¹⁴ They are fierce fighters and freedom loving. They always take pride in claiming that many invaders who conquered South Asia failed to defeat them. The most famous tribes are Yusafzais in Malakand and Bajaur Agency; Mohmands in Mohmand Agency; Afridis and Shinwaris in Khyber Agency, Orakzais in Orakzai Agency; Wazirs in North Waziristan Agency; and Mahsuds in South Waziristan Agency.

Jirga and Malki systems are strong and powerful local institutions for the reconciliation and resolving local disputes. Traditionally, the household head has a strong hold and decision-making power for the whole family. The wives are traditionally submissive to their husbands and the likelihood of divorce or separation in the tribal society is negligible.

They have strong beliefs against Western culture and practices and consider modern technology being used as weapon against the Muslim culture. Opposition to immunization, especially against Polio vaccination, is a major problem that the health managers are facing today in Pakistan. It is generally considered that Polio drops are a part of the Western conspiracy to make Muslim children infertile. These misbeliefs were further strengthened when the CIA used immunization program to hunt down Usama bin Laden in Pakistan. This is a major reason why the militant groups operating in FATA have banned Polio vaccination in FATA.

Sectarianism and ethnic conflicts also common in FATA and have seriously affected the overall societal practices. Government functioning and organizational structures are no exception. Kurram agency is the most recent example. Due to ethnic conflicts between Shia and Sunni Muslim, Kurram Agency has been administratively divided into two agencies: Upper Kurram (Shia dominated) and Lower and middle Kurram (Sunni dominated)

¹² Ref. no. 8

¹³ FATA Civil Secretariat (2014) Tribal and Ethnic Diversity. Government of Pakistan. Accessed on 5 Feb 2014 (http://fata.gov.pk/index.php?option=com_content&view=article&id=53&Itemid=87)

¹⁴ Noor ul Haq, Rashid Ahmed Khan and Maqsoodul Hasan Nuri (2005). Federally Administered Tribal Areas of Pakistan. IPRI Paper No.10, Islamabad Policy Research Institute, Pakistan.

For the health program designers, it is important to account for these social, religious and cultural power structures which could provide potential areas to influence acceptance of health care interventions.

1.1.5 Public expenditure management

The preparation of annual budgets is primarily a responsibility of the Finance Department which also supervises and controls FATA's finances. The duration of a fiscal year is spanned over 12 months, from 1st July to 30th June. Generally, the process of preparation of annual budget starts 5-6 months before the start of a fiscal year. The budget in FATA comprises two components: recurrent (non-development) budget and non-recurrent (development) budget. The former is utilized for meeting expenditures of the on-going government operations whereas the latter is allocated to finance new development schemes.

As a general practice, the recurrent budget is allocated for meeting the recurring expenses such as wages, allowances, operational costs and utilities. All the government departments prepare and submit their sector-specific budgets to the finance department. Generally, the estimates for wages and allowances are accepted as such. However, budgetary allocations requested for operational costs and utilities often face cuts depending upon the fiscal space the government has under its revenue collection.

Both recurrent and development budgets are presented before Additional Chief Secretary (ACS) of FATA Secretariat for endorsement. The recurrent budgets are approved by Ministry of States and Frontier Regions at the Federal level. In comparison, developments budgets up to PKR 20 million are approved by the ACS. Once approved, the sector-specific funds are released to the concerned government departments.

The planning and development (P&D) department plays a key role in allocation of funds for the development schemes. Its main function is to execute and process all development schemes, programs and proposals (in the form of PC1s) submitted by other government departments, and to coordinate the work related to the preparation of Annual Development Plan. In addition, P&D is also responsible for oversight and monitoring of the development schemes.

For the financial year 2012-13, a total budget of PKR 25541 million was approved for FATA. Further details are presented in Figure 4.

Figure 4: Details of budgetary allocations under FATA's government budget for the year 2012-13

Details	Allocation (PKR in Millions)	%
Total Budget	25541.4	
Recurrent Budget	12538.4	49
Development Budget	13003	51

For budgetary allocation, FATA is entirely dependent upon the Federal allocation. Given the limited fiscal space available, health sector has to compete with other social sectors for allocation from the development budget.

1.2 Health Sector Analysis

1.2.1 Governance

Prior to 2002, the FATA section of the KPK planning department was authorized to take decisions related to development planning in tribal areas.¹⁵ These decisions were implemented through the provincial government line departments. Afterwards the governance system was restructured and in 2006, the Civil Secretariat of FATA was established to take over decision-making functions. Headed by an Additional Chief Secretary, implementation is now carried out by line departments of the Civil Secretariat FATA. Under the new setup, KPK Governor Secretariat plays a coordinating role for interaction between the federal and provincial governments and the Civil Secretariat FATA.

The decision making process is largely centralized at FATA Secretariat level among bureaucratic and technical leadership. At the agency-level, the officers of the government departments mostly execute the responsibilities that are entrusted upon them by their superiors and have limited role in policy making and planning processes.

The governance structure of health department can be divided into three tiers: provincial, agency and sub-agency level.

At the FATA secretariat level, under the bureaucratic leadership of ACS, health department is headed by the Secretary for Social Sectors. Director Health Services (DHS) who is responsible for overseeing the implementation of health care services across FATA reports to the Secretary for Social Sectors. He is supported by Assistant Directors and Provincial Managers of vertical health programs including EPI, LHW Program and MNCH Program.

At the agency level, an Agency Surgeon is responsible for the management of health care services through a network of primary¹⁶ and secondary¹⁷ health facilities. In addition, he also supervises the implementation of vertical health programs.

At the sub-agency level, mostly at union council level, the health facility in-charges are responsible for provision of clinic-based and outreach health services within their allocated catchment areas. Health service delivery at local level is sometimes influenced by *Maliks*, local tribal leaders. In order to meet their demands, Community Health Centers (CHCs) are established at a place of their choice.

The organizational hierarchy is structured with a top-down approach. The power and authority is mostly centralized at the FATA secretariat level. For example, the Agency Surgeon is only authorized to recruit staff up to Basic Pay Scale 11.

Policy making, planning and monitoring and supervision are the weak links at FATA secretariat level. There is no practice of developing annual health plans. On account of not setting sector-specific targets, it is difficult for the higher authorities to review the overall performance objectively. Planning process is generally driven by the needs of federal government and donor agencies.

¹⁵ FATA Civil Secretariat (2014) Administrative System. Government of Pakistan. Accessed on 5 Feb 2014 (http://fata.gov.pk/index.php?option=com_content&view=article&id=50&Itemid=84)

¹⁶ Rural Health Center (RHC), Basic Health Unit (BHU), Maternal and Child Health Centers (MCHC) and Community Health Centers

¹⁷ Agency Headquarters Hospital (AHQH)

1.2.2 Health workforce

The quantity and quality of the health workforce are positively associated with various health service outcomes, for example, immunization coverage, outreach of primary healthcare, and child and maternal survival.¹⁸ Pakistan is listed among ‘Low-density-high-mortality’ countries and the overall density of the workforce is well below the threshold level of 2.5 workers per 1,000 population.¹⁹

As of 2012, there were 751 doctors working in FATA. The doctor to population ratio in FATA (one doctor for every 5728 persons) is much higher than the national average (one doctor per 1206 persons).²⁰ There is no policy on human resource management. On the whole, FATA health sector is facing shortage of health workforce but this deficiency is more severe in terms of availability of female paramedical staff. Figure 5 presents further details about availability of workforce.

Figure 5: Availability of healthcare providers in FATA for the year 2012

Type of Healthcare Provider	Number	Availability per 10,000 population
Doctors	751	1.74
Nurses ²¹	146	0.34
Lady Health Visitors	266	0.61

The selection criteria for recruitment against different cadres of staff (doctors, nurses, lady health visitors) require certification from a recognized training institute. These procedural protocols are followed at the time of induction in service.

It is important to mention that the health care staff posted in FATA is primarily from the health department of KPK. They are relocated to FATA secretariat for further posting within FATA. The matters related to their seniority and promotions are dealt by KPK health department. Thus, FATA does not have its own pool of healthcare workers and remains dependent upon KPK. On the other hand, creation of a new position is entirely dependent upon the approval from the finance department at the Federal level. Therefore, FATA administration has a limited power and authority to increase the number of health care providers according to its needs.

1.2.3 Finance

The General Government Health Expenditure (GGHE) incurred by the Federal Government in FATA during 2012-13 was PKR 3,107 million, 12.2% of the total General Government Expenditure (GGE). Out of the total GGHE allocation for recurrent budget, 90% was spent on payment of salaries and allowance whereas the rest 10% was spent on operational expenditures including supply of medicines to the public health sector. For the year 2012-13, GGHE per capita was PKR 722. Further details are presented in Figure 6.

¹⁸ The world health report 2006: working together for health.

¹⁹ Joint Learning Initiative Report 2004. Human Resources for Health: Overcoming the Crisis

²⁰ FATA Civil Secretariat (2014) Socio-economic Indicators. Government of Pakistan. Accessed on 5 Feb 2014 (http://fata.gov.pk/index.php?option=com_content&view=article&id=55&Itemid=91)

²¹ A total number of 223 vacancies of Nurses are available in FATA. Among these, 78 vacancies exist in the health facilities other than Agency Headquarter Hospitals; however, only 42 are filled.

Figure 6: Comparison of Government Expenditures for the years 2011-14 (PKR in Millions)

		2011-12	2012-13	2013-14
General Government Expenditure (GGE)	<i>Recurrent</i>	11,615	12,538	14,118
	<i>Development</i>	13,072	13,003	14,922
	<i>Total</i>	24,687	25,541	29,040
General Government Health Expenditure (GGHE)	<i>Recurrent</i>	1,529	1,657	1,839
	<i>Development</i>	1448	1450.7	1568
	<i>Total</i>	2,977	3,107	3,407
GGHE as % of GGE		12.2	12.2	11.7
Annual increase in GGE (%)			11.3	3.5
Annual increase in GGHE (%)			28.9	4.4

This scenario clearly highlights that there is limited fiscal space for operational expenditures of the public health sector. However, a high proportion (46%) of the budget is allocated for development schemes in the health sector. This allocation provides a window of opportunity for taking initiative at the local level.

1.2.4 Medical products and Technology

The health department has established a centralized system for purchasing medical products and other supplies. The authorities at FATA secretariat have notified a list of drug supplying companies. Rate contracts for different medicines are negotiated on annual basis and agency surgeons are informed accordingly, who are authorized to purchase medicines and other supplies from the notified suppliers as per their requirement.

1.2.5 Service delivery

The FATA health services comprise of an extensive network of health service delivery that is organized into a 2-tiered health service delivery system: primary and secondary health services.

The primary healthcare facilities established in the rural areas include: Basic Health Units (BHU), Rural Health Centres (RHC), Maternal and Child Health Centres and Community Health Centres (CHC).

The Secondary Healthcare Services comprise of Civil Hospitals, Tehsil Head Quarters (THQH) hospitals and Agency Headquarters (AHQH) hospitals at the tehsil and agency levels respectively.

Figure 7: Service delivery capacity by type of public and private healthcare providers - static

Type of service	Number of facilities		
	Required	Functional	Delivering EPI
1. AHQH	6	6	6
2. THQH	6	3	3
3. Civil Hospitals	21	17	17
4. RHC	8	7	7
5. BHU	173	150	147
6. Civil Dispensaries	428	366	
7. Community Health Centers	163	110	
8. MCH Centers	75	73	

Figure 8: Service delivery capacity per type of healthcare professional – community level

Type of service	Number of facilities		
	Required	Functional	Delivering EPI
1. LHWs	1398	1398	50 ²²
2. LHSs	35	31	0
3. Nurses	78	42	0
4. LHVIs	-	349	0
5. Vaccinators	832	536 ²³	536

1.2.6 Health Information management

A reliable information system is considered the backbone of any health system because it provides the required information to analyze any gaps between health needs and health service provision. It helps the leadership and governance at different levels to analyze the effectiveness and efficiency of the existing service delivery apparatus. In a way, the information flow provides a tool to integrate all the system building blocks for achieving the health system objectives and goals.

The health information system in FATA is quite fragmented. Although the national health policies emphasize upon strengthening and integration of existing health information systems, these policies are yet to be translated into action. The information gathered is primarily utilized to produce program-specific periodic reports for onward submission to higher levels, but the utilization of this information at the local level is quite limited.

Since 2011, District Health Management Information System has replaced Health Management Information System. In addition, different vertical health programs have developed their own information systems that are not integrated with the HMIS.

Periodic reports are generated at health facility or community level by the front line workers including LHWs, vaccinators and health facility staff. These reports are consolidated at the agency level for onward submission to the provincial authorities. The problems related with health information system include: poor quality of recording and reporting, inadequate capacity in data analysis, lack of information on management issues, and lack of timely reporting and feedback from higher levels.

1.3 Immunization system

1.3.1 Routine Immunization

Figure 9: Situational Analysis – routine immunization

Indicators	2010	2011	2012
Official Coverage Estimates			
DTP1	57%	57%	57%
DTP3	41%	44%	44%
Measles 1	46%	43%	50%
Measles 2	20%	21%	20%
OPV0	43%	44%	33%
Most Recent Survey Coverage % DTP3	No Data	No Data	No Data
% Fully Immunized Child	46%	43%	50%

²² 30 LHWs in Khyber Agency and 20 LHWs in Mohmand Agency

²³ Regular vaccinators – 373, GAVI-funded vaccinators – 163

Access and demand			
% Drop Out DTP1 - DTP3	16%	13%	13%
% Drop Out DTP1 - Measles (1st dose)	11%	14%	7%
% Drop out Measles 1st and 2nd dose	26%	22%	30%
Immunization Equity			
% gap in DTP3 between highest and lowest socio economic quintiles	No Data	No Data	No Data
Number and proportion of agencies with DTP3 coverage > 80%	14 (14%)	14 (21%)	14 (7%)
New vaccines introduced into the routine schedule in the last plan period			
PCV10 (2013)	-	-	-

Level of Program Coverage

The overall situation for EPI is not very encouraging in FATA. The immunization coverage rates are low and no significant improvement has been seen during 2010-12. Poor law and order situation due to the ongoing militancy has been claimed as a major contributor. Although this stands true for some of the tribal agencies, no significant differences have been seen in those agencies and FRs that are not affected by militancy. In a large majority of the agencies, DPT3 coverage has never acceded 80%.

During the cMYP planning workshop, it was realized that one of the major limitations in setting baseline for FATA is non-availability of another reliable source of data for the period 2010-12 (for example, Pakistan Demographic and Health Survey). Although National Nutrition Survey was conducted in FATA in 2011, the data on immunization were non-representative because of a very high refusal rate of 32.8%. The government officials and other stakeholders who participated in cMYP planning workshop were cognizant of this limitation and with a consensus decided that the Program Data will be used as baseline for cMYP planning process. However, the cMYP targets will be revisited once EPI coverage survey is conducted in 2014.

Program effectiveness

The dropout rates between DPT1 and DPT3 are high and highlight that a large number of children are missed out during follow up vaccination visits (Figure 9). This gap further increases between Measles-1 and Measles-2. Persistent dropout has implications in terms of more chances of morbidity and mortality but also for wastage of resources. These gaps are the key areas to be addressed in order to achieve effective and efficient vaccine coverage and outcomes.

1.3.2 Accelerated Disease Control Initiatives

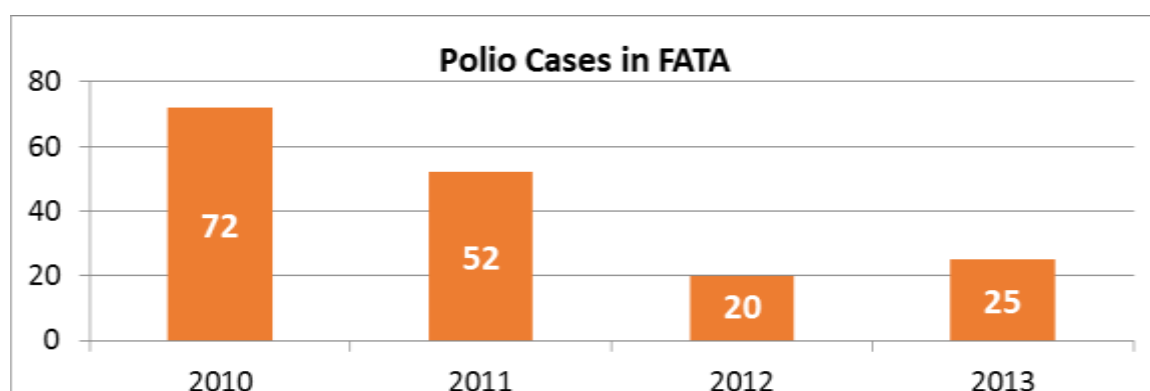
Figure 10: Situational Analysis - by accelerated disease control initiatives

Indicators	2010	2011	2012
Polio			
OPV3 coverage	41%	44%	44%
Number of rounds and sub-national rounds per year	11	8	16
Coverage Range	90%	92%	93%
MNT			
TT2+ coverage	42%	42%	35%

Number and proportion of agencies reporting >1 case of neonatal tetanus per 1000 live birth	14 (0%)	14 (7%)	14 (7%)
Was there an SIA? (Y/N)	No	No	No
Neonatal deaths reported and investigated	No data	No data	No data
Delivery at Facility Rate			18%
Measles & Rubella			
Measles / MR vaccination coverage (1st dose)	46%	43%	50%
Measles / MR vaccination coverage (2nd dose)	20%	21%	20%
Number of lab confirmed measles/rubella outbreaks	103 ²⁴	179 ²¹	1,795 ²¹
Geographic extent National Immunization Day			
Age Group (in months)	0-60	0-60	0-60
Coverage			
Total Measles Cases (Lab/Clinical/epidemiological) ²⁵	7	53	125
Total Rubella Cases (Lab/Clinical/epidemiological)	0	3	5

The overall situation for accelerated disease control initiatives indicates low vaccine coverage and high morbidity levels for vaccine preventable diseases. High number of confirmed cases of Polio is a major concern not only for health administration in FATA but also for National EPI health managers (Figure 11).

Figure 11: Incidence of Polio in FATA 2012-13



Because poorly functioning surveillance system is an accepted reality in Pakistan, these results are reflective of only the tip of an iceberg. Therefore, the participants of cMYP workshop decided that it would be unwise to use the presently reported figures as baseline for morbidity and mortality. The targets for reducing vaccine preventable morbidity and mortality will be revised once a fully functional surveillance system is in place.

1.3.3 Analysis of Immunization system performance

(1) Program Management

Program management	2010	2011	2012
1. Law & Regulation			
1.1 Is there legislation or other administrative order establishing a line item for vaccines?	No	No	No
1.2 Is the line item for vaccines in regular /	No	No	No

²⁴ Number based on Yearly VPD Surveillance Reports for FATA

²⁵ Numbers based on Measles Lab. Data from National Institute of Health, Pakistan

Program management	2010	2011	2012
recurrent Budget			
1.3 Are regulations revised in the province to implement national or provincial policies?	Yes	Yes	Yes
2. Planning			
2.1 Does the country/Province have an annual work plan for immunization funded through Health Authorities budgeting processes?	No	No	No
2.2 What is the number of UC with an annual micro-plan for immunization? (Please indicate denominator – Number of UC per province/area)	None out of 416	None out of 416	None out of 416
2.3 Number of planned supervision visits conducted vs. the number of planed visits	No data	No data	No data
3. Coordination and advocacy			
3.1 What were the Number of ICC (or equivalent) meetings held last year at which routine immunization was discussed?	Not established	Not established	Not established
3.2 What were the Number of NITAG (or equivalent) meetings held last year?	Not established	Not established	Not established
3.3 How many presentations on immunization performance, expenditures, were made to Parliament?	No information	No Information	No Information

The FATA health department follows National Immunization Policy and no FATA-specific policy has been developed so far. Immunization delivery is an established component of the health care delivery system. Budgetary allocation for immunization services primarily covers salaries and overhead expenses. There is no budget line item for vaccine procurement because vaccines and other logistics are directly supplied by the Federal EPI cell.

Planning is one of the weak areas in immunization system in FATA. Largely, these plans are limited to implementation of policy and program directives disseminated from the Federal EPI cell. There is no culture of developing and implementing annual plans, both for implementation and monitoring and supervision. One of the major reasons is that the FATA team is not formally trained in developing annual health plans. Similar is the situation at the agency level.

Apart from Steering Committees on Polio Eradication Initiative (PEI), no other supervisory body has been established for overseeing the progress of the immunization system. Periodic reviews are conducted by the ACS and DHS where EPI Program managers present progress reports on the program activities. By and large, the opportunities to present EPI program achievements come across when such presentations are demanded by the non-health stakeholders including politicians.

The present EPI management structure at FATA secretariat is an established entity but inadequately staffed. The overall management activities are managed by an Assistant Director along with a limited support staff. They are well versed with the program modalities on account of their work experience in health department; however, they are not formally trained in managing an immunization system. In addition, no standard operating procedures (SOPs) are being followed under program management. Surveillance and logistics management require specialized expertise. These aspects are not supported by the existing management structure.

The planning processes are largely limited to development of PC1, mostly driven by donor-led initiatives and Federal EPI cell. In addition, traditionally, planning remained a centralized feature

where FATA was managed by the KPK health department. The role of FATA health department was largely limited to rolling out these plans. Hence, planning remained a weak aspect at the local level.

Target setting is primarily limited to passing on the immunization targets set by the Federal EPI cell down to the agency and FR level. These targets are not matched with resource requirement estimates.

Tracking achievements against targets requires strong monitoring and supervisory mechanism. One of the major limitations for monitoring and supervision in FATA is the precarious security situation. A large number of areas have been declared a security risk. The health officials are required to seek formal permission from the local political and administrative authorities prior conducting monitoring visits. Further, multiple case of kidnapping for ransom have been seen in the recent past. On account of this situation, the provincial program managers avoid conducting monitoring and supervisory visits inside FATA. Consequently, they have to rely and trust whatever the information is being generated at the agency level.

(2) Human Resource Management

Human Resource Management	2010	2011	2012
4. Availability of qualified workforce:			
4.1 Number of healthcare skilled immunization staff per 10,000 population			1.24
4.2 % of vaccinator posts currently vacant			All regular positions of vaccinators are filled
4.3 Turnover rate of SIS (or vaccinators specifically)	Negligible for regular employees	Negligible for regular employees	Negligible for regular employees
5. Capacity building			
5.1 Number (and proportion) of immunization program staff trained in immunization services through MLM, IP or other training modalities per year:			
a) Mid-wives and LHS			None
b) Nurses			None
c) Other Skilled immunization staff (vaccinators)			None
d) Managers			None
e) Technicians			None
f) Other (LHWs)			3.5%
5.2 % of immunization health workers Refreshing trained in immunization in the last two years			95% (vaccinators only)
5.3 Curriculum review for pre-service medical and nursing immunization education conducted			None

The available health force formally trained on immunization comprises vaccinators only. There are 524 vaccinators available and 90% of them have undertaken refresher trainings in 2010. It is important to highlight that among 524 vaccinators, 356 are appointed as regular government employees whereas 168 are supported through GAVI. The bureaucratic hurdles and procedural protocols associated with GAVI fund releases had negative consequences for the EPI. The GAVI-funded vaccinators used to receive their salaries after 6-9 months and also, their fate is not clear once the GAVI funds are stopped in 2015. In addition 14 vaccinators, supported by UNICEF, have been

employed at Lower & Middle Kurram. Similar to the GAVI vaccinators, it is not clear whether UNICEF will continue to fund for their remunerations after June 2014.

In addition, 50 LHWs are reported to be trained in immunization practices in Khyber and Mohmand agencies. However, it is pertinent to mention that refresher trainings for vaccinators were mostly based on theory and classroom training and more focused on planning of PEI activities. Skill development, for example, training in injection giving technique is not a core focus of these refresher courses. Except vaccinators, no other health care providers have been trained in injection giving technique especially in relation to immunization. Few of the nurses are LHWs are involved in vaccination of mothers for Tetanus Toxoid but their contribution towards other antigens is negligible. As a consequence, vaccinators are running static vaccination centers with very limited outreach service delivery.

The existing staff strength shows that all the regular positions of regular vaccinators (373) are filled. In addition there are 163 GAVI-supported vaccinators. Despite accounting for contributions from the other paramedical staff, FATA is experiencing 50% deficit in the number of SIS required. As per the national EPI policy, there should two vaccinators in every union council. Based on this criterion, FATA requires 832 vaccinators. The workshop participants were of strong view that if the exiting number of regular vaccinators is increased substantially, it will cater the requirement of EPI in FATA. It will also allow in increasing the number of EPI-fixed centers for expansion of the existing EPI network which is presently insufficient to meet the requirement on account of difficult terrain.

Figure 12: Availability and workload of skilled immunization staff (2012)

Accredited EPI Service Providers	Posts occupied (in FTE)	Share of Total Operation Time allocated to Immunization	Share of immunization time spent on PEI	FTE spent on PEI	Available (FTE) for EPI	Total FTE spent on immunization
Vaccinators	524	100%	20%	105	419	524
Nurses	78	0%	0%	0	0	0
Dispensers	607	2%	90%	11	1	12
Lady Health Visitors (LHWs)	349	2%	40%	3	4	7
Medical Technicians (MT)	440	2%	90%	8	1	9
Female Medical Technicians (FMT)	0	0%	0%	0	0	0
Mid-wives	0	0%	0%	0	0	0
Lady Health Workers (LHWs)	1,398	2%	90%	25	3	28
				152 (26%)	428 (74%)	580 (100%)
Total FTE available for EPI (except PEI)						428
Total FTE Needed for EPI (except PEI)						849
Deficit						421 (50%)

The problems of human resource management in FATA are not limited to availability of Skilled Immunization Staff (SIS) only. There is also severe shortage of human resources in the management structure both at FATA secretariat and agency levels. There is no surveillance officer, epidemiologist, monitoring and evaluation officer, cold chain manager or communication officer available in FATA

secretariat. Majority of these positions even do not exist in the existing hierarchy. Similarly, at agency level, there is no surveillance officer or epidemiologist in place for supervising surveillance activities. It becomes very difficult for the agency surgeon and field supervisory medical officer to perform all these roles with the help of a single district superintendent vaccination (DSV).

(3) Costing and Financing

Costing and financing	2010	2011	2012
6. Financial sustainability			
6.1 What percentage of total routine vaccine spending was financed using government funds? (including loans and excluding external public financing)	0%	0%	0%
6.2 What proportion of the line item in the provincial budget for immunization was actually funded (actually allocated / planned)?	100%	100%	100%
6.3 What % of immunization resources are being met by the domestic health budget (as identified in the annual budget plan)	100% (for notified HR only)	100% (for notified HR only)	100% (for notified HR only)
6.4 Government expenditures on routine immunization per surviving infant			USD76
6.5 Are provincial immunization budgets and expenditures monitored and reported at national level?	No	No	No

Historically, vaccine procurement has remained a responsibility of the Federal EPI cell. Therefore, no budget has been earmarked by the FATA civil secretariat to date. The expenditure for vaccine procurement is met from Federal Public Service Development Program (PSDP) which is directly transferred from federal government to the Federal EPI Cell.

The FATA health department government provides funds for immunization services through its non-recurrent annual budget. This budgetary allocation is segregated under two separate budget heads: budget for the office of Assistant Director for EPI and separate budgets for agency surgeons. The agency level staff is directly paid from the agency level budget. The main components include salaries and allowances²⁶ (against notified vacancies only) and operations cost.

Resource allocation processes are generally linked with the available staff positions. In the absence of a formal activity-based implementation and monitoring plan, it is difficult for the program managers to negotiate additional funds to meet their operational costs. In addition, the budget allocation for agency levels covers all other health programs including EPI; therefore, it is difficult to rationalize the required costs for EPI related operations within an agency.

(4) Vaccine, Cold Chain and Logistics

Vaccine supply, quality and logistics	2010	2011	2012
7. Transport / Mobility			
7.1 Percentage of ns with a sufficient number of supervisory/EPI field activity vehicles /motorbikes/bicycles (based on their need) in working condition			100% for Agency Surgeons 100% for FSMOs except in FRs 100% for DSVs
7.2 Number of UC with vaccinators using transportation means for outreach			132
8. Vaccine supply			

²⁶ Allowances include multiple items: house rent, professional allowance, medical allowance, conveyance allowance etc.

8.1 Was there a stock-out of any antigen at provincial or agency level during 2012?			Yes
8.2 If yes, specify duration in months			One month
8.3 If yes, specify which antigen(s)			OPV
9. Cold chain / logistics			
9.1 Number of UC with adequate numbers of appropriate and functional cold chain equipment vs. Number of UC with functioning health facilities			180/416
a) With ILR			155
b) With any kind of refrigerators			25
9.2 Availability of a cold chain replacement plan			No
10. Waste disposal			
10.1 Availability of a waste management policy (guidelines/SOP)			Yes
10.2 Number of agencies implementing waste management policy			Yes

Uninterrupted supply of vaccine, proper maintenance of cold chain and availability of other logistics are the key components of a functional immunization program.

There is no central storage system for vaccines in FATA. The vaccine storage for FATA is facilitated by the KPK cold rooms established in Peshawar. All the agencies collect their vaccines and other supplies directly from the KPK cold rooms. The geographical landscape of FATA makes it difficult to maintain a single warehouse for immunization system. It requires a careful planning and mapping exercise to choose suitable places for installing cold rooms. It was decided that two cold rooms should be established to cater for the storage needs when new vaccines will also be introduced. For this purpose, FATA will be divided in two zones: south and north. For south zone, one cold room will be established near Dera Ismail Khan (DIK) or Bannu district. For north zone, one cold room will be established in Peshawar.

Maintaining an inventory for cold chain is sometimes difficult in FATA. Many NGOs working in FATA provide cold chain equipment to the field staff at their own without sharing any information with the FATA health department. On the other hand, it also reflects lack of coordination between government authorities and NGOs. The official records indicate that majority of the available cold chain equipment was supplied before 2012. However, the provincial office is yet to develop a cold chain replacement plan.

Supervisory vehicles are available for the provincial management staff and agency surgeons. All DSVs have motorbikes for their supervisory visits. However, only 132 functional motorbikes are available for 524 vaccinators.

Mere presence of a vehicle or motorbike is not sufficient for conducting program activities. It requires provision of POL according to the needs. At present, no criterion has been developed to work out the amount of POL required for daily visit at any level (FATA secretariat team, Agency Surgeon, DSV or vaccinator). In the absence of such a criterion, it is difficult to rationalize the overall POL requirements.

(5) Immunization Services Delivery

Immunization services	2010	2011	2012
11. Geographical access:			

Immunization services	2010	2011	2012
11.1 Number of population per each EPI fixed sites			23,899
11.2 Proportion of area covered by immunization service to the total populated area			No data
11.3 Proportion of UC not having EPI centers			57% (236 out of 412)
11.4 Proportion of UC not having Skilled Immunization Staff (SIS)			No data
12. Efficiency of service delivery			
12.1 Share of immunization services delivered by EPI centers			43%
12.2 Average time EPI Centers provide immunization service per day			6 hours

There are 180 EPI centers established in 416 union councils. The CMYP workshop participants recommended for expansion of the existing network of EPI centers by establishing EPI centers in 206 health facilities which are already providing health services except immunization.

It is important to understand that the immunization service delivery is largely limited to provision of vaccination services within the static EPI centers through vaccinators alone.

(6) Surveillance and Reporting

Surveillance and Reporting	2010	2011	2012
13. Routine Surveillance			
13.1 Percentage of integrated VPD surveillance reports received at provincial level from agencies compared to number of reports expected:			100%
a) Timeliness			50%
b) Completeness			100%
13.2 AFP detection rate/100,000 population under 15 year of age	1.15	1.75	1.96
13.3 % suspected measles cases for which a laboratory test was conducted			30% ²⁷
13.4 Number of neonatal deaths for which a follow up investigation was conducted			0
13.5 Sentinel Surveillance for Rotavirus established			No
13.6 Sentinel Surveillance for meningitis (Hib/PCV) established			No
13.7 % of suspected meningitis cases tested for Hib/pneumococcal disease according to standard protocol			0%
14. Coverage monitoring			
14.1 % gap in match between DTP3 survey coverage and officially reported figures	No data	No data	No data
15. Immunization safety			
15.1 % of agencies that have been supplied with adequate (equal or more) number of AD syringes for all routine immunizations	100%	100%	100%
16. Adverse Events			
16.1 National AEFI System is Active with a designated national/provincial committee			No
16.2 Number of serious AEFI cases reported and investigated			No

²⁷ This information is a subjective assessment by the EPI staff because on account of non-availability of reliable data

Surveillance is very important for monitoring the status of vaccine preventable diseases. It requires that all reports are received complete and timely, from health centers to the central level. In practice, surveillance reports are received from all the health centers but their timeliness is well below par. Although these reports are considered complete, no validation is carried out at agency level. There are 14 active surveillance sites established across FATA but their functionality is compromised on account of multiple reasons. One of the major reasons is non-availability of qualified staff (surveillance officer or epidemiologist) both at provincial and agency levels. The World Health Organization has appointed surveillance officers at the FATA secretariat level but they primarily look after polio surveillance activities. Under the present situation, it is not possible to conduct outbreak investigations or any epidemiological analysis for improving immunization service delivery.

(7) Demand Generation, Communication and Advocacy

Demand Generation and Communication	2010	2011	2012
17. Communization strategy			
17.1 Availability of a routine immunization communication plan	No	No	No
17.2 KAP Study conducted in relation to immunization	No	No	No
18. Evidence based communication			
18.1 % of government funds on demand generation / communication: EPI and PEI	0	0	0
a) EPI (without PEI)	0	0	0
b) PEI	0	0	0

Demand generation, communication and advocacy are importance for multiple reasons. The communities living in FATA are very conservative and their opposition to vaccination is well documented. This scenario provides an opportunity to use EPI data as evidence to create awareness on importance of immunization for reducing morbidity and mortality due to vaccine preventable diseases. These activities not only enhance acceptability of immunization services but also create opportunities to tap support from communities and other stakeholders like political leadership. There is no communication strategy in place in FATA. There are examples of organizing special walks for raising awareness against Polio; however, these are not a part of a well chalked out communication plan.

1.4 Summary - SWOT

Program Management	
Strength	Weaknesses
- Immunization a recognized government responsibility - National immunization policy and schedule in place - Separate management structure for immunization program at provincial level - An extensive network of immunization system in place across FATA	- No FATA-specific EPI policy - Weak planning and monitoring processes - Absence of annual development plans - Absence of bottom-up planning system (from UC upwards) - Available tools and guidelines for monitoring and supervision not in use - EPI not integrated with other MCH programs
Opportunities	Threats
- Involvement of top political leadership in PEI - Support from external partners	Precarious law and order situation

Human Resource Management	
Strength	Weaknesses
• Availability of fulltime dedicated EPI program manager at provincial level • All notified positions of vaccinator are filled • Negligible turnover of vaccinators who are appointed on permanent basis • Focus on long-term staff retention through recruitment of vaccinators from union councils of their residence	• No human resource management policy • Poor capacity of EPI Office at FATA secretariat due to non-availability of qualified technical staff for surveillance, monitoring and evaluation, cold chain management • Paramedical staff not trained in immunization protocols • Inadequate refresher trainings for vaccinators • Program managers not formally trained in MLM trainings • Dependence upon a substantial number of vaccinators supported through GAVI
Opportunities	Threats
• Presence of other paramedical staff (nurses, LHV, health technicians) for involvement in vaccination activities	• Limited availability of trained human resource
Costing and Financing	
Strength	Weaknesses
• EPI staff is paid through non-recurrent annual budget • Continuity of funding for the existing staff through regular budget	• EPI managers not trained in costing and financing • No rationalization of operation expenditures by determining unit costs • No budget line item for vaccine procurement
Opportunities	Threats
• Donor support	• Limited fiscal space on account of dependence upon the Federal government • Donor fatigue
Vaccine supply, quality and logistics	
Strength	Weaknesses
• Availability of functional cold chain equipment in a majority of union councils	• Low storage capacity for vaccine and other logistics at provincial level • Dependence on KPK for storage of vaccines • Inadequate planning for effective vaccine management • Inadequate transport facility for vaccinators • Weak rationalization of POL for agency staff • Lack of technical expertise for repair and maintenance • Cold chain equipment installed by donors but no resources for repair neither by Government nor donors support
Opportunities	Threats
• Donor support available for installing cold rooms and other cold chain equipment	• Geographical landscape not suitable for maintaining a single warehouse for vaccine storage • Frequent power breakdowns
Immunization Services	
Strength	Weaknesses
• Availability of established fixed EPI centers in	• A substantial number of health facilities

all agencies and FRs	- operating without EPI services leading to high dependence on outreach immunization services - Poorly functioning outreach immunization services - EPI service provision limited to fixed centers - Difficulty in target setting for union councils - Lack of UC level micro planning - Lack of focus on dropout from vaccination
Opportunities	Threats
- Donor support for RED strategy - Availability of a large number of paramedical staff who can be trained in vaccination	- Escalation of military conflicts - Hilly and difficult terrain
Surveillance and Reporting	
Strength	Weaknesses
- Availability of up-to-date guidelines and standardized case definitions and reporting forms - Formal reporting system in place	- No use of surveillance data for program management - Absence of feedback mechanism from FATA secretariat and agency levels - Lack of staff qualified in surveillance - Irregular reporting from health facility level - Lack of validation of reported data
Opportunities	Threats
- Involvement of agency bureaucracy in monitoring of polio eradication activities - Donors are willing to support strengthening of surveillance system	Limited fiscal space for recruitment of surveillance staff
Demand Generation and Communication	
Strength	Weaknesses
Consistency in making efforts to improve acceptability of vaccination among communities	- No context specific communication strategy is available - Immunization staff not trained in social mobilization and communication
Opportunities	Threats
- Availability of multiple mechanism for communication (radio, TV, print media) - Involvement of political and religious leadership	- Community opposition to immunization especially against Polio - Media hype created by incorrect reporting of morbidity and mortality by vaccine preventable diseases - Social barriers against immunization

2 Immunization objectives and strategies

2.1 Program objectives and milestones

Goal of the FATA Immunization Plan is to decrease VPD associated morbidity and mortality:

- Measles incidence reduced to less than 5 case per million population by 2018 with optimally functioning surveillance system

- Number of Polio cases decreased from 20 to zero by 2015 and sustain zero polio case status afterwards
- Neonatal death caused by neonatal tetanus reduced to less than 1 case per 1000 live birth by 2018

The objective of the FATA Immunization Plan is to improve performance of the immunization system that is measured in terms of coverage and equity as listed below:

Indicators	2012	2014	2015	2016	2017	2018
1. Increase DTP3 coverage	44%	50%	55%	60%	67%	75%
2. Increase Measles 1 coverage	50%	55%	58%	63%	68%	73%
3. Increase the proportion of population protected at birth from neonatal tetanus	35%	38%	43%	48%	54%	60%
4. Increase OPV3 coverage	44%	50%	55%	60%	67%	75%
5. Increase PCV10	0%	30%	45%	60%	67%	75%
6. Increase IPV coverage	0%	0%	30%	45%	67%	75%
7. Increase Rota vaccine coverage	0%	0%	0%	40%	67%	75%
8. Increase the proportion of children fully immunized – (% of children aged 12-23 months who receive all basic vaccinations in a country's routine immunization program)	50%	55%	55%	60%	65%	70%
9. Improve geographical equity - % of agencies that have at or above 80% DTP3 coverage	7%	14%	21%	35%	56%	77%
10. Improve socio-economic equity - DTP3 coverage in the lowest wealth		Decreased by 5% from the baseline	Decreased by 10% from the baseline	Decreased by 15% from the baseline	Decreased by 20% from the baseline	Decreased by 25% from the baseline

Indicators	2012	2014	2015	2016	2017	2018
quintile is less than % points of the coverage in the highest wealth quintile						
11. Decrease dropout rate - percentage point difference between DTP1 and DTP3 coverage	13%	12%	10%	8%	6%	4%
12. Increased demand - % of children whose mothers intend to vaccinate children		Increased by 5% from the baseline	Increased by 10% from the baseline	Increased by 15% from the baseline	Increased by 20% from the baseline	Increased by 25% from the baseline

2.2 Strategies and main activities

2.2.1 Program Management

The objective of the immunization system component is to increase program management performance. It means that by 2018:

- Immunization program planning is integrated into provincial budgeting, namely:
 - EPI annual plans are developed and consistent with the provincial cMYP
 - PC1 are adjusted as needed and aligned with the EPI annual plans
- One implementation annual progress report is produced and discussed with key stakeholders every year
- The provincial cMYP is updated regularly reflecting either changes in the context (epidemiological, vaccine availability, etc.), resource availability or immunization system outcomes (achievements)
- At least 2 meetings demonstrating contribution of EPI partners to the decision-making are held every year

Strategies and activities to achieve the component objective are as follows:

ISC Objective 1: **Increase program management performance**

Strategy 1.1: Develop FATA-specific Policy/guidelines on EPI

Activity 1.1.1: Review existing EPI policy and guidelines

Activity 1.1.2: Develop FATA-specific EPI policy and guidelines

Activity 1.1.3: Align cMYP, PC1 and EPI annual plans with EPI policy and guidelines

Strategy 1.2: Develop and institutionalize performance management system

Activity 1.2.1: Set performance standards for immunization system

Activity 1.2.2: Select indicators for measuring performance standards

Activity 1.2.3: Implement performance standards

Activity 1.2.4: Mobilize Technical support as needed (e.g. for Policy development, cMYP revision and development of performance management system)

Strategy 1.3: Review and develop effective and efficient management structure and procedures

Activity 1.3.1: Review and analyze existing EPI management structure at provincial and agency levels

Activity 1.3.2: Identify gaps in availability of human resources and skill mix required for implementation of performance management system

Activity 1.3.3: Re-align/re-organize existing management structure at provincial and agency levels

Activity 1.3.4: Revise job descriptions

Activity 1.3.5: Revise or introduce new standard operating procedures

Activity 1.3.6: Revise or introduce new reporting mechanisms

Activity 1.3.7: Conductive regular review meetings at provincial and agency levels

Strategy 1.4: Introduce mechanisms of accountability through third party monitoring

Activity 1.4.1: Revise government rules and regulations for introducing a monitoring of immunization system through an external institution

Activity 1.4.2: Engage external institution through formal advertisement

Activity 1.4.3: Identify and finalize indicators for assessment

Activity 1.4.4: Conduct bi-annual performance reviews through selected institution

Strategy 1.5: Streamline business processes

Activity 1.5.1: Assess competencies of key EPI management staff on a regular basis

(1) Develop assessment criteria/methodology

(2) Adjust regulations (introducing competency assessment as a mandatory procedure)

(3) Carry out assessments

Activity 1.5.2: Develop capacity building plan for EPI program managers at provincial and agency levels

Activity 1.5.3: Develop emergency plan to deal with disaster like situations

Strategy 1.6: Advocacy and partnership building

Activity 1.6.1: Produce regularly policy briefs/advocacy materials to share with high level officials

Activity 1.6.2: Attend high level meetings and present immunization program achievements, challenges and solutions

Activity 1.6.3: Organize consultations meetings with EPI partners and follow up implementation of decisions and actions agreed in the past

2.2.2 Human Resource Management

The objective of the immunization system component is to increase the availability of qualified human resources for the immunization program. It means that by 2018:

- Proportion of population served to skilled immunization staff (SIS) increases from 50% to 98%
- 95% of managerial and technical positions are staffed with qualified human resource

Strategies and activities to achieve the component objective are as follows:

ISC Objective 2: Increase the availability of qualified human resources for the immunization program

The availability of qualified human resources for the immunization program will be improved by: hiring technical and managerial staff at provincial and agency levels, hiring new vaccinators, integrating available qualified health professionals in delivery of immunization services at health facility level, training and capacity building and enhancing staff motivation through provision financial and non-financial incentives.

Figure 13: Availability and workload of SIS (Baseline and Different Scenarios)

	Total FTE spent on immunization	FTE spent on PEI	Total FTE available for EPI (except PEI)	Total FTE Needed for EPI (except PEI)	GAP (in FTE and %)	
Baseline	580	152	428	849	421	50%
Scenario 1	885	152	733	849	116	14%
Scenario 2	946	152	794	849	55	6%
Scenario 3	988	152	836	849	13	2%

For Strategy 2.3 and Strategy 2.4, three scenarios were developed by using HR Modelling Tool (Figure 13). It was realized that expansion in coverage of immunization services by increasing number of EPI centers will require increase in the number of vaccinators to man these EPI centers. In Scenario 1, the number of vaccinators was increased from 524 to 832 in order to have two vaccinators per union

council (Strategy 2.3:). It reduced the gap in FTE from 50% to 14%. In scenario 2, other paramedical staff was also involved in immunization activities (Strategy 2.4). The gap in FTE was further reduced to 6%. Scenario 3 shows the change in FTE after involvement of LHWs. Their involvement through training on Immunization Practices will help in closing the gap in FTE down to 2%. Scenario 3 was considered appropriate for implementing cMYP in FATA.

Strategy 2.1: Increase the number of technical staff for surveillance, logistics and cold chain management, monitoring and evaluation, and communication at provincial level

Activity 2.1.1: Advertise positions for a provincial epidemiologist/surveillance officer, cold chain and logistics manager and monitoring and evaluation officer, and communication manager

Activity 2.1.2: Conduct interviews and select appropriate technical staff

Strategy 2.2: Increase the number of technical staff for surveillance at agency level

Activity 2.2.1: Advertise positions for epidemiologist/surveillance officers for all 14 agencies and FRs

Activity 2.2.2: Conduct interviews and select appropriate technical staff

Strategy 2.3: Increase the number of SIS by recruiting 308 more vaccinators

Activity 2.3.1: Advertise vaccinator positions in provincial/local media

Activity 2.3.2: Conduct meetings with local authorities/communities promoting job of vaccinators and identification of potential candidates

Activity 2.3.3: Select and contract new vaccinators preferably from the union councils where they will be appointed to

Activity 2.3.4: Explore and provide professional/carrier growth opportunities to vaccinators

Strategy 2.4: Increase the number of SIS by integrating available qualified health professionals in the delivery of immunization services:

Activity 2.4.1: Assess opportunities (availability, readiness/willingness) for engagement of different categories of SIS into immunization program

Activity 2.4.2: Carry out consultations with relevant health authorities (vertical program management) and agree on feasible and sustainable arrangements

Activity 2.4.3: Revise the regulatory framework (standards/guidelines, scope of work) in order to ensure the engagement of SIS in the immunization as planned

Activity 2.4.4: Carry out trainings in immunization for dispensers, medical technicians, lady health visitors and midwives

Strategy 2.5: Increase effectiveness of trainings of EPI medical and managerial staff:

- Activity 2.5.1: Carry out refreshing training for each SIS at least once in 2 years
- Activity 2.5.2: Carry out MLM training of managerial staff in planning (e.g. vaccine forecasting, budgeting), reporting, decision making and advocacy at least once in two years
- Activity 2.5.3: Assess periodically competency of selected category of healthcare professionals involved in immunization
- Activity 2.5.4: Introduce a system of pre and post trainings assessment of the knowledge of trainees
- Activity 2.5.5: Train immunization staff in medical, surveillance and logistics required for the introduction of new vaccines

Strategy 2.6: Increase motivation of key staff of the immunization program

- Activity 2.6.1: Assess regularly motivations of selected category of HR of the immunization system
- Activity 2.6.2: Develop and implement non-financial incentives (career growth opportunities, promotion, recognition/awards, etc.)
- Activity 2.6.3: Explore possibilities for financial incentives (bonuses, performance based payments, etc.) and implement whenever feasible

2.2.3 Costing and Financing

The objective of the immunization system component is to increase financial efficiency and sustainability of the immunization program. It means that by 2018:

- Cost per DPT3 child will be increased from USD76 to USD106
- Immunization system outcome targets are balanced with the financial resources available:
 - 90% of financial resources (secure + probable) mobilized vs. planned
 - Coverage targets revised/adjusted to the availability of funding

ISC Objective 3: Increase financial efficiency and sustainability of the immunization program.

The objective of increasing financial efficiency and sustainability will be achieved by: developing synergies between EPI and other health programs, minimizing wastage of resources and advocacy for ensuring availability of funds.

Strategy 3.1: Enhance efficient utilization of human resources by developing synergies with other health initiatives

- Activity 3.1.1: Incorporate financial efficiency as a core component of MLM training
- Activity 3.1.2: Train EPI program managers on developing mechanisms for financial efficiency

Activity 3.1.3: Increase number of SIS through integration of EPI with other PHC programs (for example, LHW Program)

Strategy 3.2: Minimize wastage of resources under immunization program

Activity 3.2.1: Rationalize use of POL for monitoring and supervision by management staff at provincial and agency level

Activity 3.2.2: Rationalize use of POL for travelling by vaccinators at union council level

Activity 3.2.3: Develop and introduce need-based supply of vaccines, syringes and other materials

Strategy 3.3: Advocacy for ensuring financial sustainability of immunization program

Activity 3.3.1: Assess the 'gap' between existing resources and future requirements

Activity 3.3.2: Inform political and technical leadership about the importance of funding gap

Activity 3.3.3: Mobilize political and technical leadership for increasing share for program-specific costs under non-recurrent budget

Activity 3.3.4: Develop financial projections for mobilizing external donors

Activity 3.3.5: Mobilize political and technical leadership for increasing share for program-specific costs under non-recurrent budget

Activity 3.3.6: Utilize cMYP, PC1 and Annual Plans as key instruments for ensuring resource allocation

2.2.4 Vaccine, Cold Chain and Logistics

The objective of the immunization system component is to improve/sustain uninterrupted supply of vaccines to immunization service delivery. It means that by 2018:

- Stock out at facility level is decreased to zero
- 100% agencies and FRs with at least 01 month buffer stock available within the agency and FR
- % of agencies with average EVM score above 80%

Strategies and activities to achieve the component objective are as follows:

ISC Objective 4: **Improve/sustain uninterrupted supply of vaccines to immunization service delivery**

Strategy 4.1: Upgrade/maintain adequate cold chain equipment

Activity 4.1.1: Assess of needs for cold chain update

Activity 4.1.2: Prepare cold chain replacement plan

Activity 4.1.3: Develop specifications and procurement plan (aligned with the availability of funding)

Activity 4.1.4: Purchase and install necessary activity

Activity 4.1.5: Provide maintenance services on a regular basis

Strategy 4.2: Improve vaccine management by implementing EVM Improvement plan

Activity 4.2.1: Revise the annual work plan in accordance with the EVM improvement plan

Activity 4.2.2: Report on the progress of implementation of the EVM improvement Plan

Strategy 4.3: Prepare cold chain and vaccine management for the introduction of new vaccines

Activity 4.3.1: Establish two cold rooms for FATA

Activity 4.3.2: Establish one provincial warehouse

Activity 4.3.3: Expand cold chain storage capacity at agency level

Activity 4.3.4: Train vaccine management personnel in vLMIS

2.2.5 Immunization Services Delivery

The objective of the immunization system component is to strengthen capacity of immunization service delivery. It means that by 2018:

- Proportion of UCs not having EPI centers decreased to 7%
- Proportion of EPI Centers not having Skilled Immunization Staff (SIS) reduced to 3%

Strategies and activities to achieve the component objective are as follows:

ISC Objective 5: **Strengthen and optimize capacity of immunization service delivery**

Strategy 5.1: Make existing 206 additional health facilities functional for EPI

Activity 5.1.1: Repair facility/infrastructure

Activity 5.1.2: Recruit qualified staff (see corresponding strategy 2.3 under component 2.2.2 “Human Resource Management”)

Activity 5.1.3: Install cold chain equipment (see corresponding strategy 4.1 under component 2.2.4 “Vaccine, Cold Chain and Logistics”)

Strategy 5.2: Increase performance/efficiency (effective coverage) of existing EPI Centers

Activity 5.2.1: Revise regulations

Activity 5.2.2: Mobilize additional qualified staff SIS (see corresponding strategy 2.4 under component 2.2.2 “Human Resource Management”)

Activity 5.2.3: Improve micro-planning through regular supportive supervision of designated staff at EPI centers

Strategy 5.3: Increase vaccination coverage through effective outreach services

Activity 5.3.1: Identify geographical areas to be covered through outreach services through UC mapping

Activity 5.3.2: Prepare UC-specific outreach immunization plans

Activity 5.3.3: Monitor and supervise outreach immunization services

2.2.6 Monitoring, Surveillance and Reporting

The objective of the immunization system component is to increase performance of surveillance and routine monitoring/reporting. It means that by 2018:

- Reliability and accuracy of administrative data increased:
 - Discrepancy ratio (between administrative and survey data) decreases by 50% from the baseline
 - 80% of reporting units receiving satisfactory DQS score
- Ability of surveillance to detect and report on certain cases increased:
 - Number of non-polio AFP cases per 100,000 population detected and reported is increased from 32 in 2012 to 98 in 2018
 - Number of discarded measles cases per 100,000 population increased from 41 in 2012 to 147 in 2018

Strategies and activities to achieve the component objective are as follows:

ISC Objective 6: **Performance of surveillance and routine monitoring/reporting improved**

Strategy 6.1: Streamline data collection and reporting practices (integrate EPI routine monitoring into data management mainstream)

Activity 6.1.1: Assess main causes of data quality flaws

Activity 6.1.2: Introduce regular system of formal feedback mechanism on the administrative reports of subordinated entities

Activity 6.1.3: Conduct bi-annual provincial program review

Activity 6.1.4: Conduct monthly program reviews at agency/FR level

Activity 6.1.5: Provide continuous supportive supervision

Activity 6.1.6: Conduct immunization coverage survey

Activity 6.1.7: Conduct DQS at regular interval

Strategy 6.2: Strengthen accuracy of reporting through validation in field

Activity 6.2.1: Recruit qualified staff (see corresponding strategy 2.1 and 2.2 under component 2.2.2 “Human Resource Management”)

Activity 6.2.2: Conduct data validation through field monitoring visits

2.2.7 Demand Generation, Communication and Advocacy

The objective of the immunization system component is improved knowledge and attitude toward immunization among target population. It means that by 2018:

- % of children whose mothers intend to vaccinate children is increased by 25% from than the baseline
- % of parents with children under 1 year of age aware of at least two benefits of immunization is increased by 25% from the baseline
- % of parents with children under 1 year of age who can identify the nearest immunization center is increased by 25% from the baseline

Strategies and activities to achieve the component objective are as follows:

ISC Objective 7: **Knowledge and attitude toward immunization improved among target population**

Strategy 7.1: Continue community mobilization and communication interventions that proved being effective:

Activity 7.1.1: Conduct advocacy meetings with community leaders and agency administration to sensitize and motivate them regarding the routine immunization

Activity 7.1.2: Develop social mobilization plans at all levels

Activity 7.1.3: Capacity building of immunization staff involved in social mobilization

Activity 7.1.4: Conduct social mobilization activities as planned

Activity 7.1.5: Provide regular supportive supervision to social mobilization teams

Strategy 7.2: Develop and implement evidence based communication strategies

Activity 7.2.1: Conduct formative research of the target population regarding immunization

Activity 7.2.2: Develop communication plan in the light of formative research findings

Activity 7.2.3: Conduct communication activities as per plan

Activity 7.2.4: Assess the effectiveness of the communication strategies

3 Implementation and M&E

3.1 Timelines for the cMYP

Objective/strategies/activities	2014	2015	2016	2017	2018
ISC Objective 1: Increase program management performance					
Strategy 1.1: Develop FATA-specific Policy/guidelines on EPI					
Activity 1.1.1: Review existing EPI policy and guidelines					
Activity 1.1.2: Develop FATA-specific EPI policy and guidelines					
Activity 1.1.3: Align cMYP, PC1 and EPI annual plans with EPI policy and guidelines					
Strategy 1.2: Develop and institutionalize performance management system					
Activity 1.2.1: Set performance standards for immunization system					
Activity 1.2.2: Select indicators for measuring performance standards					
Activity 1.2.3: Implement performance standards					
Activity 1.2.4: Mobilize Technical support as needed (e.g. for Policy development, cMYP revision and development of performance management system)					
Strategy 1.3: Review and develop effective and efficient management structure and procedures					
Activity 1.3.1: Review and analyze existing EPI management structure at provincial and agency levels					
Activity 1.3.2: Identify gaps in availability of human resources and skill mix required for implementation of performance management system					
Activity 1.3.3: Re-align/re-organize existing management structure at provincial and agency levels					
Activity 1.3.4: Revise job descriptions					
Activity 1.3.5: Revise or introduce new standard operating procedures					
Activity 1.3.6: Revise or introduce new reporting mechanisms					
Activity 1.3.7: Conductive regular review meetings at provincial and agency levels					
Strategy 1.4: Revise and introduce mechanisms of accountability through third party monitoring					
Activity 1.4.1: Revise government rules and regulations for introducing a monitoring of immunization system through an external institution					
Activity 1.4.2: Engage external institution through formal advertisement					
Activity 1.4.3: Identify and finalize indicators for assessment					
Activity 1.4.4: Conduct biannual performance reviews through selected institution					

Objective/strategies/activities	2014	2015	2016	2017	2018
Strategy 1.5: Streamline business processes					
Activity 1.5.1: Assess competencies of key EPI management staff on a regular basis					
(1) Develop assessment criteria/methodology					
(2) Adjust regulations (introducing competency assessment as a mandatory procedure)					
(3) Carry out assessments					
Activity 1.5.2: Develop capacity building plan for EPI program managers at provincial and agency levels					
Activity 1.5.3: Develop emergency plan to deal with disaster like situations					
Strategy 1.6: Advocacy and partnership building					
Activity 1.6.1: Produce regularly policy briefs/advocacy materials to share with high level officials					
Activity 1.6.2: Attend high level meetings and present immunization program achievements, challenges and solutions					
Activity 1.6.3: Organize consultations meetings with EPI partners and follow up implementation of decisions and actions agreed in the past					
ISC Objective 2: Increase the availability of qualified human resources for the immunization program					
Strategy 2.1: Increase the number of technical staff for surveillance, logistics and cold chain management, monitoring and evaluation, and communication at FATA Secretariat level					
Activity 2.1.1: Advertise positions for an epidemiologist/ surveillance officer, cold chain and logistics manager and monitoring and evaluation officer, and communication manager					
Activity 2.1.2: Conduct interviews and select appropriate technical staff					
Strategy 2.2: Increase the number of technical staff for surveillance at agency level					
Activity 2.2.1: Advertise positions for epidemiologist/surveillance officers for all 14 agencies and FRs					
Activity 2.2.2: Conduct interviews and select appropriate technical staff					
Strategy 2.3: Increase the number of SIS by recruiting 96 more vaccinators					
Activity 2.3.1: Advertise vaccinator positions in provincial/local media					
Activity 2.3.2: Conduct meetings with local authorities/communities promoting job of vaccinators and identification of potential candidates					
Activity 2.3.3: Select and contract new vaccinators preferably from the union councils					

Objective/strategies/activities	2014	2015	2016	2017	2018
where they will be appointed to					
Activity 2.3.4: Explore and provide professional/carrier growth opportunities to vaccinators					
Strategy 2.4: Increase the number of SIS by integrating available qualified health professionals in the delivery of immunization services:					
Activity 2.4.1: Assess opportunities (availability, readiness/willingness) for engagement of different categories of SIS into immunization program					
Activity 2.4.2: Carry out consultations with relevant health authorities (vertical program management) and agree on feasible and sustainable arrangements					
Activity 2.4.3: Revise the regulatory framework (standards/guidelines, scope of work) in order to ensure the engagement of SIS in the immunization as planned					
Activity 2.4.4: Carry out trainings in immunization for dispensers, medical technicians, lady health visitors and midwives					
Strategy 2.5: Increase effectiveness of trainings of EPI medical and managerial staff:					
Activity 2.5.1: Carry out refreshing training for each SIS at least once in 2 years					
Activity 2.5.2: Carry out MLM training of managerial staff in planning (e.g. vaccine forecasting, budgeting), reporting, decision making and advocacy at least once in two years					
Activity 2.5.3: Assess periodically competency of selected category of healthcare professionals involved in immunization					
Activity 2.5.4: Introduce a system of pre and post trainings assessment of the knowledge of trainees					
Activity 2.5.5: Train immunization staff in medical, surveillance and logistics required for the introduction of new vaccines					
Strategy 2.6: Increase motivation of key staff of the immunization program					
Activity 2.6.1: Assess regularly motivations of selected category of HR of the immunization system					
Activity 2.6.2: Develop and implement non-financial incentives (carrier growth opportunities, promotion, recognition/awards, etc.)					
Activity 2.6.3: Explore possibilities for financial incentives (bonuses, performance based payments, etc.) and implement whenever feasible					
ISC Objective 3: Increase financial efficiency and sustainability of the immunization program.					
Strategy 3.1: Enhance efficient utilization of human resources by developing synergies with other health initiatives					
Activity 3.1.1: Incorporate financial efficiency as a core component of MLM training					

Objective/strategies/activities	2014	2015	2016	2017	2018
Activity 3.1.2: Train EPI program managers on developing mechanisms for financial efficiency					
Activity 3.1.3: Increase number of SIS through integration of EPI with other PHC programs (for example, MNCH Program)					
Strategy 3.2: Minimize wastage of resources under immunization program					
Activity 3.2.1: Rationalize use of POL for monitoring and supervision by management staff at provincial and agency level					
Activity 3.2.2: Rationalize use of POL for travelling by vaccinators at union council level					
Activity 3.2.3: Develop and introduce need-based supply of vaccines, syringes and other materials					
Strategy 3.3: Advocacy for ensuring financial sustainability of immunization program					
Activity 3.3.1: Assess the 'gap' between existing resources and future requirements					
Activity 3.3.2: Inform political and technical leadership about the importance of funding gap					
Activity 3.3.3: Mobilize political and technical leadership for increasing share for program-specific costs under non-recurrent budget					
Activity 3.3.4: Develop financial projections for mobilizing external donors					
Activity 3.3.5: Mobilize political and technical leadership for increasing share for program-specific costs under non-recurrent budget					
Activity 3.3.6: Utilize cMYP, PC1 and Annual Plans as key instruments for ensuring resource allocation					
ISC Objective 4: Improve/sustain uninterrupted supply of vaccines to immunization service delivery					
Strategy 4.1: Upgrade/maintain adequate cold chain equipment					
Activity 4.1.1: Assess of needs for cold chain update					
Activity 4.1.2: Prepare cold chain replacement plan					
Activity 4.1.3: Develop specifications and procurement plan (aligned with the availability of funding)					
Activity 4.1.4: Purchase and install necessary activity					
Activity 4.1.5: Provide maintenance services on a regular basis					
Strategy 4.2: Improve vaccine management by implementing EVM Improvement plan					
Activity 4.2.1: Revise the annual work plan in accordance with the EVM improvement plan					
Activity 4.2.2: Report on the progress of implementation of the EVM					

Objective/strategies/activities	2014	2015	2016	2017	2018
improvement Plan					
Strategy 4.3: Prepare cold chain and vaccine management for the introduction of new vaccines					
Activity 4.3.1: Establish two cold rooms for FATA					
Activity 4.3.2: Establish a provincial EPI warehouse					
Activity 4.3.3: Expand cold chain storage capacity at agency level					
Activity 4.3.4: Train vaccine management personnel in vLMIS					
ISC Objective 5: Strengthen and optimize capacity of immunization service delivery					
Strategy 5.1: Make existing 206 additional health facilities functional for EPI					
Activity 5.1.1: Repair facility/infrastructure					
Activity 5.1.2: Recruit qualified staff (see corresponding strategy 2.3 under component 2.2.2 "Human Resource Management")					
Activity 5.1.3: Install cold chain equipment (see corresponding strategy 4.1 under component 2.2.4 "Vaccine, Cold Chain and Logistics")					
Strategy 5.2: Increase performance/efficiency (effective coverage) of existing EPI Centers					
Activity 5.2.1: Revise regulations					
Activity 5.2.2: Mobilize additional qualified staff SIS (see corresponding strategy 2.4 under component 2.2.2 "Human Resource Management")					
Activity 5.2.3: Improve micro-planning through regular supportive supervision of designated staff at EPI centers					
Strategy 5.3: Increase vaccination coverage through effective outreach services					
Activity 5.3.1: Identify geographical areas to be covered through outreach services through UC mapping					
Activity 5.3.2: Prepare UC-specific outreach immunization plans					
Activity 5.3.3: Monitor and supervise outreach immunization services					
ISC Objective 6: Performance of surveillance and routine monitoring/reporting improved					
Strategy 6.1: Streamline data collection and reporting practices (integrate EPI routine monitoring into data management mainstream)					
Activity 6.1.1: Assess main causes of data quality flaws					
Activity 6.1.2: Introduce regular system of formal feedback mechanism on the administrative reports of subordinated entities					
Activity 6.1.3: Conduct bi-annual provincial program review					

Objective/strategies/activities	2014	2015	2016	2017	2018
Activity 6.1.4: Conduct monthly program reviews at agency/FR level					
Activity 6.1.5: Provide continuous supportive supervision					
Activity 6.1.6: Conduct immunization coverage survey					
Activity 6.1.7: Conduct DQS at regular interval					
Strategy 6.2: Strengthen accuracy of reporting through validation in field					
Activity 6.2.1: Recruit qualified staff (see corresponding strategy 2.1 and 2.2 under component 2.2.2 “Human Resource Management”)					
Activity 6.2.2: Conduct data validation through field monitoring visits					
ISC Objective 7: Knowledge and attitude toward immunization improved among target population					
Strategy 7.1: Continue community mobilization and communication interventions that proved being effective:					
Activity 7.1.1: Conduct advocacy meetings with community leaders and agency administration to sensitize and motivate them regarding the routine immunization					
Activity 7.1.2: Develop social mobilization plans at all levels					
Activity 7.1.3: Capacity building of immunization staff involved in social mobilization					
Activity 7.1.4: Conduct social mobilization activities as planned					
Activity 7.1.5: Provide regular supportive supervision to social mobilization teams					
Strategy 7.2: Develop and implement evidence based communication strategies					
Activity 7.2.1: Conduct formative research of the target population regarding immunization					
Activity 7.2.2: Develop communication plan in the light of formative research findings					
Activity 7.2.3: Conduct communication activities as per plan					
Activity 7.2.4: Assess the effectiveness of the communication strategies					

3.2 Monitoring and Evaluation

3.2.1 M&E Framework for immunization



M&E Framework

File attached (click the icon to open the file).

3.2.2 Monitoring and Evaluation Strategy and Plan

The M&E Framework is the essential instrument that the immunization program will use for tracking the performance of cMYP in FATA. The quantifiable indicators are grouped under three broad areas: impact, outcomes and immunization-system-component-specific (ICS) indicators.

The impact and outcomes indicators will facilitate in linking FATA cMYP with the broader national plans. These will reflect whether the planners and funders are getting value for money.

The ICS indicators will be used to link the inputs, processes and outputs. The source of information for ICS indicators is primarily based on EPI and administrative data. Authenticity and accuracy of program and administrative data is often questioned in Pakistan. Therefore, validation of cMYP results through third party monitoring (TMP) will ensure transparency and accountability within the reporting system.

The main sources of information include EPI MIS, DHIS, MNCH MIS, LHW Program MIS and other administrative data. In addition to these health sector-specific data sources, EPI coverage survey and other periodic surveys will provide the information that is not covered under public health sector.

The M&E Framework will be used in planning and decision making while developing PC-1, revisiting cMYP, and conducting periodic reviews at provincial and agency level. It will also be used to negotiate the resource requirement from the FATA Civil Secretariat, Federal government and donors.

The M&E Officer will be responsible for maintaining and updating the information required for M&E Framework.

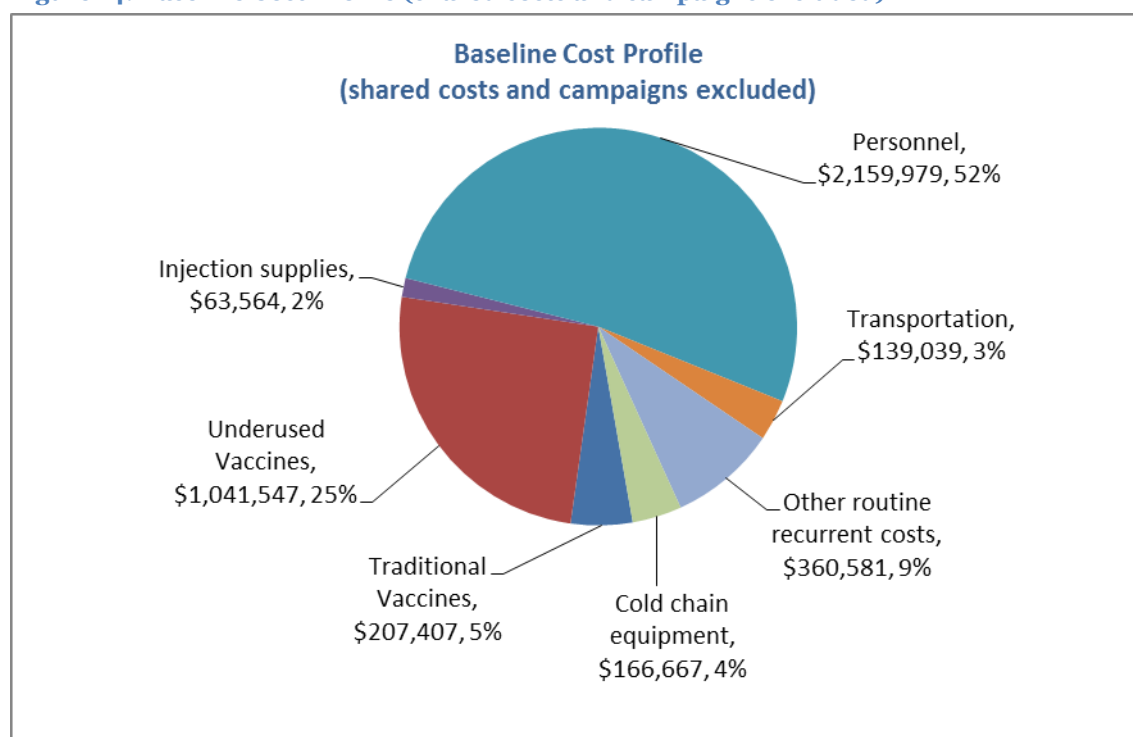
4 Immunization Program Costing and Financing

4.1 Current program costs and financing



cMYP Costing Tool

Figure 14: Baseline Cost Profile (shared costs and campaigns excluded)



The baseline cost profile for FATA is grouped under 5 categories: Personnel, Transportation, Other routine recurrent costs, Cold chain equipment, and Vaccines and Injection and supplies (Figure 14).

1. Personnel

The information pertaining to personnel consisted of three components: salaries and allowance for full-time EPI staff, per-diems for vaccinators and mobile teams and per-diems for supervisory and monitoring staff.

The baseline information was compiled on basis of standard government payment rates that are used for payment of salaries, allowances and per-diems. The FATA EPI Office used this in consultation with the FATA Health department.

The analysis of the baseline cost profiles (2012) shows that USD2.159 million was incurred on personnel cost which constituted to 52% of the total expenditure on immunization program. Further analysis shows that 90% of this cost was spent on payment of salaries and allowances. In comparison, 6% and 4% was spent on payment for per-diems for vaccinators and mobile teams and per-diems for supervisory and monitoring staff respectively. The incurred under 'Personnel' was borne by the FATA secretariat and GAVI HSS Grant. This analysis highlights that salaries and allowance were the major cost driver in 2012.

2. Transportation

The expenditure on transportation was based on the type and number of vehicles available at FATA secretariat, agency and union council levels. In addition, information was collected regarding average

mileage per year of a given vehicle. The FATA EPI office provided the information on the quantity of fuel used per 100KM.

The analysis shows that the expenditure on transportation contributed to 3% (USD139,039 million) of the total expenditure in 2012. On the main reasons for less expenditure on transportation was non-availability of sufficient number of vehicles for the immunization staff. For example, only 132 motorbikes were available/in working condition for 524 vaccinators at the union council level. The provincial government was the sole contributor for the expenditure on transportation.

3. Other routine recurrent costs

The other routine costs comprised expenditures for cold chain maintenance and overheads, and also for conducting social mobilization communication activities. The information pertaining to cold chain maintenance and overheads was populated by cMYP costing tool based on the standard inputs provided by the Federal EPI Cell. No such information, specific to EPI, is maintained and consolidated by the FATA health department. In comparison, the information on expenditure incurred on social mobilization and communication activities was collected from budget registers maintained at FATA EPI office.

The total expenditure against routine recurrent costs was estimated as USD360,581 which was found 9% of the total baseline expenditure out of which 45% was spent on social mobilization and communication activities.

4. Cold Chain Equipment

In 2012, the Federal EPI Cell provided 25 Solar Refrigerators for FATA. The procurement rates provided by the Federal EPI Cell were used to estimate the costs incurred on the cold rooms. An amount of USD166,667, 4% of the total baseline expenses, was spent on supplying these Solar Refrigerators.

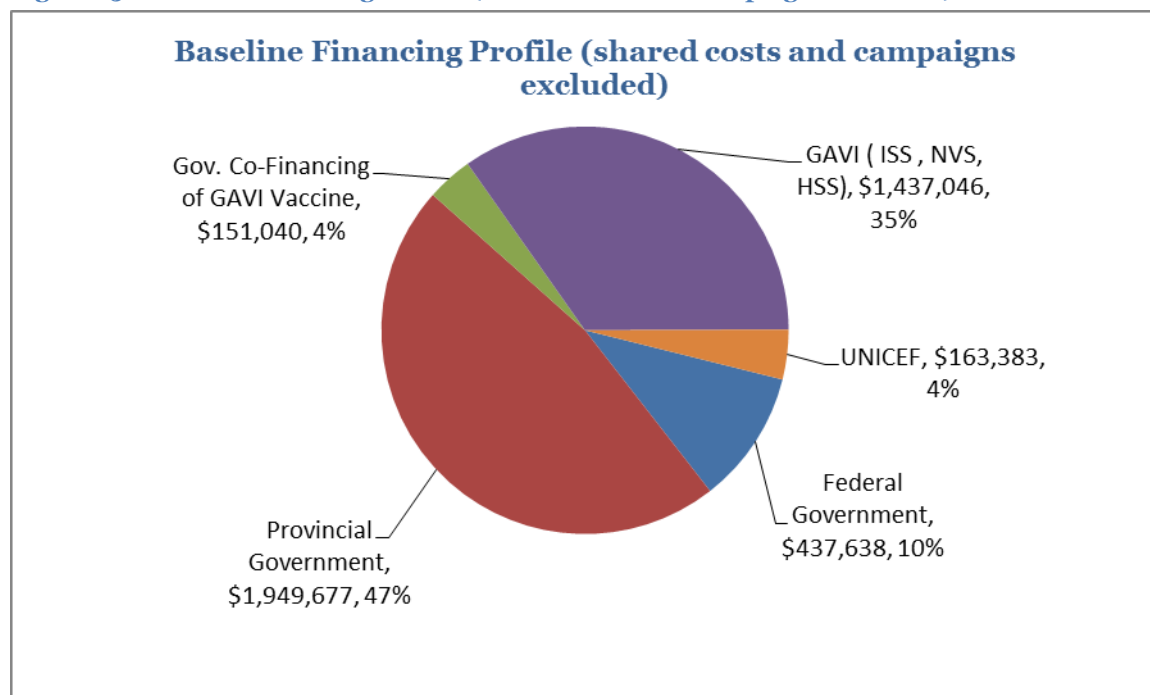
5. Vaccines, Injections and Supplies

This category consists of: Traditional Vaccines, Underused and New Vaccines, and Injections and supplies. The Traditional Vaccines include BCG, OPV, Measles and Tetanus Toxoid whereas Underused Vaccines include Pentavalent (DPT-HepB-Hib). New vaccines include IPV and Rota vaccine; however, the new vaccines were not introduced in 2012 and the government plans to introduce these vaccines from 2015 onwards. All the vaccines are procured at the Federal level and then supplied to the provincial governments.

WHO's forecasting tools was not used for estimating the expenditures made for procuring vaccines and injections. It was based on the information provided by the Federal EPI Cell on the number of doses per antigen supplied during 2012. The total expenditure was calculated by using the cost per dose per antigen provided in the costing tool.

In 2012, 32% of the total expenditure was incurred on vaccines, injections and supplies, a major driver of the costs required for EPI besides personnel. In the coming years, this cost will further increase because the government plans to introduce new vaccines, IPV and Rotavirus.

Figure 15: Baseline Financing Profile (shared costs and campaigns excluded)



In 2012, the total spending on EPI program in FATA was shared among the FATA secretariat (Provincial government), Federal government, Federal Govt. Co-Financing of GAVI, UNICEF and GAVI (ISS, NVS, HSS) grant (Figure 15).

In 2012, the FATA secretariat (provincial government) was the largest financier of the EPI program which provided 47% of the total resources. It included expenditure for payment of salaries and allowances (83%), transportation (7%) and maintenance of cold chains equipment and other recurring costs (10%). Despite spending nearly USD2 million on immunization, the FATA secretariat remained heavily dependent upon the contributions from the Federal government, UNICEF and GAVI HSS Grant (USD2.1 million). This is a significant limitation in the context of a narrow fiscal space for the FATA health department (Figure 6).

GAVI (ISS, NVS, HSS) was the second largest financier of the EPI program which provided 35% of the total resources. Out of these, 62% (USD890,507) was spent on procuring underused vaccines where as 42% (USD546,539) were incurred on payment of salaries to 168 vaccinators recruited on contractual basis.

The finances provided by the federal government (10%) were spent on procuring traditional vaccines and injection supplies and 25 solar refrigerators. The breakdown of this expenditure is presented in Figure 14. In addition, the federal government also provided 4% of the total resources through its share under Govt. Co-financing of GAVI vaccines. In total, the federal government provided 14% of the total resource requirement.

The donor contribution from partners (4%), from UNICEF, was mainly spent on social mobilization and communication activities.

Figure 16: Immunization program baseline indicators

Baseline Indicators	2012
Total Immunization Expenditures (\$)	6,502,255
Campaigns (\$)	2,363,471
Routine Immunization only	4,138,784
per capita (\$)	0.96
per DTP3 child (\$)	67.69
% Vaccines and supplies	32%
% Government funding	58%
% Total health expenditures	3%
% Gov. health expenditures	32%
% GDP	0.08%
Total Shared Costs (\$)	528,592
% Shared health systems cost	8%
TOTAL (\$)	7,030,847

The analysis of the baseline indicators shows that, in 2012, the total expenditure of the immunization system was USD6.5 million (Figure 16). However, it is important to mention that besides this immunization-specific cost, the FATA secretariat (provincial government) also contributed USD 0.5 million as the Shared Health System costs which formed 8% of the total expenditure on immunization system.

Of the total immunization expenditure, 36% funds were spent on special immunization campaign, Polio Eradication Initiative (PEI). In comparison, the routine immunization activities consumed USD4.1 million (54%) of the total immunization expenditure excluding shared health system costs. The FATA EPI management plans to highlight this important aspect at all forums including politicians, technocrats and donors in order to bring their focus more towards the significance of routine immunization services.

Further analysis of indicators reveals that, the expenditure on routine immunization in 2012 was spent at an average of USD0.96 per capita or USD67.69 per DPT3 child. The future investments in human resources, cold chain equipment, vehicles and transportation will obviously increase per capita and per DPT3 child costs. In a situation where 58% of the total costs were borne by the public sector, the FATA EPI managers will require to develop their skills in planning and management in order to compete not only with other government departments for allocation of additional resources but also to persuade the donor's for bridging the gaps in resource availability.

The FATA EPI management also plans to use these indicators as a demand creation tool to deliver general awareness messages to the general population highlighting how much government is spending on every child in FATA. For example, in 2012, the government spent on average Rs.7107 (USD67.69) on every child when he became 3 and a half month old.

The next section present details on future resource requirements.

4.2 Future resource requirements

Figure 17: Future resource requirements by cost categories

COST CATEGORY	2014	2015	2016	2017	2018
	USD	USD	USD	USD	USD
ROUTINE IMMUNIZATION COSTS					
Traditional Vaccines	117,972	131,154	146,772	165,366	185,088
Underused Vaccines	653,344	732,450	815,062	934,776	1,069,862
New Vaccines	1,040,380	1,391,134	2,620,092	3,202,866	3,578,609
Injection supplies	69,538	87,030	102,692	117,497	132,536
Personnel	3,326,691	3,995,173	4,314,787	4,659,969	5,032,767
Transportation	588,656	659,220	711,985	768,974	830,524
Other routine recurrent costs	855,863	1,036,117	932,682	1,079,284	1,003,688
Vehicles	1,703,280	111,974			
Cold chain equipment	2,489,877	466,770			
Other capital equipment	118,150				
RI Costs (Sub-Total)	10,963,751	8,611,023	9,644,072	10,928,732	11,833,075
CAMPAIGN COSTS					
Campaigns ²⁸	6,654,913	5,501,341	1,673,237	2,557,243	1,783,662
GRAND TOTAL	17,618,665	4,112,364	11,317,309	13,485,975	13,616,737

Figure 17 presents details of the projected resource requirement for 5 years, from 2014 to 2018. The same information is also presented in Pakistani Rupees in Figure 18. The future resource requirement is separately presented under routine immunization costs and campaigns.

The routine immunization costs are further divided in seven categories: Vaccines and Injection Supplies, Personnel, Transportation, Vehicles, Cold chain equipment, other Capital equipment and other routine recurrent costs.

1. Vaccines and Injection Supplies

In the next 5 years, the FATA health department plans to improve the coverage rate of different vaccines (Annex 1). The financial projections for vaccines and injection supplies are based on the number of doses required per antigen including wastage rates and the price list provided available in the costing tool.

The Federal Government will provide resources for traditional vaccines and injection supplies. The underused vaccines and one new vaccine (PCV 10) will be financed through GAVI (ISS, NVS HSS) and Federal governments share of co-financing for GAVI vaccines. In addition, the government also plans to introduce two new vaccines: IPV and Rotavirus vaccines in 2015 and 2016 respectively. Both of these vaccines will be financed through GAVI (ISS, NVS, HSS); however, Rota vaccine will also be supported Federal government's share of co-financing for GAVI vaccines. The introduction of new vaccines will have financial implication not only for the resource requirement for procurement of vaccines and injection supplies but also for cold chain equipment, overhead costs and training of personnel.

²⁸ Cost for SIAs for Polio Eradication are estimated on the basis of 16 SIAs per year for 2014-15 and 4 SIAs per year for 2016-18.

In order to achieve the immunization coverage targets, the additional resource requirement for purchasing vaccines and injection supplies will increase by almost 4 times in 2018. In comparison to the expenditure of USD1.2 million in 2012, the resource requirement will increase to USD4.96 million by the year 2018. These aspects are further discussed in the subsequent sections.

2. Personnel

The FATA EPI office plans to increase the availability of qualified human resources for the immunization program at provincial, agency and union council levels (ISC Objective 2:).

At FATA secretariat, new positions of epidemiologist, surveillance officer, logistics and cold chain management officer and communication officer will be created. It will also include increasing the number of support staff in FATA EPI office.

At agency level, one position each for agency surveillance officer and data entry operator will be created in all 14 agencies/FRs. Further, vacant positions of the assistant superintendent vaccination (14) will also be filled.

At UC level, 308 vaccinators will be recruited to increased coverage in the uncovered union councils and also to man 206 new fixed EPI centers across FATA.

The addition of new staff will require a substantial increase in resource allocation for immunization program. By 2018, the funds required for payment of salaries and allowances will be more than doubled as of 2012. The provincial government will require USD5 million in 2018 as compared to USD2.16 million in 2012. It is also pertinent to mention that after 2015, EPI in FATA will require an additional USD0.5 million to finance 163 GAVI-supported vaccinators when the grant period comes to an end by 2015.

3. Transportation

Expansion in the EPI coverage will result in increase in demand for resources for transportation. In 2012, nearly 3% of the total resources were spent on transportation. By 2018, the immunization system will require to increase this expenditure 7%. In absolute numbers, USD830,524 will be required to meet the transportation needs. This requirement is closely linked with the increase in POL prices. Although, the costing tool has accounted for inflation in POL prices, the FATA EPI office will revise these estimates on yearly basis in order to ensure realistic projections for resource requirement.

4. Vehicles

The immunization system will require an amount of USD1.8 million to procure vehicles required for the immunization staff and supply of vaccines. These projections are based on the price list provided by Federal EPI Cell and the total number of vehicles that are planned to be hired. The immunization program also plans to replace the existing vehicles that have completed their on-road life. The FATA EPI office and agency offices will be strengthened by provision of vehicles for monitoring and supervision whereas motorbikes will be procured for 832 vaccinators for outreach immunization services.

5. Cold chain equipment

The immunization program plans to enhance the capacity of the cold chain system in order to meet the needs when new vaccines will be introduced in 2015 and 2016. It includes installation of two cold

rooms, supply of new ILRs/Freezers to agency offices and Solar refrigerators and ILRs to fixed EPI centers. It also includes supply of power generators and other cold chain equipment. The FATA EPI office has estimated these projections by using the information on number of items required and the price list provided by the Federal EPI Cell.

It is estimated that USD2.95 million will be required to meet the needs of cold chain equipment.

6. Other capital requirement

The immunization system will need USD118,150 for supplying other capital equipment (laptops, computers, photocopiers, furniture etc.) for FATA EPI office and 14 agency/FR offices. These projections are estimated by using average unit costs as per the prevailing market rates.

7. Other recurrent costs

Other recurrent costs consist of funds required for cold chain maintenance and overheads, maintenance of other capital equipment, utility bills, short-term training, IEC/social mobilization, disease surveillance, program management and other routine recurrent costs. The FATA EPI office has estimated the resource requirement under this category by breaking down each component into activities and determining the average cost per activity.

The financial projections indicate that the immunization program will require USD4.9 million to meet the expenditure planned under other recurrent costs.

In total, immunization system in FATA will require USD51.9 million to meet the needs of routine immunization system over a period of 5 years (2014-18) which is 9.4% of the total resource requirement.

In addition to the routine immunization, the FATA health department plans to conduct special immunization campaigns in the next 5 years. Majority of the campaign costs will be incurred on SIAs for Polio eradication. In order to bring down the incidence of Polio to zero, 16 rounds of polio SIAs per year will be conducted in 2014-15 with an average coverage of 95%. From 2016 to 2018, four rounds of polio SIAs per year will be conducted with an average coverage of 95%. In addition to polio SIAs, the FATA health department plans to conduct two measles campaigns with an average coverage of 95%, one each in 2014 and 2017. All the agencies in FATA are categorized as high risk areas for Maternal and Neonatal Tetanus. The FATA health department plans to conduct three rounds of Tetanus Toxoid vaccination in FAT under which 50% of the women in child bearing age will be immunized over a period of five years. In order to achieve the coverage targets for SIAs, the immunization system will require USD18.1 million.

Figure 18: Future resource requirements by cost categories (in Pakistani Rupees)

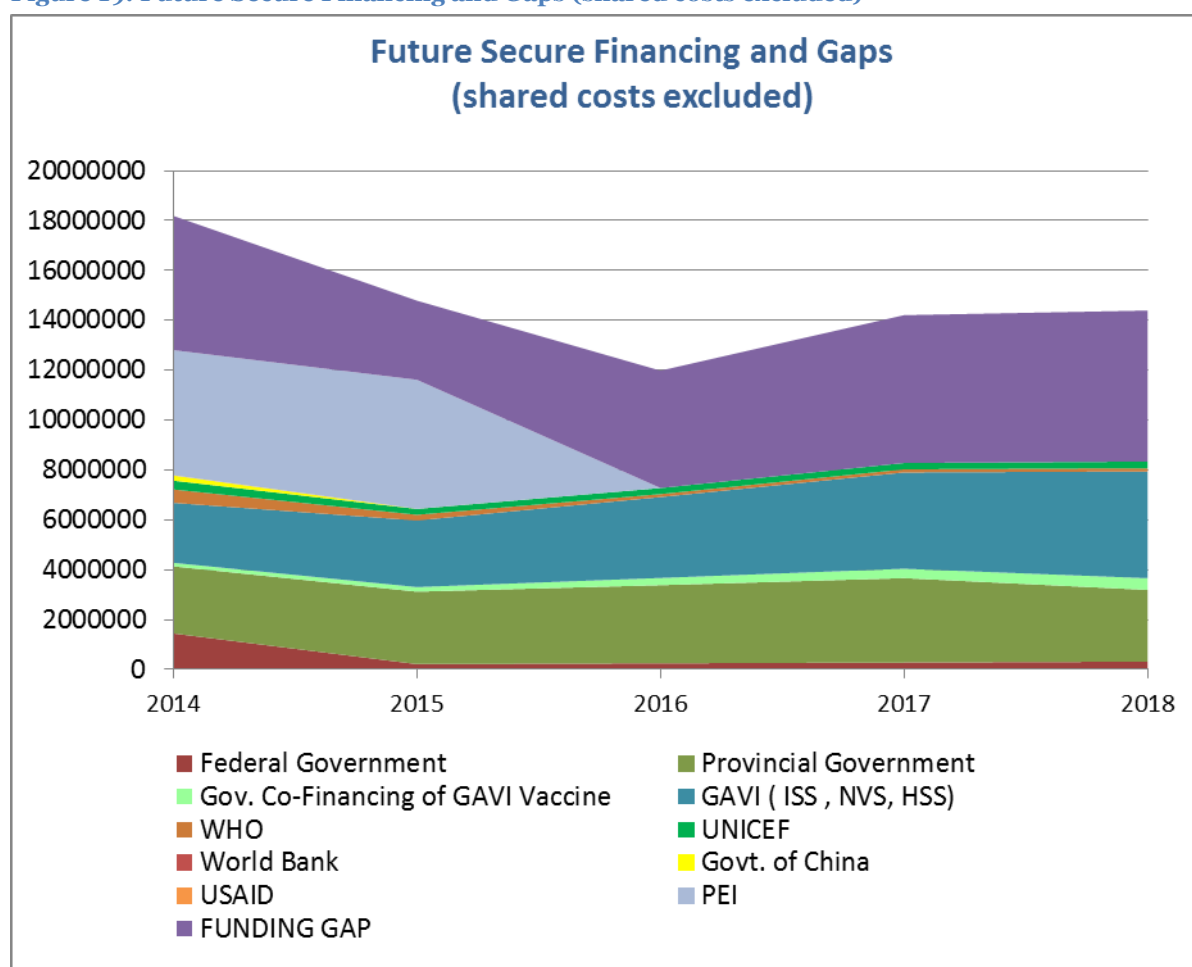
COST CATEGORY	2014	2015	2016	2017	2018
	PKR (million)	PKR (million)	PKR (million)	PKR (million)	PKR (million)
ROUTINE IMMUNIZATION COSTS					
Traditional Vaccines	12.4	13.8	15.4	17.4	19.4
Underused Vaccines	68.6	76.9	85.6	98.2	112.3
New Vaccines	109.2	146.1	275.1	336.3	375.8
Injection supplies	7.3	9.1	10.8	12.3	13.9
Personnel	349.3	419.5	453.1	489.3	528.4

COST CATEGORY	2014	2015	2016	2017	2018
	PKR (million)	PKR (million)	PKR (million)	PKR (million)	PKR (million)
Transportation	61.8	69.2	74.8	80.7	87.2
Other routine recurrent costs	89.9	108.8	97.9	113.3	105.4
Vehicles	178.8	11.8	-	-	-
Cold chain equipment	261.4	49.0	-	-	-
Other capital equipment	12.4	-	-	-	-
Routine Immunization Costs (Sub-Total)	1,151.2	904.2	1,012.6	1,147.5	1,242.5
CAMPAIGNS					
Campaigns	698.8	577.6	175.7	268.5	187.3
GRAND TOTAL	1,850.0	1,481.8	1,188.3	1,416.0	1,429.8

The next section presents an analysis on future financing and funding gaps of the immunization program.

4.3 Future financing and funding gaps of the immunization program

Figure 19: Future Secure Financing and Gaps (shared costs excluded)



The financial projections presented in Figure 19 indicate that the GAVI (ISS, NVS, HSS) and FATA Civil secretariat (provincial government) are the main sources of secure financing for immunization program in the next five years. Their contribution will gradually increase from USD5 million in 2014 to USD7.1 million in 2018. In addition, GAVI will also provide funds for measles and MNT campaign. It is pertinent to mention that the GAVI funds provided for the operational costs of the measles and MNT campaigns will be channeled through WHO and UNICEF respectively.

In 2014-15, there are 32 rounds of Polio SIAs are planned for FATA. The Polio Eradication Initiative (PEI) will provide USD10.1 million of these activities. It is expected that zero incidence of Polio will be achieved by the end of 2015.

The federal government will provide USD1.45 million under its share of co-financing GAVI vaccines in the next 5 years. The contribution from the Government of China and USAID will be in providing cold chain equipment and training on vLMIS respectively.

Considering only the secure funds, there is a substantial funding gap of USD25.23 million for the period of 5 years. The overall volume of the funding gap remains almost the same except a decrease in 2015. The main drivers of this funding gap are the costs required for hiring additional staff, their salaries and allowance, additional transport costs, cold chain equipment, other capital equipment and some aspects of program management. It also includes the resources required for conducting SIAs for Polio eradication from 2016 onwards.

Figure 20: Future Secure and Probable Financing and Gaps (shared costs excluded)

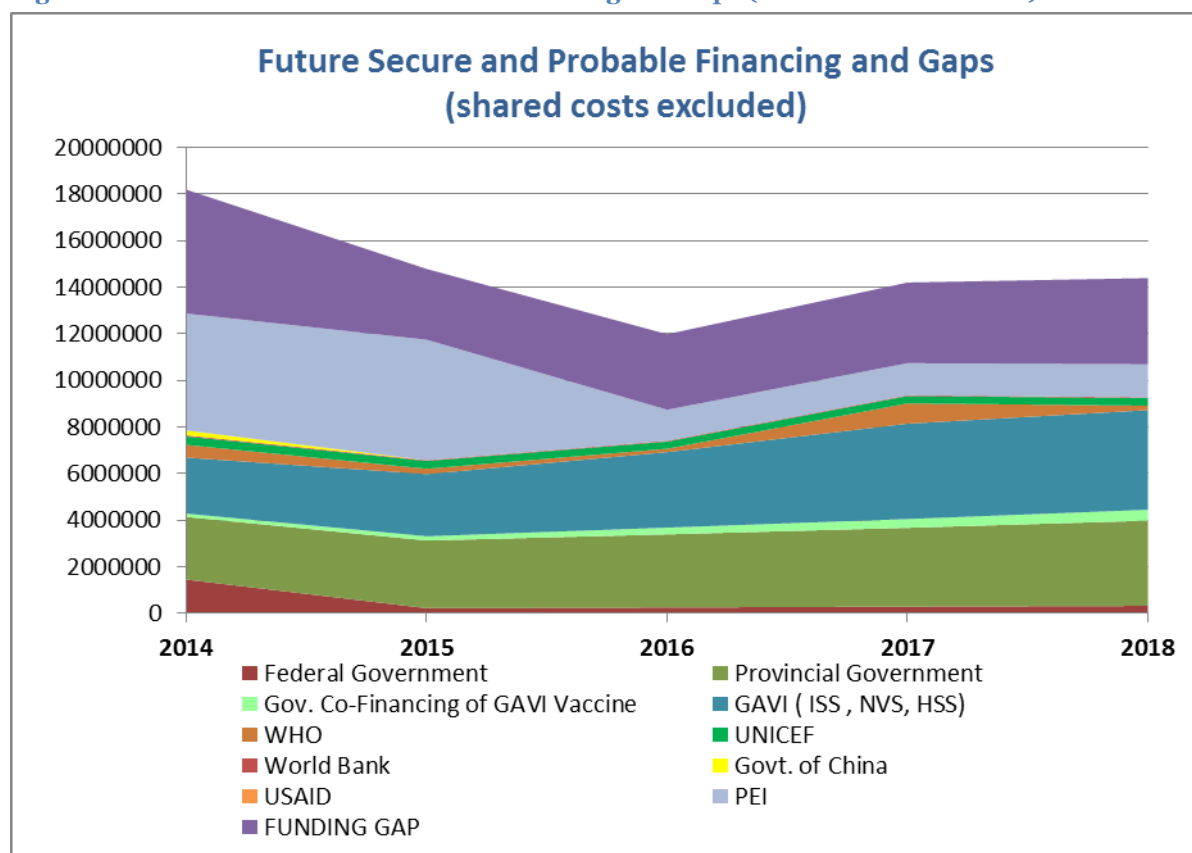


Figure 20 shows that the probable funding has limited potential to bridge the funding gap highlighted in Figure 19. The major contributors to probable funding are WHO, World Bank, UNICEF for social

mobilization, program management and other recurrent costs. It also includes GAVI (ISS, NVS, HSS) support for Measles campaign for children below five years and potential financiers for polio SIAs.

The financial projection indicates that considering both secure and probable funding, there will remain a funding gap of USD18.7 million primarily required for meeting the needs pertaining to salaries and allowances, logistics (cold chain equipment and vehicles), other recurrent costs and Polio SIA activities.

4.4 Funding gap analysis with Secure Funds only

Figure 21: Composition of the Funding Gap with Secure Funding only

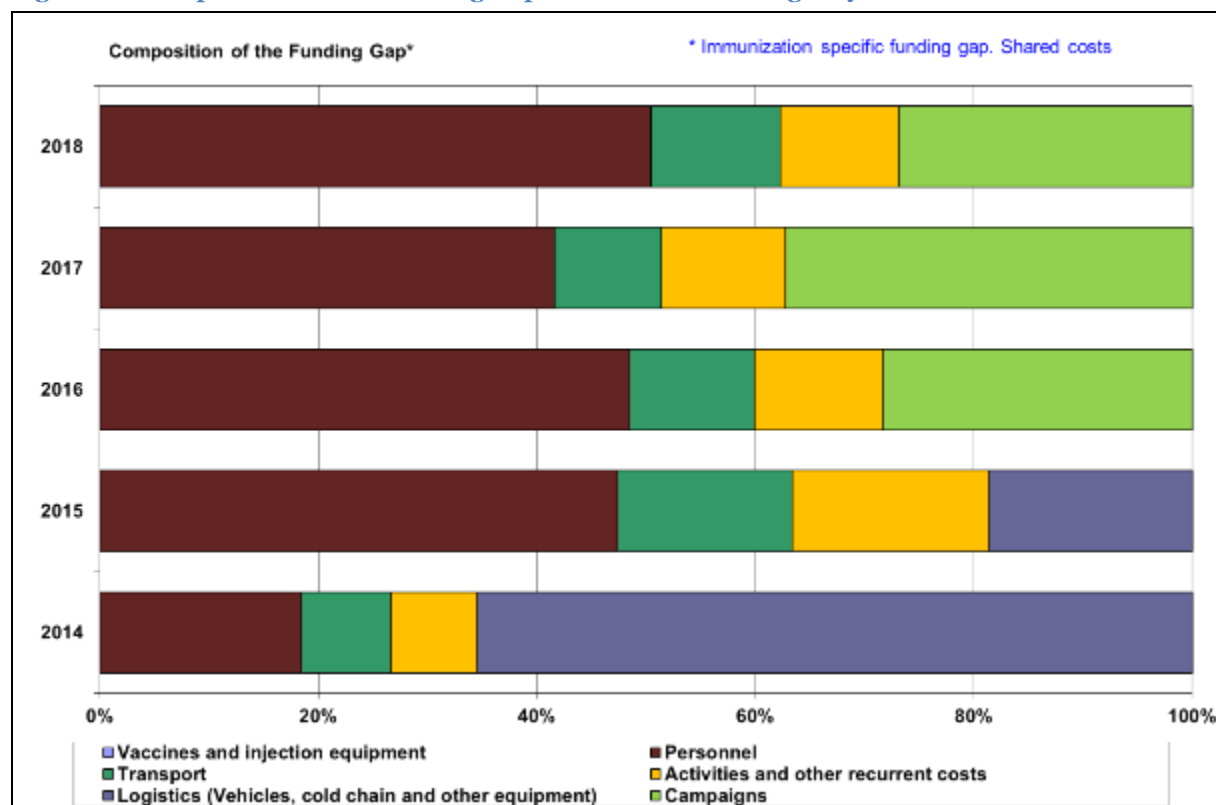


Figure 21 highlights the composition of the funding gap with secure funding only. It is quite evident that the composition of the funding gap remains almost same in terms of categories except 2014 and 2015 where costs for logistics (vehicles, cold chains and other equipment) are also required. This funding gap is further analyzed under 5 categories: Personnel, Transport, Activities and other recurrent costs, Logistics and Campaigns.

1. Personnel

The FATA immunization program is facing severe shortage of qualified technical staff for the management and implementation of immunization activities (Section: Human Resource Management). In addition, 524 vaccinators cannot meet the immunization demands in FATA where population is thinly distributed and geographical accessibility becomes difficult on account of hilly and mountainous terrain. The expansion in the existing network of EPI centers demands hiring of new 308 vaccinators. However, the FATA Civil Secretariat is almost solely dependent upon the Federal government for resource allocation. The current fiscal situation does not allow the FATA Civil Secretariat to provide additional resources without an external support. However, if the required resources are not provided, it is not possible to achieve the potential gains by decreasing disease

burden due to VPD. In order to meet the requirement for hiring new human resources, the FATA government requires an additional USD9.87 million for the period 2014 to 2018.

2. Transport

The FATA Civil Secretariat will also face a shortfall of USD0.535 on average per year from 2014 to 2018 after increasing the number vehicles both for the managerial staff and vaccinators. It will also include supply of vaccines and other logistics from the provincial warehouse to agency and sub-agency levels. Without a functional supply chain system, achievement of the planned targets will be hard to imagine.

3. Activities and other recurrent costs

Besides other expenditures, this category requires resource allocation for Technical Assistance for developing Performance Management System, Technical Assistance for Third Party Monitoring, Formative research and EPI Coverage Survey. These activities are essential for developing and strengthening EPI in FATA. Under this category, the FATA faces a shortage of USD2.78 million over the next five years. It is expected that World Bank, WHO and UNICEF may support the FATA immunization program for these initiatives. However, without these important activities it will be impossible to improve the quality of immunization services through establishing performance-based practices and by ensuring accountability in management practices.

4. Logistics

Presently, there is severe shortage of vehicles required for EPI activities. This requirement will further increase with hiring of new human resources. Although, the EPI in FATA will get a support for logistics, USD47,619 from the Federal Government and the Government of China, it still faces a shortfall of USD4.1 million to be incurred on procurement of vehicles, cold chain equipment and other logistics. If the funding gap related cold chain management is not addressed, it will delay the expansion in immunization coverage and also increase vaccine wastage rates due to poorly functioning old cold chain equipment. Similarly, if the funding gap related to vehicles and other logistics is not addressed, it will affect monitoring and supervisory system which has already been identified as a significant weakness under program management.

5. Campaigns

The funding gap under the category of campaigns can be further subdivided into two sub-groups. Firstly, from 2015 onwards, PEI activities will also require mobilization of additional resources because the current PEI program covers the costs up to 2015 only. In order to conduct 4 rounds of Polio SIAs per year during 2016-18, the immunization program will require USD4.1 million. If funding gap for polio campaigns remains, it increases likelihood of polio transmission and undermines previous investments in polio eradication.

Secondly, the FATA immunization program has planned for Measles campaigns. However, there is funding gap of USD0.82 million primarily required for vaccines and operational costs. If funding gap these campaigns remains, it increases likelihood of Measles epidemics and increased morbidity and mortality related with maternal and neonatal tetanus.

4.5 Financial sustainability

Figure 22: Macroeconomic and Sustainability Indicators

Macroeconomic and Sustainability Indicators	2012	2014	2015	2016	2017	2018
Per capita GDP (\$)	1256	1332	1372	1414	1456	1500
Total health expenditures per capita (THE per capita \$)	30	32	33	34	35	36
Population (in millions)	4.30	4.49	4.59	4.69	4.79	4.90
per DTP3 child (\$)	76	158	113	113	112	106
RESOURCE REQUIREMENTS FOR IMMUNIZATION AS % OF TOTAL HEALTH EXPENDITURES						
Routine and Campaigns (Includes Vaccines and Operational Costs)	5.45%	12.65%	9.76%	7.51%	8.47%	8.16%
Routine Only	3.62%	8.02%	6.13%	6.46%	6.94%	7.15%
Funding Gap						
With Secure Funds Only		3.75%	2.09%	3.10%	3.54%	3.58%
With Secure and Probable Funds		3.70%	2.01%	2.03%	2.07%	2.10%
RESOURCE REQUIREMENTS FOR IMMUNIZATION AS % OF GOVERNMENT HEALTH EXPENDITURES						
Routine and Campaigns (Includes Vaccines and Operational Costs)	54.48%	115.03%	88.74%	62.61%	70.55%	62.78%
Routine Only (Includes Vaccines and Operational Costs)	36.17%	72.95%	55.72%	53.87%	57.85%	55.00%
Funding Gap						
With Secure Funds Only		34.05%	19.02%	25.86%	29.51%	27.57%
With Secure and Probable Funds		33.63%	18.24%	16.96%	17.21%	16.15%
RESOURCE REQUIREMENTS FOR IMMUNIZATION AS % OF GDP						
Routine and Campaigns (Includes Vaccines and Operational Costs)	0.13%	0.30%	0.23%	0.18%	0.20%	0.20%
Routine Only (Includes Vaccines and Operational Costs)	0.09%	0.19%	0.15%	0.16%	0.17%	0.17%
RESOURCE REQUIREMENTS FOR IMMUNIZATION PER CAPITA						
Routine and Campaigns (Includes Vaccines and Operational Costs)	1.63	4.05	3.22	2.55	2.96	2.94
Routine Only (Includes Vaccines and Operational Costs)	1.08	2.57	2.02	2.20	2.43	2.57

The macroeconomic indicators listed in Figure 22 highlight that sustainability of immunization system is closely linked with resource allocation from the government health expenditures. The current financial projections indicate that the cost per DTP3 child will rise from USD76 in 2012 to USD106 in 2018.

It is expected that the government will continue its funding for immunization system. However, the resource requirement for immunization program as percentage of the government health expenditure

will increase from 54.485% in 2012 to 62.78% in 2018. High dependence on government funds is likely to reduce the available fiscal space for immunization system. Therefore, the immunization program plans to ensure financial efficiency and sustainability by employing the following strategies:

1. Enhance efficient utilization of human resources by developing synergies with other health initiatives (Strategy 3.1:)
2. Minimize wastage of resources under immunization program (Strategy 3.2:)
3. Advocacy for ensuring financial sustainability of immunization program (Strategy 3.3:)
4. Introduce mechanisms of accountability through third party monitoring (Strategy 1.4:)

5 Annexes

Annex 1: Agency-wise requirement of new EPI Centers in FATA (2014)

Agencies/FRs	Requirement of New EPI centers
Bajaur Agency	7
Khyber Agency	16
Lower & Middle Kurram Agency	45
Mohmand Agency	25
North Waziristan	20
Orakzai Agency	10
South Waziristan	26
Upper Kurram Agency	0
FR Bannu	6
FR D.I. Khan	10
FR Kohat	16
FR Lakki	7
FR Peshawar	11
FR Tank	7
Total Required	206

Annex 2: Immunization coverage targets for cMYP 2014-18

Type of Vaccine	Baseline	Coverage Targets				
	2012	2014	2015	2016	2017	2018
BCG	53%	55%	60%	65%	70%	75%
Measles	50%	55%	58%	63%	68%	73%
OPV	44%	50%	55%	60%	67%	75%
Pentavalent	44%	50%	55%	60%	67%	75%
TT	35%	38%	43%	48%	54%	60%
Pneumococcal (PCV10)		30%	45%	60%	67%	75%
Rota vaccine				40%	67%	75%
IPV			30%	45%	65%	75%
OPV0	33%	38%	43%	48%	54%	60%

Annex 3: Expenditures and future resource requirements by cMYP components

cMYP Component	Expenditures		Future Resource Requirements				
	US\$	US\$	US\$	US\$	US\$	US\$	US\$
	2012	2014	2015	2016	2017	2018	Total 2014 - 2018
Vaccine Supply and Logistics (routine only)	1,667,049	6,767,350	3,584,477	4,361,862	5,111,293	5,670,700	25,495,682
Service Delivery	2,299,018	3,915,347	4,654,393	5,026,771	5,428,943	5,863,291	24,888,746
Advocacy and Communication	163,383	14,280	14,857	15,455	16,080	16,729	77,401
Monitoring and Disease Surveillance		111,180	115,672	120,344	125,205	130,263	602,664
Programme Management	9,333	155,594	241,625	119,639	247,210	152,092	916,160
Supplemental Immunization Activities (SIA) (includes vaccine and operation costs)	2,363,471	6,654,913	5,501,341	1,673,237	2,557,243	1,783,662	18,170,397
Shared Health Systems Costs	528,592	570,880	674,350	665,874	719,144	776,675	3,406,922
GRAND TOTAL	7,030,847	18,189,544	14,786,714	11,983,183	14,205,119	14,393,413	73,557,972

Annex 4: Composition of the Funding Gap (Immunization Specific Only)

Composition of the funding gap	2014	2015	2016	2017	2018	Avg. 2014 - 2018
Vaccines and injection equipment						
Personnel	993,913	1,475,773	2,282,317	2,464,902	2,662,094	9,878,999
Transport	438,494	497,045	536,836	579,813	626,231	2,678,419
Activities and other recurrent costs	424,346	560,631	551,368	673,691	572,094	2,782,130
Logistics (Vehicles, cold chain and other equipment)	3,527,592	578,744				4,106,336
Campaigns			1,333,915	2,202,491	1,418,997	4,958,403
Total Funding Gap*	5,384,346	3,112,193	4,704,436	5,923,897	5,279,416	24,404,287

* Immunization specific resource requirements, financing and gaps. Shared costs are not included.

Annex 5: Sustainability indicators

Macroeconomic and Sustainability Indicators	2012	2014	2015	2016	2017	2018
Per capita GDP (\$)	1,256	1,332	1,372	1,414	1,456	1,500
Total health expenditures per capita (THE per capita \$)	30	32	33	34	35	36
Population	4,301,732	4,492,211	4,590,590	4,691,124	4,793,860	4,898,846
GDP (\$)	5,402,975,392	5,983,625,072	6,298,290,079	6,633,249,855	6,979,860,146	7,348,268,287
Total Health Expenditures (THE \$)	129,051,960	143,750,752	151,489,484	159,498,228	167,785,100	176,358,439
Government Health Expenditures (GHE \$)	12,905,196	15,812,583	16,663,843	19,139,787	20,134,212	22,926,597
Resource Requirements for Immunization						
Routine and Campaigns (\$)	7,030,847	18,189,544	14,786,714	11,983,183	14,205,119	14,393,413
Routine Only (\$)	4,667,376	11,534,631	9,285,373	10,309,946	11,647,875	12,609,750
per DTP3 child (\$)	76	158	113	113	112	106
Resource Requirements Immunization for as % Total Health Expenditures						
Routine and Campaigns (Includes Vaccines and Operational Costs)	5.45%	12.65%	9.76%	7.51%	8.47%	8.16%
Routine Only	3.62%	8.02%	6.13%	6.46%	6.94%	7.15%
Funding Gap						
With Secure Funds Only		3.75%	2.09%	3.10%	3.54%	3.58%
With Secure and Probable Funds		3.70%	2.01%	2.03%	2.07%	2.10%
Resource Requirements for Immunization % as Government Health Expenditures						

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Routine and Campaigns (Includes Vaccines and Operational Costs)	54.48%	115.03%	88.74%	62.61%	70.55%	62.78%
Routine Only (Includes Vaccines and Operational Costs)	36.17%	72.95%	55.72%	53.87%	57.85%	55.00%
Funding Gap						
With Secure Funds Only		34.05%	19.02%	25.86%	29.51%	27.57%
With Secure and Probable Funds		33.63%	18.24%	16.96%	17.21%	16.15%
% GDP						
Resource Requirements for Immunization						
Routine and Campaigns (Includes Vaccines and Operational Costs)	0.13%	0.30%	0.23%	0.18%	0.20%	0.20%
Routine Only (Includes Vaccines and Operational Costs)	0.09%	0.19%	0.15%	0.16%	0.17%	0.17%
Per Capita						
Resource Requirements for Immunization						
Routine and Campaigns (Includes Vaccines and Operational Costs)	1.63	4.05	3.22	2.55	2.96	2.94
Routine Only (Includes Vaccines and Operational Costs)	1.08	2.57	2.02	2.20	2.43	2.57