Federal Ministry of Health,

Comprehensive EPI Multi-Year Plan 2016 - 2020

National Primary Health Care Development Agency

(In collaboration with Immunization Partners)

2015

Table of Contents

List of Abbreviations & Acronyms

AEFI:	Adverse Events Following Immunization
AFP:	Acute Flaccid Paralysis
ALGON:	Association of Local Governments of Nigeria
BCG:	Bacillus Calmette-Guérin
CBO:	Community-based Organization
cMYP:	Comprehensive Multi-Year Plan
CSM:	Cerebrospinal meningitis
CSO:	Civil Society Organization
DPHC:	Director of Primary Health Care.
DPT3:	Third dose of Diphtheria, Pertussis (whooping cough) and Tetanus vaccine
DQS:	Data Quality Self-Assessment
DSNO:	Disease Surveillance and Notification Officers
DVD-MT:	District (LGA) Vaccine Data Management Tool
EPI:	Expanded Programme on Immunization
EU-PRIME:	European Union Partnership to Re-Enforce Immunization Efficiency
FAQs:	Frequently Asked Questions
FCT:	Federal Capital Territory
FGN:	Federal Government of Nigeria
FMOH:	Federal Ministry of Health
FOMWAN:	Federation of Muslim Women Association in Nigeria
GAVI:	Global Alliance for Vaccines and Immunization
GIVS:	Global Immunization Vision and Strategy
Hep.B:	Hepatitis B Vaccine
HFs:	Health Facilities
Hib:	Haemophilus Influenza type b

HWs:	Health Workers
ICC:	Interagency Coordination Committee
IDSR:	Integrated Disease Surveillance and Response
IMNCH:	Integrated Maternal, Neonatal & Child Health
IMR:	Infant Mortality Rate
IPDs:	Immunization Plus Days
LGA:	Local Government Area
LIDs:	Local Immunization Days
M&E:	Monitoring and Evaluation
MDGs:	Millennium Development Goals
MMR:	Maternal Mortality Ratio
MNTE:	Maternal and Neonatal Tetanus Elimination
MOE:	Ministry of Education
MOLG:	Ministry of Local Government
NCH:	National Council of Health
NDHS:	National Demographic and Health Survey
NEEDS:	Nigeria Economic Empowerment and Development Strategy
NGO:	Non-Government Organization
NHA:	National Health Accounts
NHMIS:	National Health Management Information System
NICS:	National Immunization Coverage Survey
NIDs:	National Immunization Days
NNT:	Neonatal Tetanus
NPC:	National Planning Commission
NPoC:	National Population Commission
NPHCDA:	National Primary Health Care Development Agency
OPV:	Oral Polio Vaccine

PBM:	Paediatric Bacterial Meningitis
PHC:	Primary Health Care
REC:	Reaching Every Community
REW:	Reaching Every Ward
RI:	Routine Immunization
SIA:	Supplemental Immunization Activity
SIPDs:	Sub-national Immunization Plus Days
SMOH:	State Ministry of Health
TBAs:	Traditional Birth Attendants
TT:	Tetanus Toxoid
U5MR:	Under Five Mortality Rate
UNICEF:	United Nations Children's Fund
VDC:	Village development Committee
VPD:	Vaccine Preventable Diseases
VVM:	Vaccine Vial Monitor
WCBA:	Women of child-bearing age
WDC:	Ward Development Committee
WHA:	World Health Assembly
WHC:	Ward Health Committee
WHO:	World Health Organization
WICR:	Walk in Cold Room
WPV:	Wild Polio Virus
YF:	Yellow Fever

Acknowledgement

This document has been prepared by the Comprehensive Multi-Year Plan Development (cMYP) Committee in Nigeria consisting of representatives from the Federal Ministries of Health (FMoH), Federal Ministry of Finance (FMoF), Federal Ministry of Women Affairs, (FMWAs), National Planning Commission (NPC), National Population Commission (NPoC), National Primary Health Care Development Agency (NPHCDA), States (Ministry of Health and State Primary Health Care Board), LGA (PHC Coordinators) and Partners (UNICEF, WHO, CHAI, CDC, EU-Delegation, HERFON, IVAC, SCI, Rotary International and other organizations).

Our sincere thanks go to all the representatives from the federal (Ministries, Agencies and Parastatals), States, LGA and immunization Partners in Nigeria who gave their time and demonstrated the same dedication and willingness to share experience, make suggestions and work in partnership during series of meetings and workshops to develop this country cMYP (2016 – 2020).

We wish to specially thank the UNICEF Country office and CHAI for invaluable contribution in development of this cMYP. We also wish to thank WHO for the provision of a Technical Assistance (TA) to finalize this cMYP.

Lastly, we wish to appreciate and thank Dr Ado J. G. Muhammad (OON), Executive Director / Chief Executive Officer, National Primary Health Care Development Agency; and the immediate past Director Disease Control and Immunization of the Agency, Dr Emmanuel Abanida for their leadership and guidance to ensure the successful completion of this revised cMYP (2016 – 2020).

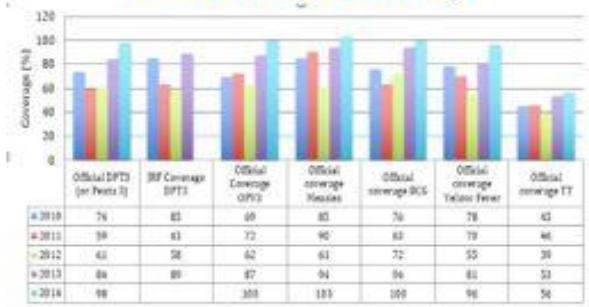
Executive Summary

Immunization Situation Analysis: Summary 2011-2015

Immunization Achievements

- Introduction of PCV and Pentavalent Vaccine
- Cold chain capacity partially updated at different levels
- Availability of potent and bundled vaccines
- Development of accountability framework
- Launch of NRISP
- Improved financing of RI at national and sub-national levels
- Signing law on Nigeria Healtlh Act

Immunization Coverage



Immunization System Analysis

- Poor coordination between National EPI and NGOs in immunization service delivery
- Inconsistencies in use of population statistics between EPI and other health programs
- High dropout rates between successive vaccine doses due to lack of validation of data in field
- High turnover of vaccinators with low availability of female vaccinators
- Training programs heavily dependent upon funding from donors
- Aging cold chain equipment
-

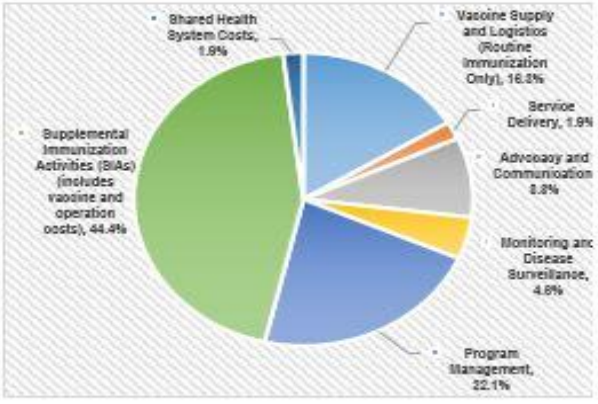
Health System Constraints

- Inadequate skilled health care workers in the rural areas
- Mal-distribution of health workers (HWs): > 70% of the HWs are in the urban areas leaving <30% of HWs in the rural areas. There are also more health workers in the southern states compared to the northern states
- Frequent transfer / retention of health workers
- Inadequate reporting of AEFI

Baseline Costing Profile

Total Immunization Expenditures (USD)	$401,355,398
Campaigns (USD)	$181,672,551
Routine Immunization only (USD)	$219,682,847
Per Capita (Routine Only) (USD)	$1.56
Per DTP3 child (Routine Only) (USD)	$47
% Vaccines and supplies (Routine)	27.9%
% Government funding	122.0%
% Total health expenditures	1.7%
% Government health expenditures	39.5%
% GDP	0.1%
Total Shared Costs (USD)	$7,826,603
% Shared health systems cost	1.9%
TOTAL (USD)	$409,182,001
Total Immunization Expenditures	$401,355,398

Baseline Financing Profile



cMYP Summary: 2016 - 2020

National Immunization Priorities

- Increase and sustain routine immunization coverage for all antigens; and reduce morbidity and mortality from VPDs.
- Reach the hard-to- reach LGAs / communities
- Sustain availability of bundled vaccines at service delivery sites
- Introduce new and underutilized vaccines (PCV, Rotavirus, HPV and IPV) into the country's immunization schedule.
- To sustain interruption of wild polio virus transmission and eradicate polio in the country

Immunization Priority Objectives

- Increase control of VPD diseases
- Increase coverage and equity of routine immunization
- Improve surveillance of VPD diseases and AEFI
- Improve effective vaccine management
- Improve monitoring and reporting of immunization services
- Increase sustainability of immunization financing

National Program Monitoring Framework

Indicator	2013	2020
Penta-3	59.7%	95%
BCG	80%	94%
OPV0	55%	95%
IPV	n/a	95%
PCV-13	n/a	95%
Rota	n/a	95%
Measles-1	58.8%	95%
Tetanus Toxoid	50%	100%
Fully Immunized Children	51%	80%
Dropout Rate	18.6%	10%

Priority Immunization Program Strategies

- Streamline EPI management structures
- Improve immunization delivery through:
  - increasing skilled immunization staff
  - ensuring micro-planning in health facilities
  - Use of polio staff in improving immunization
- Upgrade of physical infrastructure and logistics
- Increase sustainability of immunization through improved planning and budgeting
- Increase political and public awareness of the importance of immunization through evidence based advocacy, communication and social mobilization activities

Major risks and challenges

- Sufficient funding for the immunization program
- Development, implementation and monitoring of micro-plans
- High dependency on donor funding
- Inadequate distribution of health personnel
- Poor attitude of health workers at the service delivery point

Health and Development Impacts

- Improved child survival through contribution to achievement of MDG4
- Reduced disability in the community associated with VPD (AFP, meningitis)
- Use of immunization as a strategic component of poverty reduction initiatives through improved child survival

Cost and Financing projections

	2016	2017	2018	2019	2020	Total
Total Resources Required(US$ millions)	$691.2	$775.2	$747.6	$622.3	$584.1	$3,420.5
Cost per capita (US$ million)	$2.84	$3.55	$3.85	$3.60	$2.89	$2.62
Total Secure Financing(US$ millions)	$309.7	$236.8	$285.2	$341.5	$303.0	$1,477.1
Funding Gap (with secure)(US$ millions)	$381.6	$538.5	$462.4	$280.8	$280.1	$1,943.4
Total Secured and probable financing (US million)	$404.3	$472.5	$443.2	$369.0	$332.7	$2,021.5
Gap (with secure + probable)(US$ millions)	$287.0	$302.8	$304.4	$253.3	$251.4	$1,398.9
% of total needs	42%	39%	41%	41%	43%	41%

1. Situation Analysis

1.1. Background Information

1.1.1. Landscape

Nigeria is one of the largest countries in Africa, covering an area of 923,678 square kilometers. It is located within the tropics along the Gulf of Guinea on the West Coast of Africa and lies between the latitudes of 4016' and 13053' N and longitudes 2040' and 14041' E. It is bordered to the west by the Republic of Benin, to the east by the Republic of Cameroon, to the north by Republic of Niger and Chad, and the Atlantic Ocean and Gulf of Guinea to the south. The country has two major types of climate namely dry and rainy seasons which divide the country into mangrove swamps and rain forest in the south, savannah region in the middle belt and desert in the far north. The rainy and dry seasons span from April-September and October-March respectively. There is however a varying period of cold dry harmattan dusts weather mainly in the northern parts of the country between November and January. Furthermore, the country is crossed by several streams and large rivers mainly River Niger and River Benue.

1.1.2. Administrative and political structure

Nigeria is a federal republic with division of power and responsibilities between executive, legislative and judiciary branches of government.

- Executive branch of Nigeria's Federal Government is led by the Office of President and is divided into Federal Ministries, each headed by a minister appointed by the president. The president appoints at least one member from each of the 36 states in his cabinet. The President's appointments are confirmed by the Senate of Nigeria. In some cases, a federal minister is responsible for more than one ministry (for example, Environment and Housing maybe combined), or a minister may be assisted by one or more ministers of State. Each Ministry also has a Permanent Secretary, who is a senior civil servant.
- The president is elected through universal suffrage and is both the chief of state and head of government, heading the Federal Executive Council.
- Legislative branch is represented by the National Assembly of Nigeria and has two chambers: the House of Representatives and the Senate. The House of Representatives is presided over by the Speaker of the House of Representatives. It has 360 members, who are elected for four-year terms in single-seat constituencies. The Senate, which has 109 members, is presided over by the President of the Senate. 108 members are elected for four-year terms in 36 three-seat constituencies, which correspond to the country's 36 states. One member is elected in the single-seat constituency of the federal capital.
- The judicial branch consists of the Supreme Court of Nigeria, the Court of Appeals, and the High Courts. The National Judicial Council serves as an independent executive body, insulating the judiciary from the executive arm of government. The Supreme Court is presided over by the Chief Justice of Nigeria and thirteen associate justices, who are appointed by the President of Nigeria on the recommendation of the National Judicial Council. These justices are subject to confirmation by the Senate.

Nigeria is divided into 36 states and 1Federal Capital Territory. Each state is further divided into Local Government Areas (LGAs). There are 774 LGAs in the country. Kano State has the largest number of LGAs (44 LGAs), and Bayelsa State has the fewest (9 LGAs). The Federal Capital Territory of Abuja has 6 LGAs. The LGAs are divided into 9,565 political wards. The states are grouped into six geo-political zones; South-South (SSZ), South East (SEZ), South West (SWZ), North East (SEZ), North West (NWZ) and North Central (NCZ).

The States are basic units of local administration. In effect, the administration of each State is a collection of branches of Federal Government Ministries. Administrative arrangements between the States and LGAs are similar to those in the relationship between the Federal Government and the States. Authority and powers are decentralized largely through de-concentration management functions from federal level towards the state and LGA levels. The State and LGA level officers mostly execute the responsibilities that are entrusted upon them by their superiors and have limited role in policy making and planning processes.

1.1.3. Security

Nigeria is currently experiencing security challenges in the form of militants in the south and insurgents in the north. During the recent years there have been multiple attempts to attack health workers engaged in vaccination. Security will remain an important issue in coming years.

1.1.4. Demography

The data used for projections of population targets is based on the 2006 Population and Housing Census. According to the Census data Nigeria's population in 2006 was 140,431,790. The national growth rate was estimated at 3.2% per annum. In 2013 (baseline year), the population number was estimated at 175,074,668, with an estimated birth cohort of 7 million children, at the current growth rate at 3.2% per annum. With this population Nigeria is the most populous nation in Africa and the seventh most populous in the world.[1]

Nigeria's population is unevenly distributed across the country. Large areas in the Chad Basin, the middle Niger Valley, and the grassland plains, among others, are sparsely populated. The average population density for the country in 2006 was estimated at 150 people per square kilometer. The most densely populated states are Lagos (2,607 people per square kilometer), Anambra (868 people per square kilometer), and Imo (758 people per square kilometer). Most of the densely populated states are found in the southern part of the country. Kano, with an average density of 442 people per square kilometer, is the most densely populated state in the north.[2]

The population is predominantly young with approximately 45.7% under 15 years of age and 17.1% under 5years of age. Women of child bearing age (15-49 years) account for 22.53% of the total population and children less than 1 year accounts for 4% of total population. In addition, only 4% of the population is 65

[1]Population Reference Bureau, 2013).

[2] National Population Commission [NPC], 2010)

years and above. It has resulted in a high dependency rate. The average household size in Nigeria is 4.6 persons.

Figure 1: Demographic Profile of Nigeria for the year 2013 (baseline)

Demographic Profile	Urban	Rural	Total
Population	70,439	106,135	176,574
Women of Child Bearing Age	16,764	23,020	39,784

Source: Nigeria Demographic and Health Survey 2013

1.1.1. Social and Political Context

(1) Poverty

According to the World Human Development Report 2014, with a Human Development Index (HDI) of 0.5, Nigeria is ranked 152 among 187 countries of the world.[3]Nigeria is a developing country with one of the fastest growing economies in Africa with a GDP per capita of US$1,645. It is estimated that 64.4% 6of the population lives below the poverty line[4]. The nation's main source of revenue is crude oil which is shared between the Federal, State and Local Governments according to an allocation formula. Although major gains have been made during the last decade, the overall situation remains below satisfactory.

On account of their poor socio-economic status, the general population in Nigeria is vulnerable to health-related financial catastrophes and one small shock has the potential to move many individuals into poverty, which makes them more dependent upon public sector health services.

(2) Literacy

The ability to read and write is an important personal asset, increasing an individual's opportunities in life. In addition, literacy statistics can help program managers, especially those working in health and family planning; determine the best ways to reach women and men with their print messages.

In the 2013 NDHS, literacy status was determined by assessing the respondent's ability to read all or part of a sentence. According to the NDHS 2013, 53 percent of women age 15-49 are literate. Literacy is much higher in urban than in rural areas. More than 7 in 10 urban women (77%) are literate, as compared with less than 4 in 10 rural women (36%).

There are differences in literacy across zones, with literacy levels being highest among women in the South East (84%) and lowest among those in the North West (26%). Ninety percent or more

[3] United Nations Development Fund (2014). Human Development Report 2014 - Sustaining Human Progress: Reducing Vulnerabilities and Building Resilience http://hdr.undp.org/sites/default/files/hdr14-report-en-1.pdf

[4] Human Development Report 2014

of women in Abia, Anambra, Imo, Ekiti and Osun are literate. On the other hand only 10% of women in Sokoto, 11% in Jigawa and 11% in Zamfara are literate. Literacy increases with increasing wealth, ranging from 7% among women in the lowest wealth quintile to 93% among those in the highest wealth quintile.

In Nigeria, men are much more likely than women to be literate (75% vs. 53%). Similar to women, men age 15-24 (80%) living in urban areas (91%), and men in the highest wealth quintile (75%) have the highest literacy levels. The gap in literacy levels between women and men is notable in the North Central, North East, and North West zones.

1.1.1. Public Expenditure Management

The Ministry of Finance (MoF) is specifically responsible for the management and execution of the annual budget, collection of taxes, organization and control of public expenditure and payments to the government.

Historically, the Nigerian Government followed the calendar year for preparation of budgets and other financial statements.

The Budget preparation cycle is comprised of following main phases:

1. Preparation of Preliminary Draft Budget or Medium Term Strategic Framework in order to ensure that essential budget policies are sustainable and facilitate in identifying desirable policy changes
2. Preparation of National Budget for detailed budget costing and State allocation in order to ensure that budget is cost effective

Medium Term Strategic Framework (MTSF) allows the Government to plan its expenditures, for both the operating and development budgets, in the medium term and link its financial resources with the benchmarks it needs to achieve under the National Development Plan of Nigeria and Millennium Development Goals (MDGs). The aim of preparing the MTSF is to estimate available financial resources in the following three years (both from domestic revenue and donor funds), to select most important priorities, based on the Nigeria's National Development Plan (NDP), that can be financed from the available funds and establish budget ceilings. The Ministry of Finance (MoF) is responsible for gathering required information from line ministries. To provide this information, ministries need to do priorities' cost estimation.

Based on the information from MTSF, the MoF requests the ministries including Federal Ministry of Health to prepare detailed budget calculations for selected priorities and within given ceilings. The line ministries and other budgetary units prepare the budgetary requests for both operational and development components. The budgetary allotments, set by MoF, are used as control figures to indicate any discrepancy between allowances and budgetary requests.

Whenever the budgetary requests exceed the allotments specified, the MoF organizes additional consultations for each line ministry on their requested budget in order to bring budget allowances in balance with budget requests. Based on the results of the negotiations, the MoF

appears in a position either to increase allotments, by reallocating available funds by budgetary categories and charts of accounts, or to reduce the planned expenditures by reprioritizing them.

It is important for theFederal Ministry of Health, National Primary Health Care Development Agency and especially for National EPI to understand the procedural requirements of the government cycle in using cMYP in order to compete with other government departments and justify for allocation of funds.

Figure 2: Budgetary allocations under Nigerian government budget for the year 2013

Details	Total Allocation	
Total Integrated Core Budget		
Operating Budget		
Development Budget		
Sources of Funding		
Domestic Revenues		
Donor Contribution (Grants 65%, Loans 1%)		
Share of Sectors		
Security		
Infrastructure and Natural Resources		
Education		
Health		

Given the limited fiscal space available, health sector has to compete with other national priorities such as security, education, rural development, infrastructure, and other national investments in order to increase its share for resource allocation.

1.2. Health Care System Analysis

1.2.1. Governance

(1) Policy Environment

Nigeria formulated a national health policy targeted at achieving quality health for all Nigerians in 1998. As a result of emerging issues and the need to focus on realities and trends, a review of the policy became necessary. The new policy, referred to as the Revised National Health Policy was launched in September 2004. The policy outlined the goals, structure, strategy and policy direction of the health care delivery system in Nigeria.[5]

[5]Federal Ministry of Health 2004

The policy defines roles and responsibilities of different tiers of government including non-government organizations and sets the overall long-term goal to provide adequate access to primary, secondary and tertiary health care services for the entire Nigerian population through a functional referral system.

The underlying principles and values of the Revised National Health Policy are as follows:

- Social justice, equity and the ideals of freedom and opportunity affirmed in the 1999 Constitution of the Federal Republic of Nigeria are basic rights.
- Health and access to quality and affordable health care are human rights.
- Equity in health care for all Nigerians will be pursued as a goal.
- Primary Health Care (PHC) will remain the basic philosophy and strategy for national health development.
- Good-quality health care will be assured through cost-effective interventions that are targeted at a priority health problem.
- A high level of efficiency and accountability will be maintained in the development and management of the national health system.
- Effective partnerships and collaborations between various health sectors will be pursued while safeguarding the identity of each.

The national health policy identifies primary health care as the framework to achieve improved health for the population. PHC services include health education, adequate nutrition, safe water and sanitation, reproductive health, including family planning; immunization against five major infectious diseases; provision of essential pharmaceuticals; and disease control. According to the policy, a comprehensive health care system delivered through PHC centers must incorporate maternal and child health care, including family planning services.

The overall objective of the Revised National Health Policy is to strengthen the national health system such that it will be able to provide effective, efficient, quality, accessible and affordable health services that will improve the health status of Nigerians through achievement of the health-related Millennium Development Goals (MDGs). The main health policy targets are the following:

- ✓ Reduce the under 5 mortality rate by two-thirds between 1990 and 2015
- ✓ Reduce the maternal mortality rate by three quarters between 1990 and 2015
- ✓ Reduce the spread of HIV/AIDS by 2015
- ✓ Reduce the burden of malaria and other major diseases by 2015[6]

In accordance to the National Health Policy the Federal Ministry of Health is fully committed to achieve the goals and targets set under Millennium Development Goals (MGDs) (Figure 3 & Figure 4).

[6] Introduction of Malaria in the national immunization schedule is under the consideration. Final decision will depend on availability of financial resources for introduction.

Figure 3: Indicators and Targets for MDG4: Reduce child Mortality

Indicators	Baseline (2000)	2013
Target: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio		
Under 5 mortality rate (per 1000 live births)	213	117
Infant mortality rate (per 1000 live births)	100	69

Figure 4: Indicators and Targets for MDG 5: Improve Maternal Health

Indicators	Baseline (2008)	2013
Achieve by 2015 universal access to reproductive health		
Maternal Mortality Ratio (in 100,000)	545	576
Births attended by skilled health personnel (%)	35	36
Antenatal Coverage (at least four visit) (%)	45	51

Allocation from the federal government for health has been through annual appropriation and the budget has remained around 4-6.1% of the total federal budget for the past 5 years. The Routine Immunization investment case was pursued with policy makers (workshop involving senate committee chairman, dialogue with Coordinating Minister of the Economy). The funding for vaccines is now on the first line charge and all remaining balances to be remitted. And, Co-funding arrangement with states is now top on the proposed solutions, but will apply to the GAVI portion only.

On December 9, 2014, former Nigerian President Goodluck Jonathan signed into law the National Health Bill, which was approved by the Nigerian Senate earlier in 2014. The new Nigeria Health Act is intended to provide a framework for the regulation, development, and management of a national health system in Nigeria. It specifies the roles and responsibilities of the various tiers of government and partners. The National Health Act creates a Basic Health Care Provision Fund to provide Nigerians with access to basic health care services.

Fifty percent of this fund will be allocated to the National Health Insurance Scheme to provide health coverage for pregnant women, children under the age of five, the elderly, and persons who are physically challenged. The other half of the Fund will be used to provide essential vaccines and consumables for eligible primary healthcare centers ("PHC"), maintenance of facilities, equipment, and transport for PHC facilities, and development of human resources for PHCs with a goal of extending PHC to Nigerians living in hard-to-reach rural communities. The Fund will be subsidized from 1% of Nigeria's Consolidated Revenue Fund as well as contributions from state and local governments.

It is expected that when the Health Act is fully implemented, it will contribute to the improved financing for immunization activities, reduce mortality rates in the country and move more quickly toward achieving its Millennium Development Goals.

(2) Health Care System

Nigeria's health care system consists of both public and private sectors. The public health care system is mirrored on the three levels of government with the national government responsible for tertiary care, state government responsible for secondary care, and LGAs responsible for Primary Care.

Nigeria recognizes that a healthy population is important for socio-economic development. This has been underscored in the *Vision 20:2020*, and the *National Development Plan*. Consequently, the government is committed to reduce the morbidity and mortality rates and significantly efforts to develop and implement appropriate policies and programs that will strengthen the National Health System based on the principle of primary Health Care in line with the Ouagadougou and Abuja declarations.[7]

The Federal Government of Nigeria, through the Federal Ministry of Health is convinced that a purposeful reform of the National Health Care Delivery System is necessary for strengthening the weak and fragile National Health Care Delivery System and improving its performance. The government, thus, initiated a process that led to the development of the National Strategic Health Development Plan: 2010-2015 (NSHDP) which was developed in a highly participatory manner.

The following Vision, Mission Statement and the Overarching Goal for the National Health Care System reform were formulated by the Government of Nigeria:

Vision - *"To reduce the morbidity and mortality rates due to communicable diseases to the barest minimum; reverse the increasing prevalence of non-communicable diseases; meet global targets on the elimination and eradication of diseases; and significantly increase the life expectancy and quality of life of Nigerians".*

Mission - *"To develop and implement appropriate policies and programs as well as undertake other necessary actions that will strengthen the National Health System to be able to deliver effective, quality and affordable health".*

---

[7]Ouagadougou Declaration on Primary Health Care And Health Systems In Africa: Achieving Better Health in Africa In the New Millennium Available at http://www.afro.who.int/en/divisions-a-programmes/dsd/health-policyaservicedelivery/hpspublications/doc_details/2135-ouagadougou-declaration-on-primaire-health-care-and-health-system-inafrica2008.html

The Overarching goal of the NHCSR is *"to significantly improve the health status of Nigerians through the development of a strengthened and sustainable health care delivery system".*

The NSHDP serves as the overarching framework for health development in Nigeria and draws inspiration from 36 State and the FCT Health Development Plans (SHDP). The reform has the following eight strategic priority areas:

1. Leadership and Governance for Health;
2. Health Service Delivery;
3. Human Resources for Health;
4. Financing for Health;
5. National Health Management Information System;
6. Partnerships for Health;
7. Community Participation and Ownership; and
8. Research for Health.

The final NSHDP was approved by the National Council on Health (NCH) during its 53rd session which took place in Asaba, Delta State from March 11-16, 2010. The NCH is the highest policy advisory body in the Nigerian Health Care Service Delivery System.

Nigeria's health sector is characterized by wide regional disparities in status, service delivery and resource availability. In view of this situation, the government of Nigeria initiated several interventions including the Midwives Service Scheme (MSS); the Subsidy reinvestment and Empowerment Program, Maternal and Child Health (SURE-P-MCH); and systematic PHC infrastructure upgrades through the Ward Health System.

Under the MSS, retired and newly qualified midwives provide services at PHC facilities in underserved communities around the country. The scheme, funded through MDG debt relief gains on a cost-sharing basis among the three tiers of government, has trained and deployed approximately 4,000 midwives and 1,000 community health extension workers (CHEWs) in 1,000 PHC facilities. This has improved access to skilled birth attendants in 375 LGAs across the country. In addition, attention is continuously geared toward full childhood immunization and HIV/AIDS prevention.[8]

The SURE-P-MCH program, funded through savings derived from the partial removal of the petroleum subsidy, is intended to build and expand on the gains of the MSS. The program aims to improve both demand and supply components of maternal and child health. As of January 2013, the program had engaged 1,168 midwives and 2,188 community health extension workers in 500 PHC facilities. A total of 3,072 village health workers were also recruited and deployed. In addition, the program is implementing a conditional cash transfer scheme as well as pursuing PHC facility upgrades and community engagement.

[8] National Primary Health Care Development Agency [NPHCDA], 2012

The Ward Health System (WHS) was initiated in 2000 to improve equitable access to essential health services. The system is premised on the synchronization of PHC services across electoral wards with the construction of model PHC facilities in underserved areas. As of January 2012, the NPHCDA had built 1,156 PHC facilities across the country. This is in addition to the 228 maternal health care centers and 10 health training institutions built by the MDG office.[9]

Specifically on immunization, the Policy provides for free vaccines to all eligible age groups; support to States and LGAs on Immunizations and also to establish standards and guidelines for Safe Injection and waste disposal, Cold Chain and Logistics management.

(3) Organization and Management

The leadership for the Implementation of the NSHDP is provided by the Federal Ministry of Health (FMoH) at the Federal Level, State Ministry of Health (SMoH) at the State Level, and Local Government Health Authority.

The State Health Development Planning level, (SHDP) Steering committees are established at the Federal and State levels, to monitor the implementation of the plan. The steering committee is chaired by the Permanent Secretary of the FMoH, at the Federal level, while the Honorable Commissioner for Health and the Chairman of the Local Government Area or the Supervisory Councilor for Health (LHGA) chairs the committees at the State and Local Government levels respectively.

Steering committees have representatives from the relevant departments/ Units at the FMoH, SMoH and LGA Health Management Team, representatives of the Planning Commission Ministries at all levels, and relevant development Partner Agencies. The committees are responsible for catalyzing the implementation of the plans at each of the levels; mobilizing government support for engagement of all stakeholders that are crucial to the implementation of the plans; through advocacy, planning, resource mobilization and awareness creation.

Based on existing priorities, the Federal, State and LGAs extract strategic activities from their Strategic Health Development Plans (SHDP), to develop their Medium Term Sector Strategy (MTSS) and annual operational plans. These plans show detailed activities that are linked to key deliverables towards the achievement of the targets of the plans.

The Federal, State and LGAs use technical assistance to develop plans with realistic costing and stakeholders' participation in facilitating the implementation. It is the responsibility of the Departments of Planning Research and Statistics at all levels to ensure that these plans are developed annually and to monitor their implementation using a suitable tool that ties deliverables to the results/targets of their respective SHDPs. To this effect, the Federal Ministry of Health (FMOH) prepares and disseminates specific guidelines on how to operationalize the NSHDP into MTSS and annual operational plans.

[9]Federal Republic of Nigeria, 2010a; NPHCDA, 2012

The SHDP implementation steering committee and the DPRS at each level are responsible for managing the implementation of the SHDPs. This requires provision of TA for development of operational plans; orientation of all stakeholders on the plan and required actions and responsibilities for achieving the targets of the plan; progress review and feedback.

The FMOH periodically reviews the overall progress of the implementation of the NSHDP. It makes available a feedback mechanism wherein all the states highlight their progress towards achieving set targets in the Presidential Health Summit Declaration. Since all State governments have signed onto this declaration, which has committed them to delivering on key results and targets of the NSHDP, this activity facilitates accountability and provides information that enables healthy competition among the States. The development partner agencies, CSOs and media are closely involved in this process.

NSHDP requires Development Partner Agencies to align with and support the implementation of the NSHDP while engaging with the responsible authority at all levels.

1.2.2. Health workforce

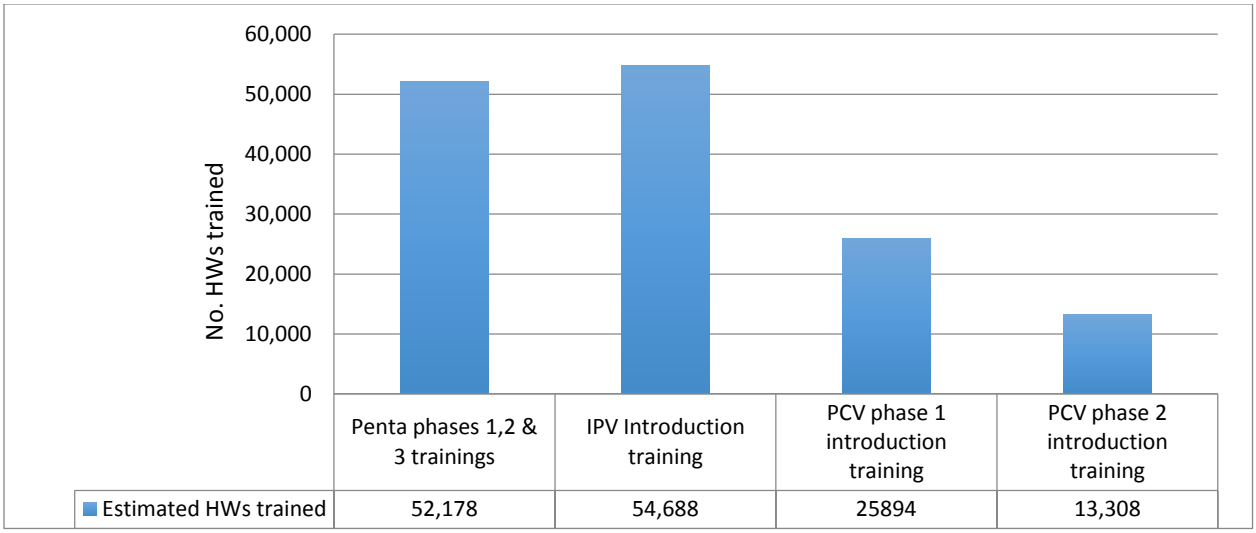
The NSHDP has a direct influence on resource requirements, mobilization and allocation to the health sector. Core technical staff is identified in the Department of Planning Research and Statistics (DPRS) at each level. The technical staff is empowered with necessary skills in planning, monitoring and evaluating the tools necessary to facilitate their work. The SHDP implementation steering committee is responsible for identifying resource needs and mobilization from governments and development partner agencies. Resource mobilization and allocation are directed towards addressing the health sector priority interventions to achieve the vision and goal of the NSHDP.

Adequate human resources for immunization activities are yet to be achieved. Although the stock of human resource for health (HRH) in the country has increased since 2009, the availability of HRH is less than 50% due to high migration of health workers arising from several factors including the declining absorptive capacity of the health sector, arising from persistent moratoriums at the State level. Other factors affecting the availability of HRH include uncongenial work conditions, poor remunerations and incentives for health workers. The distribution of available HRH is also lopsided, with the northern parts of the country having less Health workers compared to the southern parts; rural areas suffered more shortages and mal-distribution of HRH compared to urban areas and State owned facilities more than Federal owned. These have negative effect on the ability of the Health system to undertake RI activities towards achieving Universal health coverage. In recent years there has been Ad hoc efforts to address the mal-distribution, including: recruitment and posting of 8,000MSS midwives to the HFs in hard to reach areas (for child health and maternal services) and recruitment of 5,000 village health workers through SURE-P intervention programme. Efforts are on-going to scale up and sustain these interventions.

Factors such as coordinated training, motivation, supervision and monitoring affect the delivery of qualitative routine immunization services. One hundred and eleven (111) middle level

managers involved in immunization services at the state level from all the states (3 per state) were trained on Mid-level Management (MLM) between 2009 – 2013. Over 54,688 health workers were also trained during the new vaccines introductions (penta, IPV and PCV). Summary information on the number of health workers trained is shown in Figure 5 below. There is also an observed improvement in the integration of immunization services with other health intervention.

Figure 5: Number of health workers trained during new vaccine introduction



1.2.3. Finance

A Framework has been developed to serve as a guide to the Federal, State and LGAs in the selection of evidenced-based priority interventions that will contribute to achieving the desired health outcomes for Nigerians.

The Federal, States and LGAs have used this framework to respectively develop their estimated budget plans through participatory approaches to reflect their context and prevailing issues.

The total estimated costs of the NSHDP for the six-year period 2010-2015 is NGN3.997 trillion (USD 26.653 billion) with an annual cost and investment requirement of NGN666.3 billion (USD4.442 billion). This gives an annual cost per capita of NGN 4,745 (USD 31.63)[2]. Details of the specific earmarks of each priority area are in the table below.

Figure 6 Specific earmarks of National Strategic Health Development Plan priority areas

Priority Area	NGN	USD	Per cent
Leadership And Governance For Health	27,587,202,750	183,914,685	0.69%
Health Service Delivery	1,946,257,153,350	12,975,047,689	48.68%
Human Resources For Health	1,664,676,299,550	11,097,841,997	41.64%
Financing For Health	218,976,510,300	1,459,843,402	5.48%

National Health Information System	41,605,199,400	277,367,996	1.04%
Community Participation And Ownership	23,913,081,450	159,420,543	0.60%
Partnerships For Health	25,502,477,700	170,016,518	0.64%
Research For Health	49,448,161,050	329,654,407	1.24%
Total	**3,997,966,085,850**	**26,653,107,239**	**100.00%**

The interplay of the funding sources and financing agents in the Nigerian health system is critical in ensuring adequate and timely resourcing of the National Strategic Health Development Plan. It will ensure the delivery of high impact and cost effective health services within an enabling environment, and invariably promote universal access to health services. The NSHDP (2010 – 2015) projects significant financial resource needs from the public sector at the Federal, State and LGA levels for each of the eight (8) priority areas. This underscores the importance of predictable and sufficient investments by these tiers of government to achieve the targeted measurable results.

The strategy for financing the NSHDP is not solely dependent on increases in the Federal, State and LGA government spending. It will also require corresponding reactions by all actors in the health sector – Development Partners, CSOs, Private sector and philanthropists. On an annual basis, expenditure plans and budgets need to match available resources to meet the priorities identified by the yearly operational plans. Government and Development partners ensure flexibility in funding, on a yearly basis, to allow for necessary budget reviews.

Health authorities at the Federal, State and LGA implement the NSHDP in collaboration with all stakeholders. The Medium Term Sector Strategy (MTSS) serves as important tool for implementing the NSHDP through annual operational plans for all planning entities at the Federal, States and LGAs.

(1) Financing of Immunization Program

During the past 5 year period, allocation to health from the federal budget has remained around 4-6.1%. Though NHA[10] results indicate increase in spending on health over time, which remains very hard burden on Nigerian households. Nigeria's per capita Total Health Expenditure (THE) increased from US 9.39 dollars in 1998 to US 55.04 dollars in 2005 and US 161 dollars in 2013. In 2013, the total health expenditure was 6.1% of GDP and the households accounted for around 68.6% of THE, while government shoulders about 25%.The government expenditure on health was about 4.4% of total government spending.[11,12] The total NPHCDA budget in 2013 was approximately US$ 126 million. The 2013 budget for immunization was approximately $57.5 million (RI - $38.7 million and SIAs - $18.8 million). The RI budget was approximately 2% of

[10]National Health Accounts

[11]Afr J Med Med Sci. 2012 Dec; 41(4):357-64

[12] WHO Global Health Expenditure Database http://apps.who.int/nha/database/DataExplorer.aspx?ws=0&d=1

the total 2013 health budget ($1.8billion)[13]. In general, information on health and/or immunization program budget allocations and release is not readily available, and depending on specific political situation in States and LGAs significantly varies in different states and LGAs.

1.2.4. Medical Products and Technology

Vaccine manufacturing is intensively discussed among the key stakeholders of the country. Discussion process is currently led by the Local Organizing Committee (LOC) which facilitates the process for implementation of round-table meetings to explore opportunities for domestic production of vaccines. Particularly, the topics of round-table meetings are following:

- Fundraising for business plan development;
- Justification of the need for strengthening in country capacity for production of vaccines;
- Stimulate interest of the various groups to consider their involvement in manufacturing vaccines.
- Mapping potential partners for participation in the vaccine manufacturing initiative of the country.

1.2.5. Service Delivery

(a) Primary Health Care Services

In Nigeria, three attempts had been made to evolve and sustain community and people oriented health system. The first attempt was in 1976 when the Federal Government introduced the Basic Health Services Scheme (BHSS) as part of the 1975-1980 development plan, the second attempt was in 1986-1992 period when 52 pilot LGAs were chosen to be developed as model PHC LGAs and the third attempt was in 1993-2001, with the introduction of the ward health system and the ongoing efforts in revitalizing PHC.

National Primary Health Care Development Agency (NPHCDA) was established by Federal Government by decree Number 29 of 1992. NPHCDA was set up to give support to the National Health Policy as it relates to primary health care development. Its mandate covers providing leadership, promoting and supporting the implementation of quality and sustainable PHC system through advocacy and resource mobilization, partnership, capacity building and collaboration with relevant stakeholders. NPHCDA is also charge with the responsibility of developing the village and ward health system through proper community engagement and the establishment of State Primary Health Care Development Agencies.

NPHCDA has a Governing Board, an Executive Director, a core of professional staff at its headquarters, presently based in Abuja, and six zonal offices namely South West, South East, South South, North east, North West and North Central. The zonal office has a team made up of zonal coordinator and technical officers.

[13] NigeriaBudgetoffice.
http://www.budgetoffice.gov.ng/pdfs/revised_budget/16.%20Summary_Health_NEW%202xls.xls_Revised_v3.pdf

In 2001, NPHCDA introduced the *ward health system* by adopting the political wards as the operational units for implementation of the PHC programs at the LGA-District/Village level. The objective of ward system development was to provide a nationally acceptable targeted area of operation with clearly defined boundary, political representation and population.

As the part of the ward system development, NPHCDA started re-orientation of the existing health and health related staff taking into account the role of these members of health teams in implementing integrated Primary Care Services. The orientation programs were focused on strengthening capacity of health and health related staff through increasing their knowledge, develop attitude and skills required to perform expected responsibilities. The overall re-orientation process was based on the philosophy and principles of PHC.

The PHC staff includes doctors, nurses/midwives, health educations, environmental health officers, pharmacy technicians, social workers, nutritionists, agric-extension workers, and community development officers. Others, include LGA Policy Makers, Chairmen, Secretaries, Treasurers and staff of related departments such as Works, Education, Agriculture and Administration.

PHC services are provided through the implementation of the PHC plans. For effective implementation of the PHC plans within the LGA, the Local Government Areas were divided into the wards. The LGA division process aimed at identification of target area for PHC activities and assignment of the health team to take responsibility of all health activities in their respective district/ward. The number and distribution of the wards is based on the population numbers in the respective geographic area. Each district ward targets from 8,000 to 50,000 population and is comprised of one or two political wards.

The wards health teams are assigned to the identified referral facilities in the wards and are managed by the most senior workers as the team leader or Ward Supervisor. The referral facilities are used for training of health teams and as a base for supervision of Community Health Extension.

The management of PHC facilities is based on the bottom-up concept and is led by the community development committees. The committee is composed by the community members and is led by elected Chairman. Typically, among the elected committee members there are elected literate member of Village/Community (to serve as secretary), representatives of religious groups, women's groups/associations, occupation/professional groups, NGOs, VHWs/TBAs, disabled, youth, traditional healers and patent medicine store owners. A trusted member of committee serves as Treasurer. Terms of Reference for Community Development Committee is developed and are available at all levels.

The roles and responsibilities of the committee includes:

- identification of health and health related needs in the village/community;
- planning for the health and welfare of the community;
- identification of available resources (human and material) within the community and allocation as appropriate to PHC programs;

- supervision of the PHC work plan development, implementation;
- monitoring and evaluation of the progress and impacts of the implementation of health activities;
- mobilization and stimulating active community involvement in the implementation of developed health plans;
- determining exemptions for drug payment and deferment and provision of funds for exempted persons;
- determining the pricing of drugs to allow for financing of other PHC activities;
- supervision of all accounts, books and cash management;
- supervision and monitoring quantity of drug supply;
- selection of appropriate individuals to be trained as Village Health Workers (VHW), supervision of VHW activities, Community Resource Persons (CORPS) and Traditional Birth Attendants;
- review of monthly record of work, remuneration in cash or in kind, of VHWs for performance;
- establishment of a village health posts, supervision of drug management;
- liaison with officials living in the village to provide health care and other development activities, providing necessary support to VHW for the provision of health care services, forward local health community plan to wards level.

The minimum health care package provided by Wards includes health interventions and/or services that address health and health related problems that result in substantial health gains at low cost. In defining this package a number of considerations were made: disease patterns, economic considerations (e.g. cost of services) and proportion of population affected/benefiting from health services. This package targets the grass root level through the delivery of a minimum set of interventions needed to meet the basic health requirement of the people hence contributing to achieving the global target of Health For All and the attainment of the Millennium Development Goals (MDGs).

Technically, this package comprises of cost-effective interventions known to promote health and development and reduce mortality and morbidity from major illnesses.

The Ward Minimum Health Care Package (WMHCP) consists of the following health interventions:

1. Control of Communicable Diseases (Malaria, STI/HIV/AIDS, TB)
2. Child survival
3. Maternal and Newborn Care
4. Nutrition
5. Non communicable Diseases Prevention
6. Health Education and Community Mobilization

WMHCP describes ad priority set of health interventions which should be provided in PHC centers on daily basis at all times and at little orno cost to clients, through government financial mechanism.

WMHCP interventions are carried out through implementation of six components. Component 2 of the WMHCP consists of IMCI (including neonatal care with particular emphasis on routine immunization.

The immunization program in Nigeria involves provision of vaccines to children and infants to protect them from Vaccine Preventable Diseases (VDPs).

(b) Secondary Care Services

Secondary health centers are involved with not only prevention but also all treatments and management of minimal complex cases. However, the more complicated cases are referred to the tertiary or specialist hospital. Examples of secondary health care institutions are comprehensive health centers and general hospitals. The comprehensive health centers are often owned by private individuals or a group of individuals, while general hospitals are owned and funded by the Government.

General hospitals have provisions for accident and emergency unit and diagnosis unit (including X-ray, scan machines and etc.) among other services.[14] The status of being a second layer of health institutions imposes certain acceptable standards and level of infrastructure. According to the Medical and Dental Council of Nigeria, there should be a minimum of three doctors who are to provide medical, surgical, pediatric and obstetric care in any general hospital. Furthermore, the general hospital incorporates the facilities of the primary healthcare into its own to play its role as a second tier health institution. As a matter of fact, to be so qualified, it should provide simple surgical services, supported by beds and bedding for minimum of 30 patients. There should also be ancillary facilities of proper diagnosis and treatment of common ailments. General hospitals are often within the control of state governments.

(c) Tertiary Care Services

A tertiary health institution, also called specialist/teaching hospitals, handles complex health problems/cases either as referrals from general hospitals or on direct admission to its own. It has such features as accident and emergency unit, diagnostic unit, wards units, treatment unit and outpatient consultation unit. All these units are to be equipped with the necessary facilities and staffed by skilled personnel. Teaching hospitals also conduct researches and provide outcomes to the government as a way of influencing health policies. This explains why this type of health institution is often is based at the universities. Teaching hospitals are supposed to be fully developed and accredited for teaching of various medical disciplines. They are to conform to international and acceptable standards. It should be stressed also that apart from the provision of infrastructure for health matters, there is also the need for availability of teaching

[14]Badru, 2003

materials and specialists in such fields as surgery, general medicine, pediatrics, obstetrics, dentistry, otolaryngology and psychiatry among other disciplines.[15] To this end, each department should have a certain number of consultants with its own outpatients, consultation sessions, ward units, surgical sessions and skilled personnel and auxiliary staff to manage these units.

As a point of emphasis, the primary type of health institutions is associated with rural and semi-urban environments or mixed population, while general hospitals are located in the state capitals and a few other big towns. Tertiary health institutions are controlled and funded by the Federal Government and by some states that have and run state universities. Therefore, specialist or teaching hospitals are mainly urban-based.

1.2.6. Health Information Management

Routine immunization data in the country are currently reported from the health facilities to the LGAs to the states and then national through the DHIS and DVD-MT platforms for the national RI logistics and feedback report. Timeliness and completeness of reporting from the States to the National level, on the Routine Immunization services has significantly improved on both the DVD-MT and DHIS2.

DVD-MT timeliness and completeness of reporting has improved from 76% and 88% in 2010 to 97% and 95% in December 2014. Monthly DHIS Reports are currently being received from all states, except Borno and Yobe. Pilot of DHIS2/RI module has been completed in Kano and roll out on-going in 4 states – Enugu, Oyo, Akwa-Ibom & Bauchi. The target for DHIS2/RI module to all states is 4 years. There is no clear record on the timeliness and completeness of reporting on the DHIS platform as at 2010, but with the current support from CDC, government and other partners, there has been very significant improvement in 2014 and 2015. Timeliness of reporting on DHIS2 improved from 32% in December 2014 to 54% in June 2015; while completeness improved from 41% to 60% in June 2015 (Figure 7).

Figure 7: HDIS2 Timeliness of RI reporting (Dec. 2014 – June 2015)

[15] Erinosho, 2005; Badru, 2003

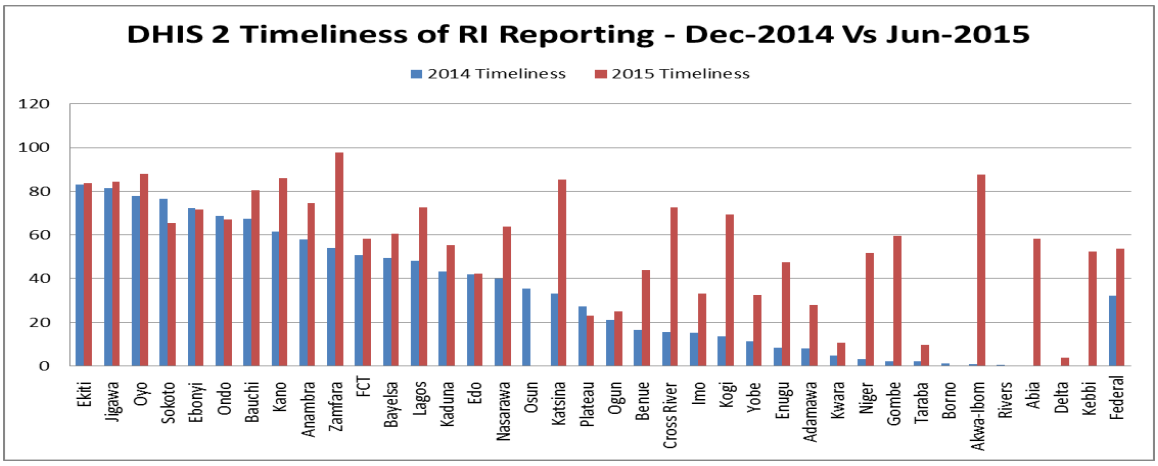
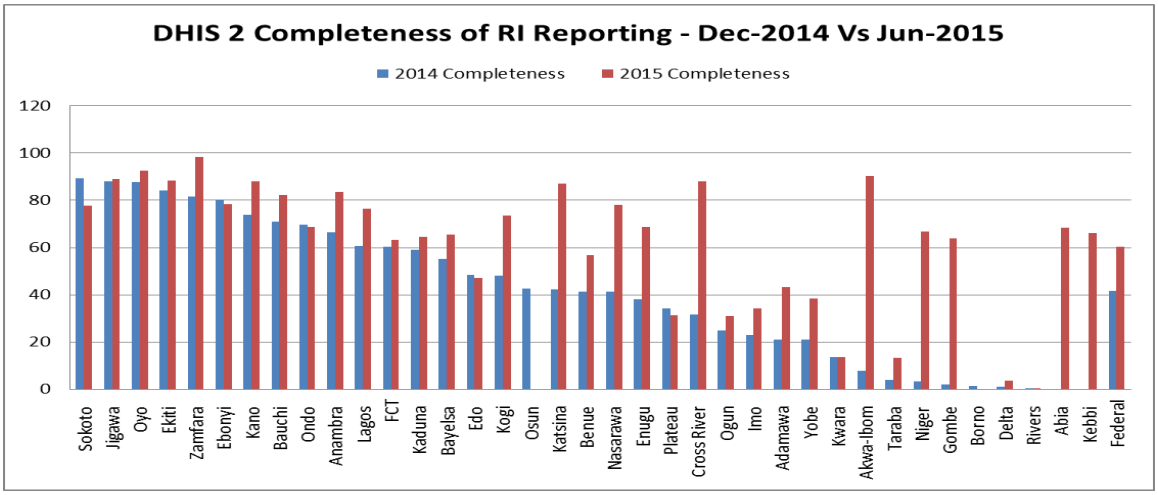


Figure 8: DHIS2 completeness of RI reporting (Dec 2014-June 2015)



Data quality

There is a wide disparity between administrative immunization coverage data, UNICEF-WHO estimates and survey data. There are also observed disparities between the coverage from one zone to the other (e.g. the northern states usually have lower coverage than the southern states); and disparity between the DPT3 and measles immunization coverage.[16]

These disparities between the data could be attributed to the quality of immunization data at LGA and HF level, which remains a challenge, possibly due to high attrition rates of health workers, limited availability of relevant training, or the misalignment between the individuals that are trained and the roles they perform and inadequate data tools. These contributes to the poor data capturing and delayed / incomplete submission of immunization data from the HFs /

[16] National Demographic Health Survey: 2003, 2008 & 2013.

LGAs. Pentavalent vaccine Post Introduction Evaluation showed that only 36% of HFs recorded prior doses of DPT in registers, and only 56% reported updating registers with information from a child's immunization card. In other words only 36% of the HFs was recording DPT in register before the introduction and 56% of HFs updated the register with information from the child immunization cards. Furthermore, only 48% of local immunization officers (LIOs) could explain anomalies in monitoring charts at their sites.[17] Hence the likelihood of discrepancies when compared with survey reports.

In order to ensure data quality in the country and avoid these observed disparities in future, the national government and immunization partners in-country have instituted Annual Data Quality Self-assessment since 2010 as quality checks at the State / LGA levels. Nigeria usually conducts a national data quality self-assessment (DQS) in Q1 each year. Before introduction of new vaccines in 2012 / 2013, most HFs did not have immunization registers but notebooks and other improvise materials for recording of immunization activities at the HFs. During DQS exercise, records on these tools (registers, notebooks, etc. used by the HFs staff to record immunization activities) are verified. The correction factor for DQS conducted in 2013 was 0.9532, meaning that precision of the reported coverage for all antigens were 95% correct.[18]Availability and recording of immunization services on the immunization registers at the HFs has significantly improved since after the introduction of new vaccines.

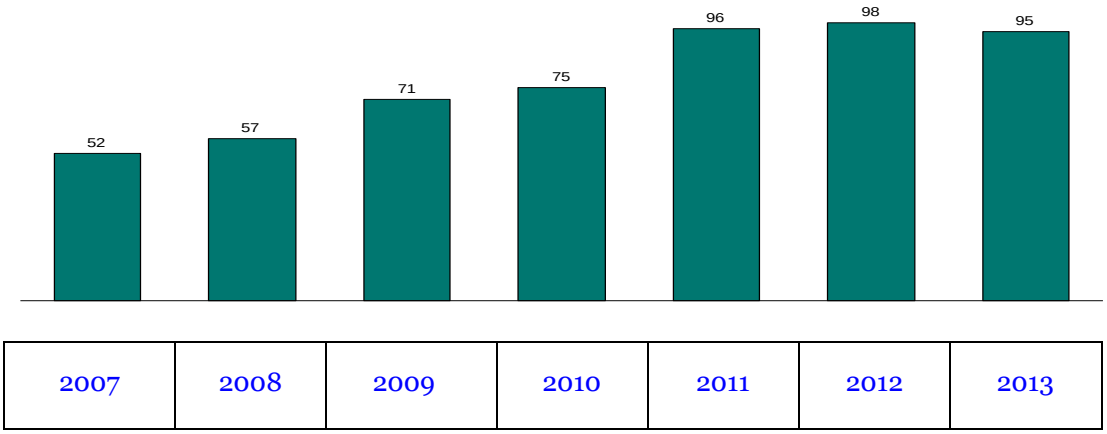
Data reporting has improved as the DQS correction factor has increased over time. Nonetheless, there is a need for further improvement in RI data quality, completeness, and reporting to bridge current observed disparity.

Other efforts by the GoN and partners to improve on the data quality include: resuscitating the quarterly zonal PHC review meetings and annual PHC review meetings where PHC data are critically examined and discussed for further necessary action(s), planned phased training / re-training of Health Workers at the lower level (especially health facilities and LGA PHC offices) on data management (collection, analysis, utilization and reporting); and proposed support in the phased procurement and installation of data management tools (vaccination cards, immunization tally sheets and registers etc.) and equipment especially at the lower levels.

[17]Post-Introduction Evaluation (PIE) of Pentavalent Vaccine in Phase 1 states. WHO 2013 / NPHCDA Assessment Reports

[18], NPHCDA/WHO Nigeria DQS Report (2013)

Figure 9: Trend of correction factor for reported antigens from the DQS:



1.3. Immunization System

The goal of the cMYP 2011 – 2015 was to significantly and rapidly improve RI coverage on a sustainable basis and reduce disease burden arising from vaccine preventable diseases in all communities in Nigeria, while using immunization as an entry point to strengthening the overall primary health care delivery system. There were seven (7) programme objectives and progress has been made on each of these objectives since the creation of the cMYP.

1.3.1. Routine immunization

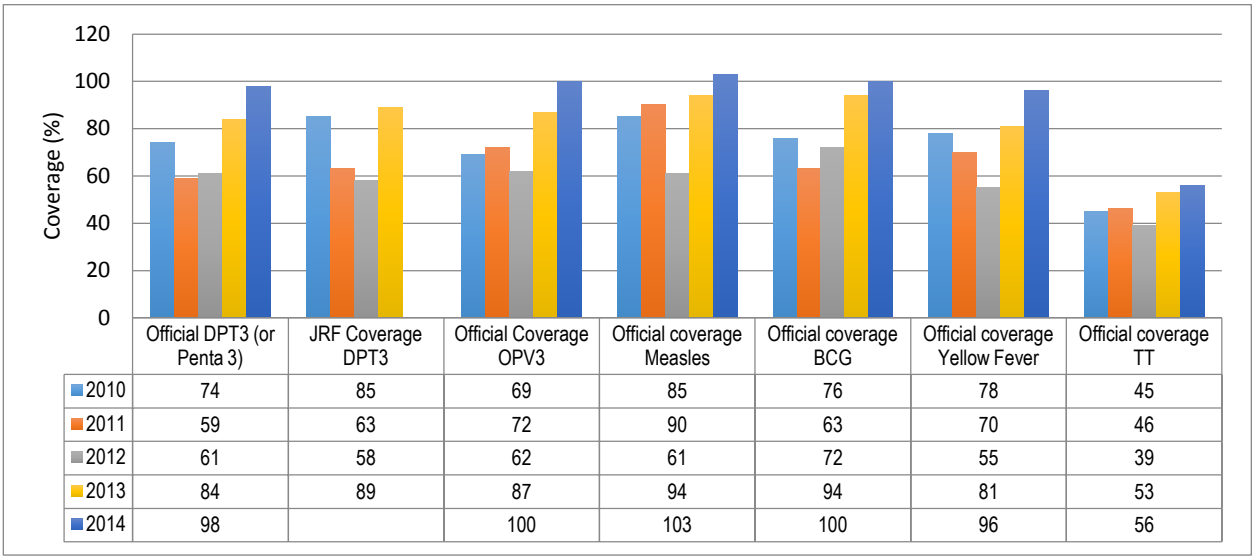
Level of program coverage

Objective 1 of the cMYP 2011 – 2015 was to ensure that 87% of infants are fully immunized against vaccine preventable diseases before attaining the age of 12 months by 2015.

Since 2013 there has been considerable progress in the routine immunization performance in the country. (see Figure 10).The DPT3/Penta3 target for 2013 and 2014 was 78% and 80% respectively, but actual coverage was 84% and 98%. This information was confirmed by DVD-MT[19] that showed a considerable improvement in the DPT3 containing antigen coverage in the eleven Polio High Risk (HR) States in 2013 and 2014 (see Figure 11).

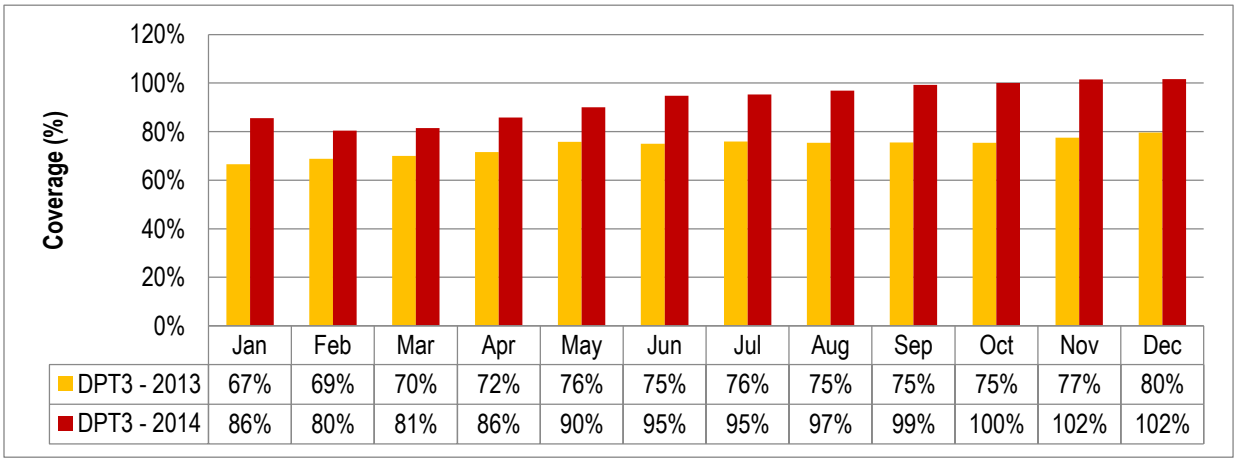
[19]District (LGA) Vaccine Data Management Tool

Figure 10: Trend of RI coverage (%) by antigen (2010-2014



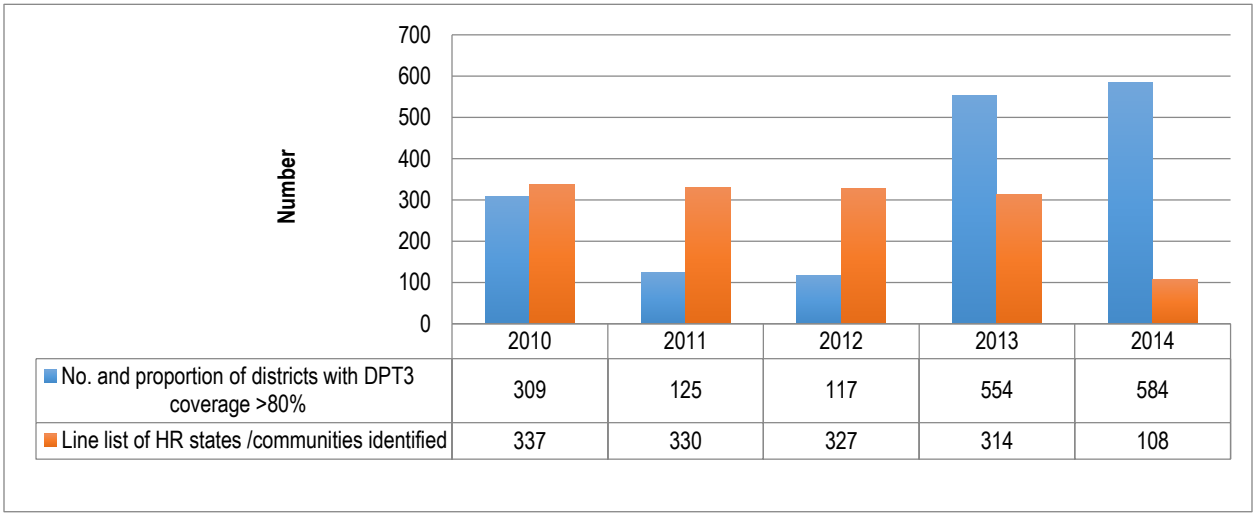
	Official DPT3 (or Penta 3)	JRF Coverage DPT3	Official Coverage OPV3	Official coverage Measles	Official coverage BCG	Official coverage Yellow Fever	Official coverage TT
2010	74	85	69	85	76	78	45
2011	59	63	72	90	63	70	46
2012	61	58	62	61	72	55	39
2013	84	89	87	94	94	81	53
2014	98		100	103	100	96	56

Figure 11: Trend of DPT3 containing antigen Coverage in 11 Polio States – 2013 vs. 2014 (DVD-MT



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
DPT3 - 2013	67%	69%	70%	72%	76%	75%	76%	75%	75%	75%	77%	80%
DPT3 - 2014	86%	80%	81%	86%	90%	95%	95%	97%	99%	100%	102%	102%

The number and proportion of districts with DPT3 coverage >80% decreased from 309 in 2010 to 125 in 2011; but there has been steady increase from 117 districts in 2012 to 554 in 2013 and 584 in 2014. There is also reduction in the number of identified high-risk states / communities from 337 in 2010 to 108 in 2014 (Figure 12).

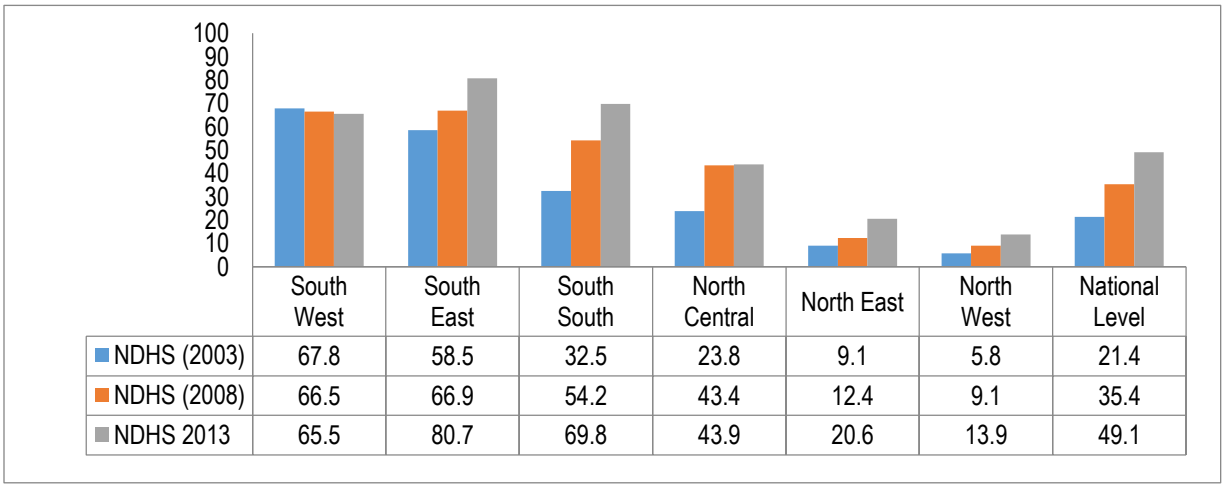


	2010	2011	2012	2013	2014
No. and proportion of districts with DPT3 coverage >80%	309	125	117	554	584
Line list of HR states /communities identified	337	330	327	314	108

Figure 12: Trend of reduction in the number of High Risk States/communities (2010-2014)

There are observed disparities in the coverage across the zones. Northern states have lower coverage rates than the southern states, (fig. 6). The lower coverage rates can be attributed to some contributing factors such as low knowledge of immunization; misconceptions of immunization and low uptake of RI as compared to the southern states which have higher coverage. Immunization coverage is also higher in urban areas compared to the rural areas.

Fig.6: NDHS DPT3- containing antigen coverage across zones (2003, 2008 and 2013):

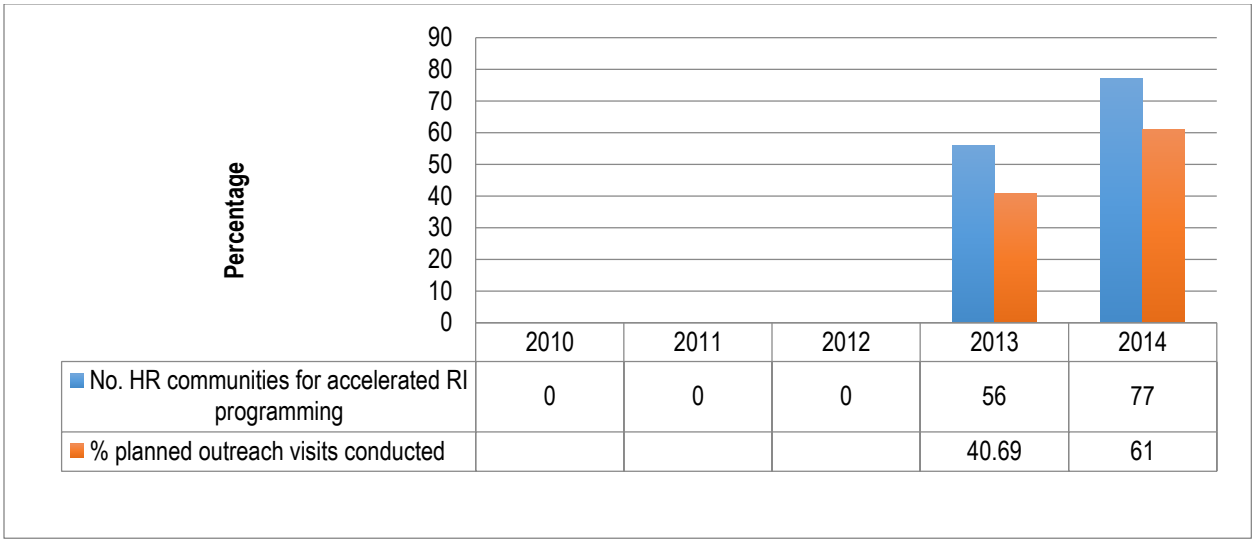


	South West	South East	South South	North Central	North East	North West	National Level
NDHS (2003)	67.8	58.5	32.5	23.8	9.1	5.8	21.4
NDHS (2008)	66.5	66.9	54.2	43.4	12.4	9.1	35.4
NDHS 2013	65.5	80.7	69.8	43.9	20.6	13.9	49.1

The number of high-risk communities identified for accelerated RI programming increased from 56 in 2013 to 77 in 2014; and the percentage planned outreach visits conducted increased from 40.69% in 2013 to 61% in 2014 (

Figure 13).

Figure 13: Trend of planned outreach conducted (2013-2014)



	2010	2011	2012	2013	2014
No. HR communities for accelerated RI programming	0	0	0	56	77
% planned outreach visits conducted				40.69	61

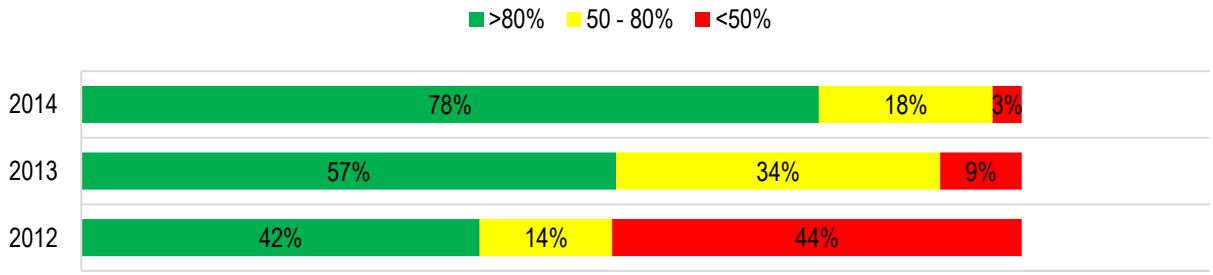
There is also disparity between the various antigens coverage. The measles and yellow fever coverage were 85% and 78% respectively in 2010; and 103% and 96% respectively in 3014.

According to the key statistics for child health [please insert source], there has been significant improvement in service delivery during the last two decades.

Considerable progress was reached in the routine immunization performance in the country during the period 2010-2015. The DPT3/Penta3 target for 2013 and 2014 was 78% and 80% respectively however actual coverage reached 84% and 98%.

Whilst we have to wait for the next MICS or DHS to appreciate real reductions in inequities a number of anecdotal evidence points towards progress. Certain communities that have never been reached are now being reached (due to various interventions outlined before). Proportion of LGAs with less than 80% coverage has decreased from 58% to 21% (fig. 9).[20]

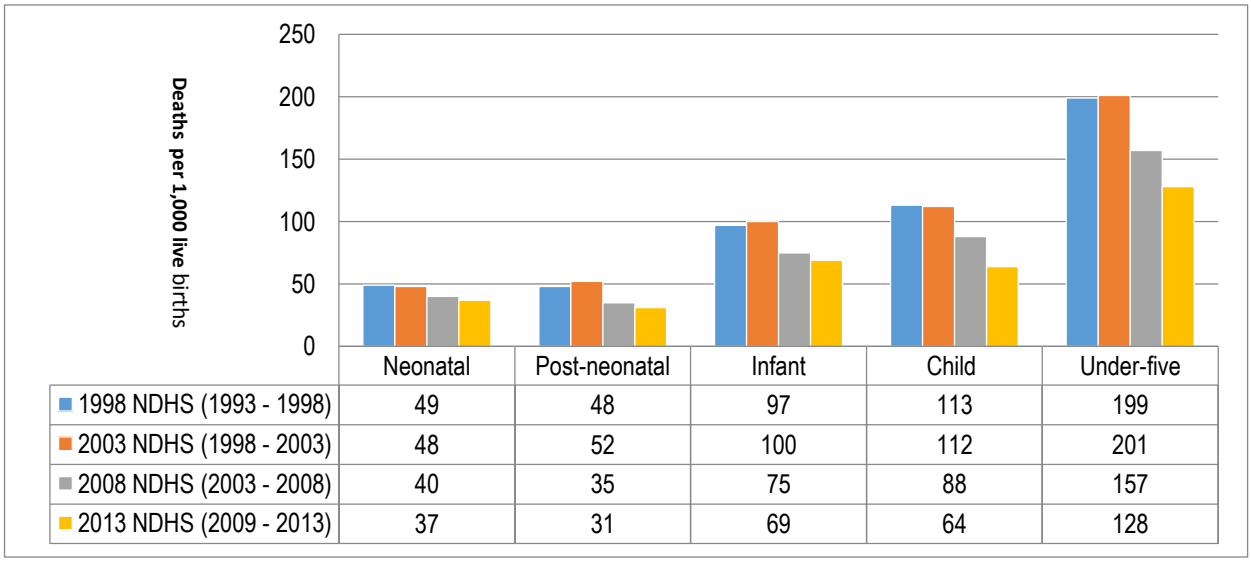
Figure 14: Proportion of LGAs with <80% DPT3 Coverage



[20] DVD-MT Database (as at December 2014)

According to the 2013 NDHS childhood mortality has considerably declined at all levels (neonatal, post-neonatal, infant, child and Under-5 mortality rates) and there has been sustained reduction from 1993 to 2013 (Figure 15).

Figure 15: Trends in childhood mortality in Nigeria (1993-2013).[21]



	Neonatal	Post-neonatal	Infant	Child	Under-five
1998 NDHS (1993 - 1998)	49	48	97	113	199
2003 NDHS (1998 - 2003)	48	52	100	112	201
2008 NDHS (2003 - 2008)	40	35	75	88	157
2013 NDHS (2009 - 2013)	37	31	69	64	128

Over the last 15 years, preceding the survey Infant mortality declined by 29 percent, from 97 deaths per 1,000 live births in 199822to 75 deaths per 1,000 live births in 2008,23which followed by further decrease by 69 deaths per 1,000 live births in 2013.24. Under-5 mortality declined by 36 percent over the same period; from 199 deaths per 1,000 live births in 1998 to 157 and then to 128 deaths per 1,000 live births in 2013. Finally, neonatal mortality decreased by 24 percent; from 49 deaths per 1,000 live births (1998) to 46 deaths per 1,000 live births (2008) and further decrease to 37 deaths per 1,000 live births (2013). However, there is no clear estimate on how much of the decline in infant mortality is due to immunization alone.

As is the case with immunization coverage, mortality rates in urban areas are consistently lower than those in rural areas. Infant mortality is 43 percent higher in rural area (86 deaths per 1,000 live births) than in urban areas (60 deaths per 1,000 live births). The urban – rural difference is even more prominent in the case of under-5 mortality.25 There are also zonal differences in the

[21] Nigeria Health Indices: NDHS (1998 – 2013)

[22] NDHS 1998

[23] NDHS 2000

[24] NDHS 2013

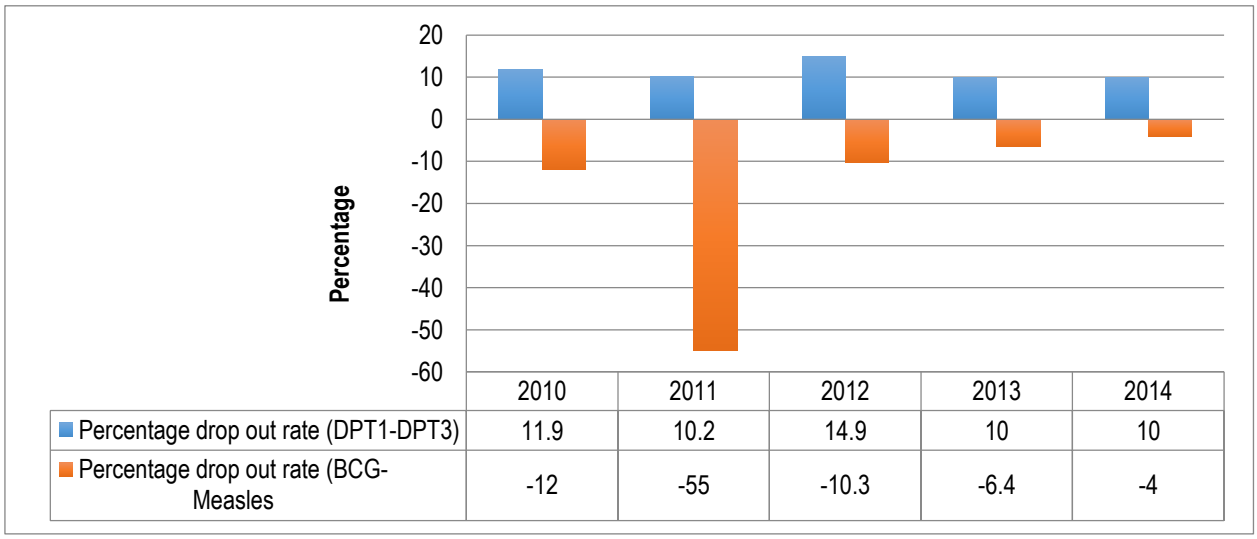
[25]Nigeria Demographic and Health Survey Report (NDHS: 2013)

infant and under-5 mortality. Under-5 mortality rate range from a low 90 deaths per 1,000 live births in the South West to as high as 185 deaths per 1,000 live births in the North West. [26]

Over the 2011-2015 period, EPI planned and implemented preparatory activities for introduction of the following new vaccines: Pentavalent vaccine, IPV and PCV. These activities included training of health workers in new vaccine introduction, social and community mobilization, development and distribution of the data collection tools and upgrade of the cold chain equipment. In addition, EPI strengthened in-country capacity to develop proposals for new vaccine introduction.

The national DP1-DPT3 dropout rate decreased from 11.9% in 2010 to 9.8% in 2014. Negative BCG-Measles dropout rate was recorded during the period, though there was an improvement from -28% in 2010 to -4% in 2014 (Figure 16).The Analysis of reported data on negative drop-out highlighted existing problems in terms of data quality and accuracy of data related to the target population (denominator issue). Taking into account that the target population rates (denominators) are based on the 2006 census data and establish population growth rates, it is hoped that during the next census planned for 2016, these issues will be precisely addressed.

Figure 16: Trends in the DPT1 – DPT3 and BCG – Measles Drop Out Rates (2010-2014)



	2010	2011	2012	2013	2014
Percentage drop out rate (DPT1-DPT3)	11.9	10.2	14.9	10	10
Percentage drop out rate (BCG-Measles	-12	-55	-10.3	-6.4	-4

[26] Nigeria Demographic and Health Survey Report (NDHS: 2013)

1.3.2. Accelerated disease control initiatives

Figure 17: Situational Analysis by Accelerated Disease Control Initiatives

Component	Suggested indicators	National Status				
		2010	2011	2012	2013	2014
Polio	OPV3 Coverage	69	72	74	88	100
	Number of rounds / coverage range of national immunization days (NIDs)	NIDs 3/yr 138-167%	NIDs 3/yr 94-96%	NIDs 2/yr 94-94%	NIDs 2/yr 95-95%	NIDs 2/yr 95-96%
	Number of rounds/coverage range of sub-national immunization days (SNIDs)	SNIDs 7/year 97-195%	SNIDs 7/year 91-95%	SNIDs 6/year 90-95%	SNIDs 9/year 95-107%	SNIDs 7/yr 95-96%
	Non polio AFP rate per 100,000 children under 15 years of age	7.7	8.3	9.9	11	13.3
	% stool adequacy rate	93	95	95	96	97
	% Non-polio enterovirus rate	15	14	16	14.5	11.5
	% stool in 'good condition'	99	99	99	99	99
MNTE	TT2+ coverage	45	46	39	53	56
	Percentage target population protected at birth from neonatal tetanus				52.8	
	Number and proportion of states reporting >1 case of neonatal tetanus per 1,000 live births	27 (73%)	26 (70%)	17 (46%)	23 (62%)	17 (46%)
	SIA Conducted (Y or N)	Yes	Yes	Yes	Yes	Yes
	Neonatal deaths reported and investigated	78	47	66	46	27
	Delivery at facility rate	ND	ND	ND	ND	ND
	% Timeliness of reports	30	44	46	67	50
	% Completeness of reports	67	76	98	100	90
	% cases of neonatal tetanus investigated	100	97	99	93	97

	within 7 days of reporting					
	% cases with incomplete investigation	98	98	98	89	86
	% true neonatal tetanus cases reported	100	100	100	100	100
Measles	Measles vaccination coverage	85	90	75	95	102
	Total measles cases (laboratory/ clinical/ epidemiological)	8,767	19,475	6,397	55,517	4,494
	Number of laboratory confirmed measles outbreaks	338	303	156	540	133
	Geographic extent national (NID). Age group & coverage.		9 – 59 months 130/94%		9 – 59 months 104/98%	
	Non Measles Febrile Rash Illness Rates	5		4	3.4	2.7
	% of LGAs reporting at least a suspected case with blood	95		88	97	84
	% of cases that are positive for Igm	28		21	35	15.4
	% of cases investigated with blood specimen	96		99	51	75
Yellow Fever	YF coverage	78	70	44	83	99
	Number and percentage of districts reporting >1 suspected case	184 (24%)				177 (22.9)
	Preventive campaign conducted (Y /N)	No	No	No	Yes	No
	% cases reported within 7 days of onset	73		62	70	76
	% cases investigated with blood specimen	86		99	100	100
	% LGAs reporting at least a suspected case with blood	28		30	32	25
Epidemic Meningitis	Preventive campaign conducted	No	Yes	Yes	Yes	Yes
	Number of suspected CSM cases reported	4983	1167	1206	871	1175

	Number of LGAs affected	305	167	199	132	125
	Number of CSM cases confirmed by laboratory	153	15	13	32	73

Polio

Administrative coverage has improved from 69% in 2010 to about 100% in 2014. Non-polio AFP rate per 100,000 children less than 15 years of age increased from 7.7% in 2010 to 13.3 in 2014. Wild poliovirus type 2 disease (WPV2) has disappeared in the country and wild poliovirus type 3 (WPV3) disease has not been detected since November 2012. Only six (6) cases of wild poliovirus type 1 (WPV1) were recorded in 2014, compared to 53 cases in 2013 and 122 in 2012 (fig. 22). The cases in 2014 were from only two states (Yobe and Kano); and the last case in Nigeria was in July 2014. Interruption of WPV in the country was targeted for 2012in the 2011 – 2015 cMYP, but achieved in Q1 2015.

Strengthening Routine Immunization in Nigeria through using PEI assets

The polio endgame strategic plan 2013-2018 through its second objective focuses on Immunization system strengthening and OPV withdrawal. This objective should be achieved through three main strategies: use of polio assets in the countries to strengthen routine immunization, introducing one dose of IPV in the routine immunization and switch of tOPV to bOPV in the routine immunization schedule.

2014 was a landmark year for Nigeria's polio eradication programme. Nigeria recorded historical progress towards the target of stopping transmission of wild poliovirus, reporting only 6 cases in 2 states in 2014 (as at 14 January 2015), compared to 53 cases in 9 states in 2013. At the same time, there have been no cases of WPV3 since November 2012. In 2014 wild poliovirus became even more geographically restricted to 2 states, including in 4 LGAs of Kano state and 1 LGA in Yobe which has continued to face security and access challenges. There has also been a significant reduction in the number of circulating genetic clusters from 8 in 2012 to only 1 in 2014 (N5). However, in 2014, Nigeria experienced an increased outbreak of cVDPV2 with 29 cases across five states (14 cases in Borno, 10 cases in Kano, 1 case in Katsina, 2 cases in Yobe and 2 cases in Jigawa), up from 5 cases in 2013.

The Nigeria's Presidential Task Force on Polio Eradication (PTFoPE) continued to oversee the implementation of the 2014 National Polio Eradication Emergency Plan with (NPEEP) the National Emergency Operations Centre (EOC) providing technical leadership and coordinating Government and partner efforts at the central level, with the State EOCs or their equivalents at the State Level coordinating implementation at the state level. To ensure that the planned activities in the NPEEP were implemented with quality, the EOC continued to implement the accountability framework for all stakeholders at all levels.

The achievements in 2014 have been largely due to the improved quality of SIAs, with the proportion of LGAs achieving an estimated coverage of least 80% coverage as verified by LQAS increasing from 72% in December 2013, to 97% by December 2014. Quality improved as the result of a number of interventions and innovations which were implemented throughout 2014. These included the introduction of Directly Observed Polio Vaccination (dOPV) and scaled up outside household vaccination to address team performance and non-compliance issues; the accelerated introduction of IPV in Borno, Yobe and Kano states; the scaling up of health camps and demand creation interventions to address other felt needs of communities; increased focus on hard to reach populations during and in-between campaigns, including internally displaced populations (IDPs) from security compromised areas; and precision focus on the high risk LGAs.

NPEEP outlines strategic priorities that will be the area of focus to ensue interruption of all polioviruses during 2015. These include:

(1) enhancing SIA quality in prioritized vulnerable areas;

(2) special approaches for insecurity areas;

(3) mounting timely and adequate polioviruses outbreak responses;

(4) enhancing routine immunization;

(5) intensifying surveillance; and

(6) expanding household and community engagement approaches to build demand for polio and routine immunization.

All strategies will be underpinned by strict adherence to the accountability framework which continues to guide the NPEEP.

- **Health Camps**

Health camps are implemented in areas with persistent non-compliance in the endemic states with provision of routine immunization services and other health interventions. Of note is that there was also targeted scaling up of health camps during specific interventions such as rolling out of accelerated IPV introduction in Borno, Yobe and Kano where health camps was the only podium for delivery of the vaccine with approximately 3 million IPV doses administered.

With the proven success of health camps in 2013, new partners joined to support implementation of health camps in selected states and LGAS in 2014.

- **Vaccinating in Security Compromised areas and Internally Displaced Persons (IDP) camps**

In security compromised areas, despite the increase in insurgency in 2014 (almost 60% of the settlements could not be fully reached by December 2014 IPDs), the local innovations from 2013 continued to be implemented in areas with accessibility. Detailed monthly security risk assessments were done to identify areas where implementation was feasible. The figure below shows the number of OPV doses administered by innovation from May – December 2014

By December 2014, there were 48 registered IDP camps in 15 LGAs of 4 states: Adamawa, Borno, Gombe and Taraba. A total of 57,715 children aged 0 – 59 months were vaccinated with OPV and those who did not present a card to indicate that they had not received IPV were vaccinated with IPV.

Of the 57,715 children that were vaccinated in IDPs, 1,592 (2.8%) had not received any OPV before indicating gaps in population immunity in the areas where the children came from and risk of spread of the polioviruses. The figure below shows the number of children vaccinated with tOPV in the different camps in the LGAs

This project is planned for implementation in Very Very High Risk (VVHR) LGAs. The main activities include: training of PEI staff on EPI, development of training curriculum and training of sub-district level staff on EPI, coordination meetings at all levels of the system, micro-planning, updates of micro-plans at all levels, supervision of fixed and outreach immunization sessions by polio funded staff, household listing, defaulter tracing, strengthening VPD surveillance and integrated communication.

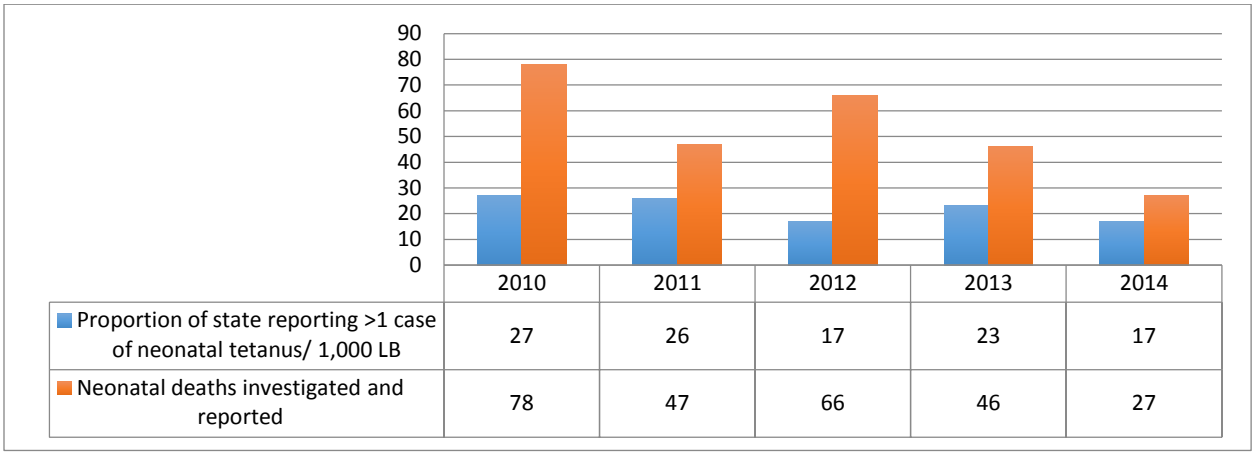
Maternal Neonatal Tetanus Elimination

TT2+ routine administrative coverage increased from 45% in 2010 to 56%in 2014. Though there is an improvement, there is still difficulty in achieving higher TT coverage in the country possibly due to low ANC attendance, low PNC attendance and low health facility deliveries. Women of child bearing age (15-49 years) and pregnant women were targeted for demand creation on TT vaccination through campaigns; piloted statewide in 2009/2010 with 63% TT3 coverage and subsequently based on risk analysis in 5 states with coverage of 49% as only 3 states were able to complete the rounds. In 2012, the MNTE program was reprogrammed focusing on elimination by zone. Sixty-one (61) LGAs were targeted for three rounds of TT SIAs with first round conducted in 2014 but subsequent rounds have not been conducted as a result of funding challenges affecting the whole MNTE program in Nigeria.

Number and proportion of states reporting > 1 case of neonatal tetanus per 1,000 live birth decreased from 27 (73%) in 2010 to 17 (46%) in 2014,however the incidence ranges between 14.6to 20 per 1000 live births (fig. 23).[27]Only about 5% of these cases are reported with the fatality.

[27]

Figure 18: Proportion of states reporting >1NT/1,000 LB&NT deaths investigated/reported (2010-2014)



	2010	2011	2012	2013	2014
Proportion of state reporting >1 case of neonatal tetanus/ 1,000 LB	27	26	17	23	17
Neonatal deaths investigated and reported	78	47	66	46	27

rate of about 60%. Neonatal deaths reported and investigated decreased from 78 in 2010 to 27 in 2014. Percentage reporting and completeness of reporting improved from 36% and 67% in 2010 to 50% and 90% respectively in 2014.

Measles

Measles administrative coverage increased from 85% in 2010 to about 100% in 2014. Confirmed cases of measles decreased from 8,767 in 2010 to 4,463 in 2014, though there are still observed cases of measles outbreaks (no specific areas of the country affected). Number of laboratory confirmed cases also reduced from 338 to 133 during the same period and case fatality rate was 1.49% as at week 53 of 2014. Generally, the gains of the catch up campaign were sustained with the successful conduct of three follow up SIAs in 2008, 2011 and 2013. The reductions in measles cases in Nigeria between 2006 and 2013 accounted for the significant drop in measles cases in the African sub region during this period.

Yellow Fever

Yellow fever coverage has increased from 78% in 2010 to 94% in 2014. Proportion of LGAs reporting at least one case with blood sample decreased from 28 to 24 in 2014. Global yellow fever vaccine shortage affected the implementation of planned yellow fever campaigns in the country. The country has received only 10 million doses of yellow fever against the 62 million doses committed by Gavi. In the last 5 years, only one campaign was conducted in 2013. Post campaign survey showed 76.75% coverage.

1.3.3. Analysis of Immunization system performance

(1) Program Management

EPI Vision and Mission

Nigeria is a signatory to the declaration of the survival, protection and development of children, which was articulated at the 49th World Health Assembly in 1988. This was reinforced by the

World Summit for Children held in New York in 1990. This declaration established objectives for global immunization and vaccine preventable diseases including poliomyelitis.

National Primary Health Care Development Agency formulated the vision and mission of Expanded Program on Immunization of Nigeria.

Vision

To achieve sustainable immunization service delivery through community ownership, community operated and community driven strategy.

Mission

To significantly and rapidly improve routine immunization coverage on a sustainable basis and reduce disease burden arising from vaccine preventable diseases in all communities in Nigeria, while using immunization as an entry point to strengthening the overall primary health care delivery system."

Interagency Coordination Committee

Coordination of partners in immunization activities is done through the Interagency Coordinating Committee (ICC). The ICC is chaired by Federal Minister of Health and comprises FMoH, NPHCDA, Association of Local Governments of Nigeria (ALGON), WHO, UNICEF, United States Agency for International Development (USAID), Rotary International (Polio Plus), UK Department for International Development (DFID), European Union (EU-Delegation), Center for Disease Control (CDC), Embassy of Japan (JICA), Embassy of Canada, Embassy of Norway, World Bank, Clinton Health Access International (CHAI), Rotary International and IVAC, HERFON and SCI. The mandate of the ICC covers polio eradication and routine immunization.

The CORE Group and Routine Immunization Working Group (RIWG) are the ICC technical bodies with clear terms of reference for their mandate. While the ICC meet once in every two months, the Core Group meets once in a month and RIWG once in every two weeks to plan and monitor the implementation of the immunization activities.

The Executive Director NPHCDA chairs the Core Group with EPI team leaders from immunization stakeholders in the country as members. The RIWG is chaired by the Head Routine Immunization at NPHCDA with program officers / EPI Experts from all immunization stakeholders as members. Decisions are taken at the RIWG for recommendations to the Core Group and then ICC as the need would arise. There are also working groups at the State level through the Emergency Operation Centers (EOC). Central supervision visits to each state level per year has improved, but gaps still exist.

The National Routine Immunization Strategic Plan – NRISP (2013 – 2015) was developed by government and partners to guide implementation of immunization programs in the country. Most States/LGAs/health facilities developed annual work-plan / micro-plan for implementation of priority immunization activities, though level of implementation varied from

state to state. Immunization services were being provided regularly in most of the wards through the REW/REC[28] strategy which is aimed at providing regular, quality and sustainable RI services in every political ward.

(1) Human Resource Management

Adequate human resources for immunization activities are yet to be achieved. Although the stock of human resource for health (HRH) in the country has increased since 2009, the availability of HRH is less than 50% due to high migration of health workers triggered by several factors including the declining absorptive capacity of the health sector, arising from persistent moratoriums at the State level. Other factors affecting the availability of HRH include uncongenial work conditions, poor remunerations and incentives for health workers. The distribution of available HRH is also lopsided, with the northern parts of the country having less Health workers compared to the southern parts; rural areas suffered more shortages and mal-distribution of HRH compared to urban areas and State owned facilities more than Federal owned. These have negative effect on the ability of the Health system to undertake RI activities towards achieving Universal health coverage. In recent years there has been Ad hoc efforts to address the mal-distribution, including: recruitment and posting of 8,000 MSS[29] midwives to the HFs in hard to reach areas (for child health and maternal services) and recruitment of 5,000 village health workers through SURE-P[30] intervention programme. Efforts are on-going to scale up and sustain these interventions.

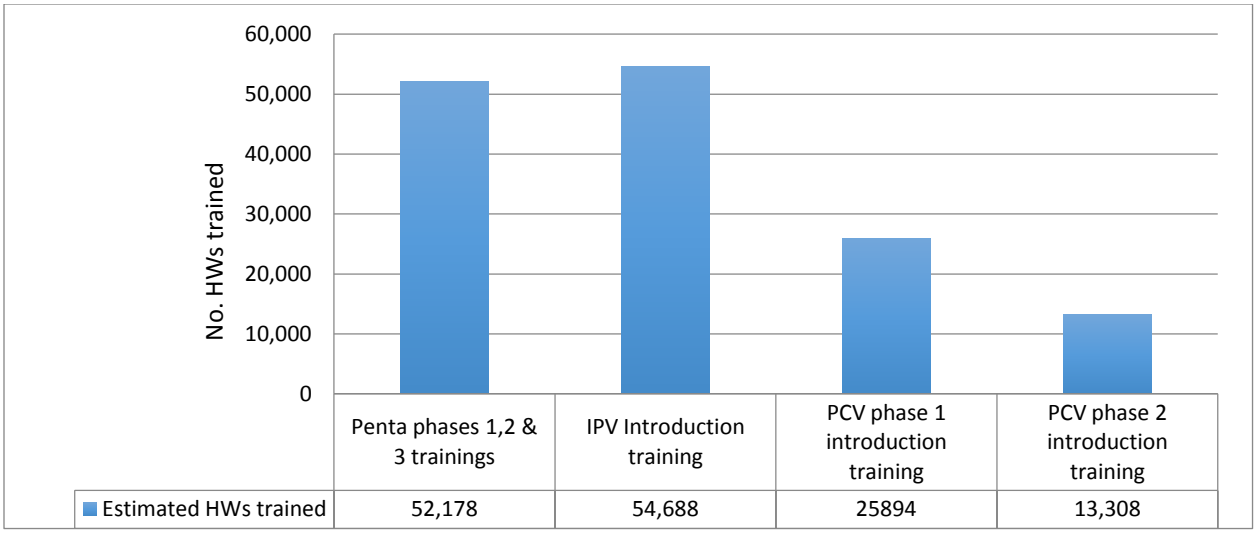
Factors such as coordinated training, motivation, supervision and monitoring affect the delivery of qualitative routine immunization services. One hundred and eleven (111) middle level managers involved in immunization services at the state level from all the states (3 per state) were trained in Mid-Level Management (MLM) between 2009 – 2013. Over 54,688 health workers were also trained during the new vaccines introductions (penta, IPV and PCV). Summary information on the number of health workers trained is shown in Figure 19 below. There is also an observed improvement in the integration of immunization services with other health intervention.

Figure 19: Number of health workers trained during new vaccine introductions

[28] REC- Reach Every Community; REW - reach every ward

[29] Midwives Service Scheme

[30] Subsidy Reinvestment Program



(2) Costing and financing

The costing and financing of the immunization system is highly dependent upon the donors' contribution. Vaccines are procured by UNICEF with support from various development partners. The Government's contribution towards procurement is in the form of co-financing for of GAVI supported vaccines.

Funding for salaries and operations of National EPI office are primarily supported from Government allocations. The services delivery at health care facility level under WMSP is financed through the State and LGA financial allocations.

Some of the operational costs including salaries of the provincial staff and their monthly expenditures are borne by the State and LGA governments through the regular budget.

Further details and analysis is presented in section (financing and funding gap analysis).

(3) Vaccine and Cold Chain Management

Logistics

The vaccine supply chain consists of the National Strategic Cold Store (NSCS) in Abuja and six Zonal cold stores located in the six geopolitical zones of North-Central (Minna), North–West (Kano), North-East (Bauchi), South–West (Lagos), South-East (Enugu) and South–South (Warri). Distribution of vaccines and immunization supplies is mostly by road to all thirty six states of the federation plus the Federal Capital Territory (FCT) through the Zonal cold stores. There is a relatively good all-weather road network from the Federal Capital to all state capitals. The distribution system is push system from the national to the Zonal and state stores.

The NPHCDA Zonal cold store in Lagos is of strategic importance for safe injection supplies distribution network in the country. The port of Lagos is an entry point for bulk dry supplies (e.g. injection devices) and cold chain equipment for immunization activities, especially

campaigns. In addition, the NPHCDA also procures devices through local vendors which are transported directly to Zonal cold stores or the NSCS.

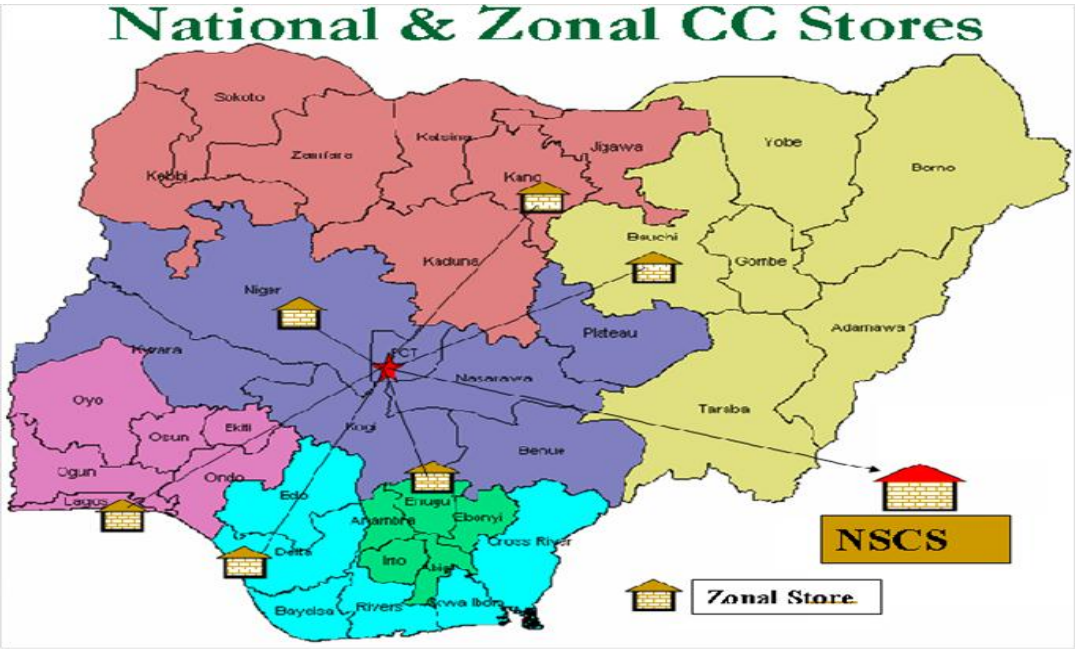


Figure 20: Distribution of National and Zonal Cold Chain Stores

The system works through working groups from the state through the zones to the National. At the LGA level, the LGA team is responsible for the vaccine supply chain. This team relates to the State Logistics Working Group (SLWG) which is responsible for the vaccine supply chain at the state level. It is made up of the State Immunization Officer, the State Cold Chain Officer, NPHCDA Zonal Technical Officer (ZTO), UNICEF and WHO logistics focal points or vaccine security consultants and any other partner present in the state that is involved in supply chain management and routine immunization.

The SLWG relates with the Zonal Logistics Working Group (ZLWG) which is made up of the NPHCDA, UNICEF and WHO as well as any partner operating at the Zonal level that is involved in supply chain management and routine immunization.

The ZLWG also works closely with the National Logistics Working Group (NLWG) which is made up of the NPHCDA (chairman), WHO, UNICEF and CHAI and other partners involved in immunization logistics.

The NLWG is a technical advisory group to the Core Group (CG) on logistics, cold chain and vaccine security in country. It is tasked with the responsibility of developing standard operating procedures for vaccine, cold chain and supply management, planning, forecasting, procurement, distribution, monitoring of vaccine utilization and training. It is also responsible for providing technical guidance on logistics policy formulation and implementation.

Below is an overview of the information flow and the relationship between the logistics system and the management functions.

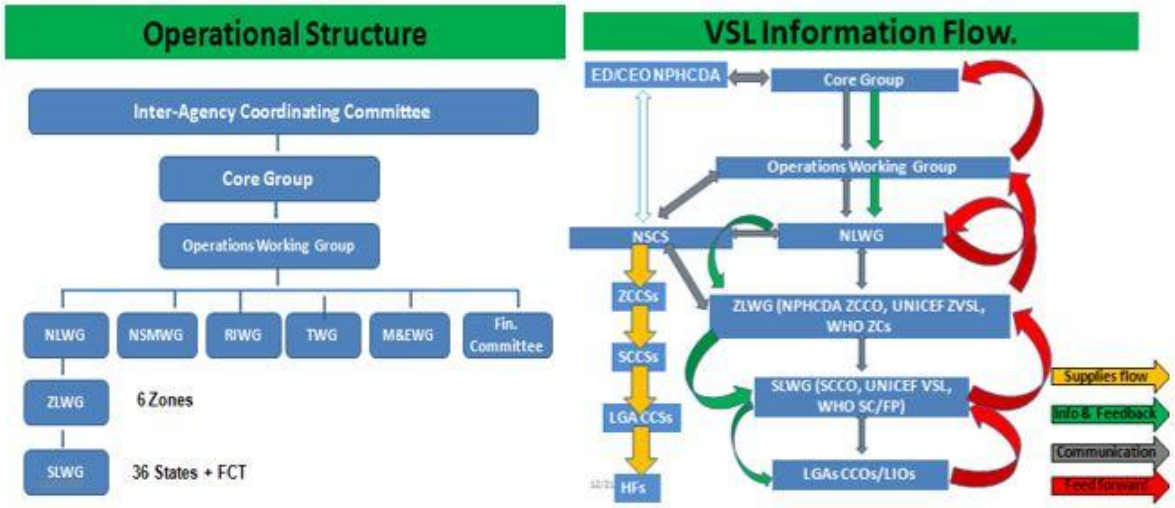


Figure 21: Logistics Operational Structure and Information Flow

The country has operationalized the six Zonal stores as part of the NSCS. Both the national and the Zonal stores are Federal Government structures. In this context the Zonal stores serve only states within their respective domain as distribution is reorganized to ensure operational effectiveness and efficiency.

Fixed infrastructure

The NSCS has two buildings one of which houses the cold rooms (11 in number – 3 x 40m³ WICRs and 8 x 20m³ WICRs/WIFRs). This also houses the freezers used for making icepacks for transport of vaccines. The second building houses the dry store where all immunization supplies are kept. Each of these buildings covers 534.5m² in size.

In addition to these, there is the main administrative building with offices, a conference room and a mechanic workshop. The compound is well laid out with ample space for parking of vehicles. There were also two standby generators of 300 and 200 KVA.

The Zonal level, the six Zonal cold stores have similar layout with the NSCS. The national store is situated near the international airport with adequate security. All zones have functional cold stores. The country is in the process of improving the storage capacity at NSCS, States, LGAs and Health Facilities. At the national level, expansion of existing infrastructure is on-going with

procurement of additional cold rooms while future expansion is planned with the installation of cold houses from 2016.

At the state level, all but three states have cold rooms installed in well ventilated buildings. All state stores have dry stores. All states have standby generators with enough capacity to power all available equipment.

At the LGA level, all LGAs have cold stores with cold chain equipment installed. Also, solar refrigerators are frequently used to store vaccines at LGA stores where electricity supply is a constant challenge.

The HF level seems to be the most affected by inadequacy of equipment and storage facilities. However, the recent nation-wide deployment of 1656 solar direct drive (SDD) refrigerators through the GAVI HSS grant, coupled with 400 solar refrigerators from the Japanese Government and other donations from partner organizations, will further improve the storage capacity at the HF level.

Challenges still exist in dry storage space, especially at the LGA level where immunization devices are not adequately housed.

Transport infrastructure

Transportation fleet at the national level consists of five refrigerated trucks which are used for effective vaccine distribution to zonal and state stores. For the distribution of dry materials, independent private vendor are contracted to supplement movement especially during campaigns when large volumes are involved.

Most states have vehicles procured by the Federal Government and other donors meant for vaccine distribution. However, these vehicles are only used for supervision and other EPI activities as most LGAs pull vaccines from the states. Recent procurements of double cabin Hilux trucks by state governments and partners has enabled some states cold stores, particularly Kano, Rivers, Bauchi and Nasarawa, to deliver vaccines to LGA stores and HFs.

Most LGAs make monthly trips to the states to collect vaccines and dry materials for immunization. Some LGAs have programme vehicles that are used for vaccine collection, while many others hire vehicles for the monthly vaccine collection.

The HFs, collect vaccines on scheduled immunization days using either cold boxes or vaccine carriers where storage facilities are not available. In Health Facilities with cold storage capacity, vaccines are collected on a monthly basis and stored for use during sessions. Most Health Facilities use motor cycles for vaccines collection and in some cases bicycles are also used. Freeze indicators for monitoring of temperatures during transport are not used at all levels, even though conditioned icepacks are used for packing vaccine.

Recording and reporting systems

As part of the recording and reporting system, various record books and vaccine movement forms are available. Ledgers are available down to the LGA level. Vaccine management tools (VM1 and VM2) are used to record vaccine movement at the HF level.

Also at the national, Zonal and state levels, the stock management tool (SMT) is used to document vaccines movement and utilization. The District Vaccine Data Management Tool (DVD-MT) is also used at the state and national levels to monitor vaccine utilization at the LGA level. Some LGAs also use it to monitor vaccine utilization within the LGA.

Store requisition, issue and receipt vouchers are used for documenting movement of vaccines and other immunization supplies at all levels. Reporting is done mainly using the VM tools and the DVD-MT. Other tools used include the monthly stock balance reporting forms which tracks vaccine balances at the state level including temperature of vaccines within the month.

The states then transmit the DVD-MT to the national level along with the updated stock balance report forms for the state. These are then analyzed at the national level and a monthly RI and logistics feedback is generated detailing the core indicators of vaccine management and their status for each state as aggregates for the LGAs. These include vaccine utilization, coverage rates, wastage rates, quality of storage and bundling principle. This provides information for corrective actions to be taken where indicated. The monthly feedback is shared with all relevant authorities including government and partners.

The recent introduction of the stock performance management dashboard nationwide has provided the needed visibility of stock at all state and LGA stores. This has resulted in an increase in stock sufficiency of bundled vaccine up to 80% of all LGAs compared to 34% baseline.

EPI Nigeria conducts cold-chain inventory on an annual basis. In addition, once in every 3-4 years Effective Vaccine Management Assessment (EVMA) is conducted. Based on the inventory and EVM Assessment all tires of the government develop annual cold chain plan.

EVM assessment conducted in 2014 showed significant progress achieved at the national level since the previous EVM Assessment (2010). Particularly, 86% of the activities included into the EVM improvement plan 20010 was fully achieved, 9% partly achieved and 5% in progress. Improvements at the state level have been less impressive. The report showed that 91% of the states developed monthly distribution plans and shares these with the LGAs. Only about 63% of tasks were achieved, 24% partly achieved, 11% in progress and 2% not achieved. Improvements at the LGA level have been steady, with 69% of tasks achieved, 21% in progress and only 10% not achieved. At the Health Facility level, 63% of tasks have been achieved, 13% partly achieved, 18% in progress and 6% not achieved (Figure 22).[31]

[31]Nigeria EVMA Report (2014) and NLWG Reports

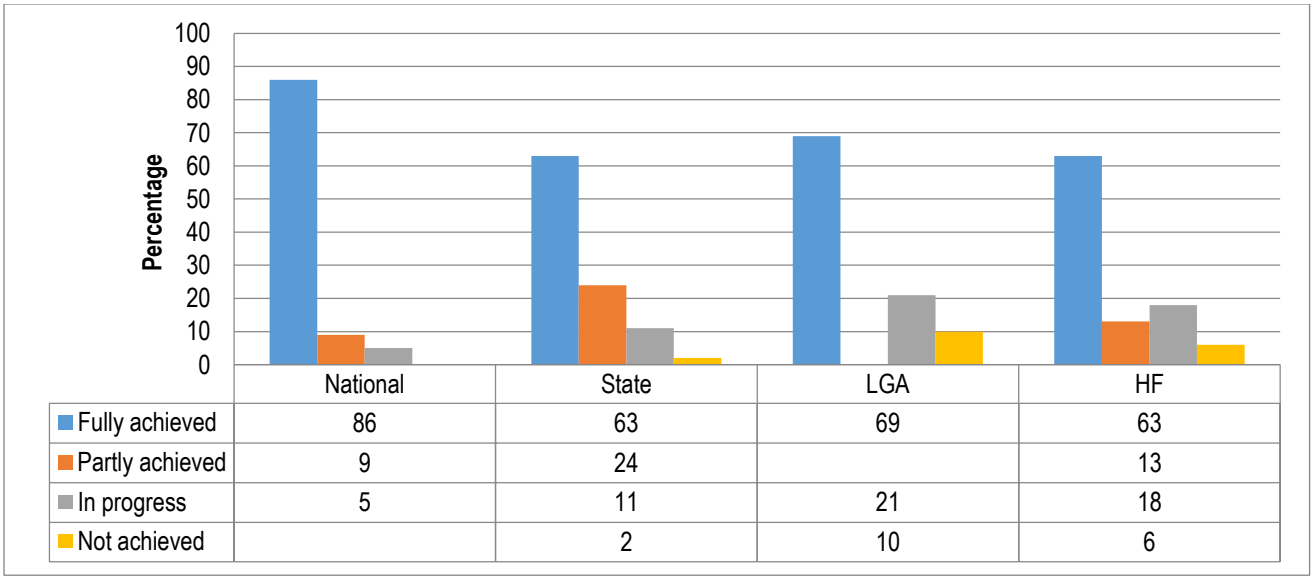
Figure 22: Summary of cold-chain and logistics indicators during the period 2011-2015[32]

Routine Immunization	Suggested indicators	National Status				
		2010	2011	2012	2013	2014
3. Vaccine Security, Cold Chain and Logistics Management						
Transport/mobility	Percentage of states with sufficient number of supervisory / EPI field activity vehicles / motorcycles in working conditions	ND	ND	ND	ND	ND
Vaccine supply	Stock out of any antigen at national level during the last year	Yes	Yes	Yes	Yes	No
	If yes, specify antigen(s)	DPT, TT HepB, tOPV	YF, DPT	HepB, DPT, YF	YF	NA
	If yes, specify duration in months	1-4	2	3	1	NA
Cold chain/logistics	Percentage of states with adequate and functional cold chain equipment	8	76	84	87	89
	Year of last inventory assessment for all cold chain transport and waste management equipment (or EVM)	EVM conducted		Inventory	Inventory	EVM conducted
	Number of PHC facilities with >80% score for all indicators on the last EVM assessment	ND	ND	ND	ND	ND
	Percentage of states with availability of a cold chain replacement plan	15				55
Waste disposal	Availability of a waste management policy and plan			Yes		Yes

ND= No data

Figure 23: Status of achievement in Effective Vaccine Management in 2014

[32] Nigeria EVMA Report (2014)and NLWG Reports



	National	State	LGA	HF
Fully achieved	86	63	69	63
Partly achieved	9	24		13
In progress	5	11	21	18
Not achieved		2	10	6

Other high impacts activities to strengthen the cold chain system not captured in the 2010 improvement plan, but were critical to the overall achievement in the supply chain were the procurement and installation of cold chain equipment (CCE) and training of cold chain officers. CCE procured and installed included 1,656 SDDs, 6,000 fridge tags, electronic temperature-monitoring devices, Vaccine Carriers and WICR from GAVI reprogrammed funds in 2013 / 2014. The distribution was guided by the 2010 EVM Assessment improvement plan and the NRISP[33] (2013-2015). The grant for the training of cold chain officers supported Vaccine Management Training of cold chain officers (national & states), technicians (10 states) and repairs & maintenance (21 states).

In 2013 - 2014, 100% functionality of cold chain equipment in all the States was targeted; but only 87% of the functionality in 2013 and 89% functionality in 2014 were achieved. With the distribution and installation of the additional CCE; and trainings for the cold chain officers, there has been significant improvement in the proportion of states with adequate and functional cold chain equipment from 8% in 2010 to 89% in 2014, as indicated on Figure 22.

Another notable achievement was the revision of the supportive supervision checklist to include monitoring of vaccines and devices. Supportive supervision has improved, with 82% of the states now performing supervisory visits at the LGA level on a routine basis; and LGAs also performing supportive supervisory visits at the health facilities.

There were occasional stock outs of some vaccines during 2010 to first quarter of 2013. There were stock out of DPT, TT, HepB and tOPV at varying times during Q1 to Q4 in 2010; stock out of DPT and YF in Q2 of 2011; stock out of HepB, DPT and YF in Q3 of 2012; and YF in quarter one of 2013. The stock out of YF observed in 2012 and 2013 were due mainly to global shortfall, while stock out of other antigens during the 2010 to 2012 were either due to delay in funding or

[33]National Routine Immunization Strategic Plan

delivery (or combination). However, there has been an increase in the vaccine supply adequacy over time, especially since 2013. 100 % of LGAs were targeted to receive bundled vaccines. Pilot push system of vaccine / devices distribution directly to the health facilities and the introduction of consumption tracking dashboard provides visibility into stocks. In 2014, about 80% of LGAs consistently had adequate stock levels.

After looking at the rationale on the vaccine supply chain delivery in country, Government and Partners have decided to set up a hub system by having three entry points for vaccines and devices at Abuja, Lagos and Kano (instead of just one for the vaccines at Abuja). Storage capacity is currently being addressed under the introduction plan of the new vaccines. For instance, using the Rotavirus vaccine introduction as a proxy for the measurement of the storage capacity requirements, there is national storage capacity of 239 m^3 as of May 2015.

Government of Nigeria and partners to ensure 100% vaccine availability, potency and quality data include the following: provision of fridge tags / thermometers / tools for temperature monitoring, cold box provision, and contingency plans for ensuring potency of vaccines throughout supply chain transport. Routine immunization and logistics diagnostics undertaken for Yobe, Sokoto, Kaduna has revealed incisive findings.

National, zonal and LGA cold chain officers were training on vaccine management in 2012 / 2013. This has contributed to the improvement observed in the vaccine supply chain.

Procurement, Transportation and Storage

Transportation fleet at the national level consists of five refrigerated trucks which are used for effective vaccine distribution to zonal and state stores. For the distribution of dry materials, independent private vendor are contracted to supplement movement especially during campaigns when large volumes are involved.

Most states have vehicles procured by the Federal Government and other donors meant for vaccine distribution. However, these vehicles are only used for supervision and other EPI activities as most LGAs pull vaccines from the states. Recent procurements of double cabin Hilux trucks by state governments and partners has enabled some states cold stores, particularly Kano, Rivers, Bauchi and Nasarawa, to push vaccines to LGA stores and HFs.

Most LGAs make monthly trips to the states to collect vaccines and dry materials for immunization. Some LGAs have programme vehicles that are used for vaccine collection, while many others hire vehicles for the monthly vaccine collection.

The HFs, collect vaccines on scheduled immunization days using either cold boxes or vaccine carriers where storage facilities are not available. In Health Facilities with cold storage capacity, vaccines are collected on a monthly basis and stored for use during sessions. Most Health Facilities use motor cycles for vaccines collection and in some cases bicycles are also used. Freeze indicators for monitoring of temperatures during transport are not used at all levels, even though conditioned icepacks are used for packing vaccine.

There is no data on the proportion of states and LGAs with sufficient number of supervisory/EPI field activity vehicles/ motorcycles in working conditions.

The development of planned preventative maintenance policies has been completed. There has been significant improvement in maintenance at the national, with a contract in place for preventative maintenance and emergency repairs. 100% of the stores in the national supply tier (NSCS & Zonal stores) are serviced by this contract. Four (4) cold chain technicians were trained per state in 2012. In 2013 / 2014, 100 % cold chain maintenance system was targeted in all the States; but only 55% of the availability of the cold chain replacement plan was achieved in 2014. Only 41% of state stores conducted regular preventative maintenance. Inadequate funding at the subnational level for the preventive maintenance of the available cold chain equipment, except the new CCE covered by warranty contributed to the non-achievement of target

Temperature Monitoring

Out of the 5 critical indicators for temperature monitoring, two were at satisfactory level while two were at average level. Systematic internal review of temperature records was rather challenging.

There was good knowledge of correct storage temperature of vaccines. In more than 81% of service points visited, staff knew the temperature range of vaccines used in EPI. In about 80% of facilities visited, staff knew the vaccines that can be damaged by freezing.

Issues reported in the following areas include: Correct reading of temperature was uncertain in nearly half of the facilities visited; a third of facilities did not have manual recording of temperature in place and one out of nine facilities had a systematic review of temperature records.

Vaccine Wastage Policy

Knowledge and implementation of the Multi-Dose Vial Policy (MDVP) were a challenge. There were some challenges reported regarding the use of correct diluents in about 20% of facilities visited. In one third of facilities, HWs could not explain different types of vaccine wastage nor were they able to calculate wastage. Currently country accepts the Vaccine Wastage Rates set and provided by manufacturers of vaccines.

Figure 24: Practices for vaccine wastage rates[34]

Antigen	Accepted Wastage Rates
BCG	50%
HepB Birth Dose	25%

[34] APR 2014

tOPV	25%
bOPV	25%
IPV	25%
Pentavalent (DPT-HepB-Hib)	25%
PCV	25%
Rotavirus	5%
Measles	30%
YF	30%
Men A	25%
TT	25%
Td	25%
HPV	5%

(4) Immunization Service delivery

The immunization services are integral part of the Primary Health Care and are provided through the network of 25,132 Primary Health Facilities of the country. The service provision is based on the micro-plans that are regarded an essential tool for achieving sustained high Routine Immunization coverage. In many LGAs and HFs, poor population data leads to inaccurate immunization coverage rates, which in turn misrepresents the performance of the national immunization program, as well as overall performance of health system.

Currently, immunization services are being provided through the fixed, outreach and mobile sites. The most part of the States follows the "1-2-3" strategy which considers provision of one fixed immunization session per week, two outreach services per month and three supportive supervisory visits per month (from LGA to lower levels). The strategy is applied rigidly in most states LGAs and HFs without adjusting sessions or resource availability based on actual demand.

- **Fixed sites services** are the Routine Immunization services performed on work days at the health facilities and providing all routine immunization antigens included into the national immunization schedule. Fixed site services are provided to the population residing within the 5 km geographic area from the health facility. The vaccination sessions are provided by Community Extension Health Workers (CHEW).

- **Outreach services** are immunization services performed twice a month by the staff of health facilities to provide all routine immunization antigens included into the national immunization schedule. Outreach services target population groups residing within the range from 5 to 10 km geographic area from the assigned health facility. The vaccination sessions are provided by Community Extension Health Workers (CHEW). Transportation costs for the outreach services are covered by the local administrations (LGAs).

- **Mobile services** refer to immunization services provided once a month by the staff of the health facilities to provide all routine immunization antigens included into the national immunization schedule. Mobile services target population groups residing in more than 10km geographic areas. In many cases Mobile service provision is used to meet the needs of population in hard-to-reach geographic areas of the country. Similarly to fix and outreach service provision, the vaccination sessions are performed by the Community Extension Health Workers (CHEW) and transportation costs are covered by the local administrations (LGAs).

Over 85% of Nigeria's immunization services are provided by public sector providers.[35] One of the objective of the National Immunization Program is to increase private sector provision of Routine Immunization services, as an avenue for reaching a segment of the children who remain unimmunized. In 2012, the State Government signed a MOU with the private providers in three states (Kwara, Niger and Nasarawa), detailing a commitment from these providers to offer safe and effective immunization services and participate in a data reporting system. In return, the government promised to provide capacity building, data, tools, vaccine supplier and storage capacity. Similar MOUs are considered by the other states of the country.

Immunization schedule

Figure 25: National Immunization Schedule for Routine Immunization Among Children and Women

Vaccine Name	Target Population	Vaccine Classification	1st Dose	2nd Dose	3rd Dose	4th Dose	5th Dose
BCG	Births	Traditional	Birth				
Oral Polio Vaccine	Births	Traditional	Birth	6 weeks	10 weeks	14 weeks	
Hep-B (Birth Dose)	Births	Underused	Birth				
Pentavalent (DPT-HepB-Hib)	Surviving Infants	Underused	6 weeks	10 weeks	14 weeks		
Measles	Surviving Infants	Traditional	9 months				

[35] NICS 2010

YF	Surviving Infants	Traditional	9 months				
Vitamin A	Surviving Infants	Underused	6 months	12 months			
Tetanus Toxoid (TT)	Child Bearing Age Women	Traditional	First contact	+1 month	+6 month	+1 year	+1 year

(5) Surveillance, Monitoring and Reporting

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.

There are several parallel surveillance systems operating for surveillance of vaccine preventable diseases (VPD).

Integrated Disease Surveillance and Response

Nigeria, along with other member nations at the regional committee meeting in Harare in 1998 endorsed the Integrated Disease Surveillance and Response strategy (IDSR) as a means of strengthening communicable disease surveillance and making it more sensitive at all levels. IDSR implementation started in June 2000 with an orientation workshop held to sensitize National Programme Managers of vertical program and partners on IDSR.

Currently, IDSR is an integral part of the overall National Health Management Information System (NHMIS) and expects bi-annual returns from states, whereas disease surveillance returns are rendered monthly and weekly for epidemic-prone diseases. Data on disease surveillance is fed back into the NHMIS system for effective health planning.

The IDSR guidelines have been adapted for use in Nigeria and training was conducted in all States. The trainings followed by rounds of national level IDSR training four surveillance officers and immunization program managers.

The initial IDSR guidelines listed twenty-one diseases for reporting under the integrated surveillance system. In 2008, based on a comprehensive review of IDSR the list was increased to forty diseases for reporting under the IDSR. The list includes communicable diseases, non-communicable diseases and accidents. Implementation of the IDSR utilizes case-based and laboratory-based surveillance strategies.

EPI Routine Surveillance System

- **Sentinel surveillance** for rotavirus and meningitis has been established. Percentage monthly timeliness and completeness of reporting has also improved from 30% and 50% in 2010 to 67% and 90% respectively in 2014.

- **National AEFI** was created in 2013. In total 18 serious cases were detected by the surveillance system out of which 16 cases were investigated. During the period January – October 2015 total of 5,238 cases were reported.

AFP Surveillance

Nigeria has maintained highly sensitive surveillance systems for acute flaccid paralysis (AFP). Thus AFP surveillance has remained above certification level for the past ten years. The AFP surveillance network is made up of Disease Surveillance and Notification Officers (DSNOs) in all the 774 LGAs in the country with State Epidemiologists at the State level. The Epidemiologists and DSNOs are supported by WHO Surveillance Officers. The network has laboratory support from two national laboratories at the University College Hospital (UCH), Ibadan and the University of Maiduguri Teaching Hospital (UMTH), Maiduguri; one reference laboratory (UCH, Ibadan) in the country and a specialized laboratory in Atlanta USA.

The AFP surveillance system enjoys a lot of support from WHO in Nigeria as part of the support for the Polio Eradication Initiative in Nigeria.

There have been improvements in AFP surveillance performance in 2014 compared to 2013 with more AFP cases detected (10,447) compared to 8,648 cases in 2013 which is a 21% increase in detection rate attributed to strengthening of reporting networks including informants, and further capacity building and engagement of the surge capacity in surveillance activities. Performance indicators show that the AFP surveillance system worked well, even in security-compromised areas. In 2014, Borno State reported 274 AFP cases compared to 182 cases in 2013 while Yobe State reported 230 AFP cases in 2014 compared to 152 cases in 2013 which represents a 51% increase in AFP cases detection in both states in 2014 compared to 2013. As of November 2014, 100% LGAs across Nigeria are reporting AFP cases, and 96% of LGAs are meeting the two main performance indicators (number of cases and stool collection), representing an improvement from 2013.

However, despite the progress, there were 34 AFP cases that were classified by the National Polio Expert Committee in 2014 as polio compatible and also genetic sequencing showed that some of the WPV and cVDPVs were orphan viruses that had been circulating undetected revealing surveillance gaps in the country that pose a threat of undetected polioviruses circulation.

These surveillance gaps have to be addressed in 2015 to timely detect any polioviruses circulation, so that timely and adequate mop-up response to the outbreaks be mounted. Additionally, the OPV doses of the AFP cases will be used to identify areas with population immunity gaps so that immunization activities be intensified to boost population immunity in the vulnerable areas[36].

[36] National Polio Eradication Emergency Plan, 2014

Accelerated Disease Control Surveillance

- ***Measles***

Measles surveillance is part of the IDSR system, however following the Accelerated Measles Control (AMC) campaign in Nigeria, measles case-based surveillance with laboratory support was introduced. The measles case-based surveillance uses the same surveillance structure as the AFP surveillance with support of 4 national laboratories located in Kaduna, Gombe, FCT and Lagos.

Measles administrative coverage increased from 85% in 2010 to about 100% in 2014. Confirmed cases of measles decreased from 8,767 in 2010 to 4,463 in 2014, though there are still observed cases of measles outbreaks (no specific areas of the country affected). Number of laboratory confirmed cases also reduced from 338 to 133 during the same period and case fatality rate was 1.49% as at week 53 of 2014. Generally, the gains of the catch up campaign were sustained with the successful conduct of three follow up SIAs in 2008, 2011 and 2013. The reductions in measles cases in Nigeria from 8,767 cases in 2010 to 4,494 cases in 2013 accounted for the significant drop in measles cases in the African sub region during this period.

- **Yellow Fever**

Yellow fever coverage has increased from 78% in 2010 to 94% in 2014. Proportion of LGAs reporting at least one case with blood sample decreased from 28 to 24 in 2014. Global yellow fever vaccine shortage affected the implementation of planned yellow fever campaigns in the country. The country has received only 10 million doses of yellow fever against the 62 million doses committed by Gavi. In the last 5 years, only one campaign was conducted in 2013. Post campaign survey showed 76.75% coverage.

- **Neonatal Tetanus (NNT)**

One of the key strategies for the elimination of maternal and neonatal tetanus is strong case-based surveillance for neonatal tetanus. The country commenced serious efforts towards case-based surveillance for neonatal tetanus in 2008 using the AFP and Measles surveillance structure. However there is still a high level of under-reporting of cases.

- **Meningitis**

Number of suspected cases reported has reduced from 4,983 in 2010 to about 1,164 cases in 2014. Number of LGAs affected decreased from 305 to 123. Number of cases confirmed by laboratory also decreased from 153 to 73 within the same period. Nigeria has so far conducted 4 MenAfriVac campaigns from 2011 to 2014 guided by the risk assessment that prioritized states according to identified risk. The independent surveys reported coverage of 88.5% in 2012, 88% in 2013 and 2014 phased campaigns.

Figure 26: Summary of the Surveillance indicators[37]

Component	Suggested indicators	National status				
		2010	2011	2012	2013	2014
Routine surveillance	% (Completeness) of surveillance reports received at national level from states					64
	AFP detection rate / 100,000 population under 15 years of age					13
	Percentage suspected measles cases for which a laboratory test was conducted					55
	Sentinel surveillance for rotavirus established			Yes	Yes	Yes
	Sentinel surveillance for meningitis (Hib / PCV) established		Yes	Yes	Yes	Yes
	Percentage of suspected meningitis cases tested for Hib / pneumococcal diseases according to standard protocol.					99.4
	% monthly timeliness of reports	30	44	46	67	50
	% monthly completeness of reports	67	76	98	100	90
Coverage monitoring	% gap in match between DPT3 survey coverage and official reported figure	6.27			46	
Immunization safety	Percentage of states that have been supplied with adequate number of AD syringes for all routine vaccines				90	100
Adverse events	National AEFI system is active with a designated national committee			Yes	Yes	Yes
	Number of serious AEFI cases reported and investigated				18/16	57/35

[37]WHO Nigeria Surveillance Reports / Monthly Feedbacks; NPHCDA Monthly Feedback; Survey Reports

(6) Demand Generation, Communication and Advocacy

Demand generation, communication and advocacy are important for multiple reasons. These provide 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.

EPI has initiated development of the National Integrated Communication and Social Mobilization Strategy for Immunization. According to the existing timeline the strategy will be completed by Q4 2015. This document aims at harmonization of various policies, strategies and guidelines governing the implementation of social mobilization and communication programs for Routine and Supplemental Immunization. The strategy will also serve as an operational guide for National Immunization Program Officers and training institutions. The responsibilities for mobilization and communication were discharged at the national level by the National Social Mobilization Working Group (NSMWG) under the ICC and at State and LGA levels by the respective social mobilization committees.

In accordance to the Alma Ata Declaration of 1979, Primary Health Care emphasizes the importance of full involvement by all communities to ensure success. Nigeria, being a signatory to that declaration, has made relentless efforts to ensure full community involvement in matters relating to health.

NPHCDA defines community mobilization as means of encouraging, influencing and arousing interest of people to make them actively involved in finding solutions to some of their own problems and regarded as continuous exercise, which should constitute an integral aspect of efforts aimed at initiation health actions by the people themselves.

At the Ward/Village level, responsibilities for mobilization and communication lie with the Ward/Village Development Committees (WDC/VDC). Communication and advocacy activities are integral part of the service package provided through the PHC network of the country. More specifically, activities related to the communication and advocacies are included in the Component 6 of the Minimum Health Package: Health Education and Community Mobilization. Each PHC Health Facility develops community mobilization plan for implementation of the following multiple strategies:

- Ensuring adequate IEC materials for all health issues
- Intensive focused communication with communities through using multiple communication channels
- Inclusion of interpersonal communication channels within community leaders
- Building capacity of health workers/service providers in communication and counseling
- Use of advocacy and social mobilization approaches as well as evidence based approaches
- Use of advocacy and social mobilization approaches

- Evidence based interventions

During the previous five year period efforts have been made to increase demand through delivery of evidence-based positive messages on the value of immunization. This approach incorporated targeted messages to health workers, comm9unity organization, traditional leaders, religious leaders and media, amongst many others. African vaccination week is celebrated annually to further increase political commitment and draw people's attention to the benefits of immunization.

Emphasis on capacity strengthening of Ward Development Committees was specifically aimed at increasing demand for health service, incorporate transparency and accountability in the management of PHC activities at the community level to ensure ownership and sustainability. A total of 736 WDCs were trained in 13 States and Federal Capital Territory (FCT) in 2013.

Advocacy and communication activities created a platform for New Vaccine Introduction, achieving ownership of the immunization programs and increased awareness of communities on the benefits of vaccination. In turn, all these activities contributed in increased demand of immunization at the community level. A study on the relevance, functionality and impact of the WDCs established in 2010 through Gavi support, showed that there was significant health and social impacts of the WDCs. The cumulative DPT3 coverage increased from 43% to 64% in 2013 in the 2010 supported wards compared to the increase from 45% in the 2010 to 56% in 2013 in the unsupported wards.

Progress has been made in advocacy, communication and demand creation. Advocacy and communication activities created a platform for New Vaccines Introduction, achieving ownership of the immunization programs; and awareness / demand at the Community Level. A study on the relevance, functionality and impact of the WDCs established in 2010 through Gavi support showed that there was significant health and social impacts of the WDCs. The cumulative DPT3 coverage increased from 43% to 64% in 2013 in the 2010 supported wards compared to the increase from 45% in the 2010 to 56% in 2013 in the unsupported wards[x].

Other progress made included the capacity building of health workers and other stakeholders and engagement of the mass media to increasing awareness and demand generation. Electronic (TV and radio) and print media were involved for both routine and campaign related activities (though there was more support for campaign related activities than routine).

1.4. Summary – SWOT

Program Management	
Strengths	**Weaknesses**
• Availability of legislation (NPI, NPHCDA Act, NHA). Clearly defined roles and responsibilities in NHA • Availability of policies and guidelines (NIP, NRISP) • Availability of functional coordination committees and working groups • Accountability framework in place (2013-2015) • Regular high level advocacy with the legislature • Good pool of skilled health care workers	• Existing legislature focuses more on immunization financing • Weak ICC at the state level • Weak implementation of the accountability framework • Inadequate skilled health care workers in the rural areas • Mal-distribution of health workers (HWs): > 70% of the HWs are in the urban areas leaving <30% of HWs in the rural areas. There are

(though concentrated mostly around the urban areas) • Establishment of PHCUOR concept: To address PHC manpower (harmonized remuneration) and management of bottlenecks. • Signing into law the National Health Act would provide additional financing for primary health care health services (immunization inclusive) • Political will and financial commitment, especially at Federal level	also more health workers in the southern states compared to the northern states • Frequent transfer / retention of health workers • Inadequate budgetary and resource allocation for RI at national and sub-national levels • Inadequate and delayed releases of appropriated funding for immunization with resultant delayed implementation of planned RI activities. • No system to evaluate CMYP itself • Inadequate engagement of the community members in RI services
Opportunities	**Threats**
• NTLC as a high level advocacy platform for strengthening accountability for RI • Growing PPP on immunization (e.g. private Alliance on health) • Donor support for in-service training • Volunteer health care workers • Involvement of private sector (e.g.Dangote) in RI • Performance based financing • Basket funding in some states.	• The general view that the National Health Act will solve all health challenges • Exit of GAVI and rebasing of the economy • Frequent and protracted health worker strike • Brain drain/Migration • States / LGAs are not employing staff (HWs) • Attitude of some health workers • Insecurity in some regions • High out of pocket expenditure • Poor economy (Diminishing/dwindling oil revenue)
Human Resource Management	
Strengths	**Weaknesses**
• Human resource policy available • Sufficient fulltime dedicated managerial and supervisory EPI staff available at regional and provincial levels • Allocation of EPI-specific staff (vaccinators) in majority of PHC health facilities • Master trainers available at national, regional and provincial levels • Provision of an additional vaccinator in high workload health facilities • Availability of training materials and guidelines both in English and local language	• Lack of clarity in roles and responsibilities among National EPI and BPHS NGOs especially recruitment and training of vaccinators • High turnover of vaccinators • Low remuneration of vaccination staff • Absence of carrier pathways for vaccinators • Low proportion of female vaccinators • Paramedical staff not trained in immunization protocols • Inadequate manpower for training team at national level • Lack of flexibility in recruitment criteria in MoPH-served areas
Opportunities	**Threats**
• Training of nurses/midwives on immunization practices through GAVI HSS support • Presence of other female paramedical staff (nurses, and midwives) for involvement in vaccination activities	• Cultural and traditional barriers in recruiting female vaccinators • Training programs heavily dependent upon funding from donors • Inequitable distribution of health staff

• Increasing focus on community midwives • Flexibility for NGOs to recruit vaccinators in areas of need by lowering the selection criterion • Availability of qualified human resources in private health sector • As a part of polio legacy initiative, polio funded staff will be involved in several EPI activities.	between urban and rural areas
Costing and Financing	
Strengths	**Weaknesses**
• Health sector long-term financing policy developed • EPI activities financed under PHC • Commitment of the Government to contribute for procurement of vaccines through co-financing share	• EPI managers not trained in costing and financing • No budget line item for national immunization program and vaccine procurement • Prolonged and cumbersome administrative procedure for releasing of fund for EPI supervisory staff and meeting of co-financing commitments
Opportunities	**Threats**
• EPI activities financed under PHC Ward Minimum Service Package • Donor support from GAVI and other development partners	• Heavy dependence on donor funding may lead to donor fatigue • Low budget execution rate of development budget by FMoH and delayed disbursement of budgetary funds
Vaccine security and logistics	
Strengths	**Weaknesses**
• Availability of vaccines at service delivery points • Provision of logistic support to RI providers (GAVI, WHO and some States etc.) • Provision of Computerized software for vaccine management in some states • Implementation of vaccine management plan. • A strong monitoring system for the 2010 EVM improvement plan implementation. • 2014 EVM assessment conducted and improvement plan developed, monitoring and other improvement processes in place.	• Inadequate vaccine devices at some service delivery points (less then 100%) • Inadequate functional cold chain equipment in some states and LGAs • Inadequate project vehicles, lack of funds for maintenance and fueling for vaccine movement • Inadequate revised data tools • Inadequate trained personal to handle cold chain equipment. • Absence of immunization waste management system.
Opportunities	**Threats**
• Presence of development partners willing to support and collaborate in providing RI services. • MenA project has installed incinerators in 21 states and the GAVI HSS is supporting the remaining states to be covered.	• Security challenges across the country • Hard-to-reach areas • Limited access to Government counterpart fund due to declining Global oil price

Immunization Service Delivery	
Strengths	**Weaknesses**
• Extensive network of 1,575 fixed EPI centers across the country • EPI an established part of PHC services • Declared Government commitment to routine immunization • Timely availability of bundled vaccines • Availability of welltrained Health workers due to introduction of new vaccines • Cold chain expansion • NRITSS	• High dropout rates between successive vaccine doses not being monitored due to lack of validation of data in the field • Entire population not covered with Ward Minimum Health Package • Low utilization of PHC facilities • Difficulty in target setting for districts due to difference in denominators • Poor micro planning at health facility level • Significant proportion of children not vaccinated • Unavailability of all routine immunization (RI) antigens in about 20% of planned RI sessions giving rise to missed opportunities • Weak community engagement in RI service delivery • Inadequate supportive supervision • Poor attitude of health care worker / service providers at the service delivery point
Opportunities	**Threats**
• Engagement of more Private Providers • Introduction of new vaccine into RI schedule • Availability of the national health act 2014 • More partners support for RI (Bill and Melinda Gates Foundation, JICA, DFID, CIDA, GAVI, Dangote Foundation, European Union)	• Recurrent and persistent health workers strike action • Poor commitment of some political leaders to RI services • Inadequate funding for RI at all levels due to decline in national revenue • Insecurity issues in North East • Poor integration of PHC services
Accelerated Disease Control and Surveillance	
Strengths	**Weaknesses**
• AEFI surveillance included into RI data management tools • NPCDA founded the emergency epidemic response team as a means of strengthening epidemic response • AEFI reporting integrated into integrated disease surveillance • Measles and MNT included into the IDSR003: IDSR combines polio measles and MNT , MNT started in 2012 • Measles and Polio labshave been linked: Maiduguri and Ibadan both polio and measles • Active surveillance for YF conducted • Officers trained on case based surveillance in all states	• Inadequate reporting of AEFI • Non-availability of adequate AEFI tools at the LGA / health facility levels • Occasional measles reagent stock-out at the laboratories. • Limited human resources in Maiduguri lab • Limited reverse cold chain availability

Opportunities	Threats
• DHIS RI module to reorient staff on data management	• Inability to pay staff salary • Divided attention • Challenges in security compromised area
Advocacy, Communication and Demand Creation	
Strengths	**Weaknesses**
• Social mobilization structure at National, State, LGA and Ward levels • Social mobilization plans at national level and state levels • High level awareness among care givers for immunization services • Involvement of traditional and religious leader. • Availability of functional WDCs in some wards	• Lack of social mobilization plans (especially at LGA / ward levels) • Low capacity of personnel / Lack of skilled service providers (especially in rural/ hard to reach areas) • Personnel are inadequately equipped with communication skills • Inadequate IEC materials for RI • Inadequate funding of advocacy / communication activities (at all levels) and outreach services • Social mobilization activities are more focused on SIAs • Non availability / Non-functional WDCs in some wards
Opportunities	**Threats**
• Private public partnership including NGOs, CSO, etc. • Development partners support • Involvement of top political leadership in PEI • Traditional/Religious institutions • Media, E-health, Social media • State level Basket funds available for Routine Immunization program (Gates Foundation)	• Insecurity in parts of the country • Poor political will at all levels
Management Information System	
Strengths	**Weaknesses**
• Availability of M&E officers at States and LGAs. • Existence of a coordinated system in DVD_MT and DHIS • Availability of agreed harmonized RI data collection tools (DVD_MT & DHIS) • 97% LGAs timely reporting of RI through DVD-MT • Availability of a web based real-time database in DHIS2 • Secured Database/has integrity • Regular monthly LIOs review meetings conducted for feedbacks • Annual HDPU forum and quarterly HDCC meetings.	• Data quality still poor nationwide (e.g. RI administrative data very high compared to survey data; DHIS timeliness and completeness of reporting is still low at 57% and 61% respectively. • Denominator issues: Varying target populations for RI and campaigns in the same population, most times making planning and reporting difficult • Poor implementation of HMIS work plans at all levels • Inadequate data entry clerks at the PHC level • Inadequate revised data collection tools (at LGAs / HFs (especially private HFs)

• Availability of HMIS & RI supportive supervision tools	• Inoperative community HMIS • Dependency of states on partners for the monthly RI review and feedback systems. • Inadequate supportive supervision (SS) especially at the sub-national levels; and • Poor feedback from the States to LGAs; and LGAs to the health facilities
Opportunities	**Threats**
• Availability of DHIS2 module to reorient staff on data management • Availability of RI meetings to re orient staff on data management • Willingness of Partners to support government to improve data quality	• Health workers strike • Insecurity in some parts of the country • Inadequate political commitment to support HMIS

2. Immunization Objectives and Strategies

2.1. Program priorities and objectives

Goal of the Immunization Plan of Nigeria is to decrease VPD associated morbidity and mortality. After a thorough situational analysis of immunization system performance during the period 2011-2015, the Government of Nigeria (GoN) in collaboration with implementing partners identified eleven (11) priority areas for EPI implementation during the period 2016-2020:

1. Increase and sustain routine immunization coverage for all antigens; and reduce morbidity and mortality from VPDs.
2. Reach the hard-to- reach LGAs / communities
3. Sustain availability of bundled vaccines at service delivery sites
4. Introduce new and underutilized vaccines (PCV, Rotavirus, HPV and IPV) into the country's immunization schedule.
5. To sustain and expand the cold-chain at all levels
6. To sustain interruption of wild polio virus transmission and eradicate polio in the country
7. Measles morbidity and mortality reduction
8. Maternal and neonatal tetanus elimination
9. Strengthen Health Management Information System.
10. Strengthen the PHC system (through wards / community structures & participation)
11. Improve budgeting and budget execution at Federal, States, LGA and ward levels.

In order to advance EPI implementation for addressing the priority areas of the immunization system eight (8) general objectives were developed. The proposed general objectives are represented in the summary table below:

Figure 27: General Objectives of the cMYP 2016-2020

Immunization system component	General Objectives
1. Routine Immunization Services	At least 90% of States / LGAs to achieve at least 95% fully immunized children against vaccine preventable diseases before the age of 12 months
2. Demand Creation, Communication and Community Participation	All levels to strengthen immunization systems through effective demand creation, communication and community participation.

3. Vaccine Security, Cold Chain and Logistics Management	All levels to strengthen immunization systems through improved vaccine security, logistics management and immunization safety
4. Accelerated Disease Control and Surveillance	All levels to accelerate efforts to achieve polio eradication, MNTE, and epidemic meningococcal A meningitis elimination as well as measles and yellow fever; and also strengthen surveillance for targeted vaccine preventable diseases
5. Health Management Information System	To develop and strengthen a Health Management Information System (HMIS) that is comprehensive, timely and complete by 2020
6. Human Resource for Health, Costing and Financing	All levels to strengthen immunization systems through improved human resource development and adequate financing / resource mobilization
7. Integration, Research and Evaluation	To promote integrated services for high impact interventions, research and development
8. Governance and Accountability: Programme Management	To establish good governance, partnership, coordination and accountability for Routine Immunization system strengthening including realization and effective operationalization of PHCUOR in every state

2.2. Specific objectives strategies and activities of the cMYP 2016-2020

General objectives of the cMYP 2016-2020 will be achieved through achievement of cMYP Specific objectives which in turn will be achieved through implementation of the strategies and activities presented in the Annex 1 of the cMYP 2016-2020.

2.3. Specific objectives and milestones

The national priorities, EPI objectives and milestones for the cMYP 2016-2020 has been developed to sustain the achievement so far made and address the identified gaps in the system performance. Figure 28 below presents summarized table of specific objectives and milestones:

Figure 28: National Priorities, EPI objectives and Milestones

National Priority	EPI Objectives	Milestones	Priority

1. Immunization Services			
Improving immunization coverage	To achieve 95% coverage for all antigens among infants in at least 90% of States / LGAs by 2020	2016: 60% States/ LGAs achieve >95% coverage 2017: 70% States/LGAs achieve >95% coverage 2018: 80% States/LGAs achieve >95% coverage 2019: 85% States/LGAs achieve >95% coverage 2020: 90% States/LGAs achieve >95% coverage	1
Immunization Demand	To reduce *DPT1-DPT3 and BCG-MCV1 drop out to less than 10% in all the States/ LGAs by 2020	2016: 60% States/LGAs achieve DPT3 and MCV1 dropout rate <10% 2017: 70% achieve <10% drop out rate 2018: 80% achieve <10% drop out rate 2019: 85% achieve <10% drop out rate 2020: 90% achieve <10% drop out rate	1
Immunization Equity	To reduce the percentage gap in Penta 3 between highest and lowest socio-economic quintiles from 70% in 2013 to 30% by 2020	2016: achieve < 60% reduction 2017: achieve < 50% reduction 2018: achieve < 40% reduction 2019: achieve < 35% reduction 2020: achieve < 30% reduction	1
New vaccine introduction	To achieve 90% coverage of PCV, bOPV, IPV, Rota vaccine; MenAfriVac A and HPV (for 14-years old girls) by 2020	2016: 60% States/LGAs to achieve > 90% coverage for PCV, bOPV & IPV vaccine. 2018: 80% achieve > 90% coverage for PCV, bOPV, IPV, Rota vaccine; MenAfriVac A, and HPV. 2020: 90% achieve > 90% coverage for PCV, bOPV, IPV, Rota vaccine; and 80% achieve > 80% coverage MenAfiVac A, and HPV.	2

2. Advocacy, Communication and Demand Creation			
Planning for Advocacy and Communication	To ensure the availability of an integrated communication plan for RI in at least 75% of states / LGAs by 2020	2016: Integrated plan available in 40% of the states / LGAs 2018: Integrated plan available in 60% of the states / LGAs 2020: Integrated plan available in 75% of the states / LGAs	2
Advocacy and Programme Communication	To build the capacity of at least 80% of the health workers and other stakeholders at all levels for advocacy and communication skills	2016: Build capacity of 40% of the HWs 2018: Build the capacity of 65% of HWs 2020: Build the capacity of 80% of HWs	2
Community Participation and Demand creation	To create awareness and improve community participation for immunization services.	2016: Achieve WDCs/VDCs in 40% of wards 2018: Achieve WDCs/VDCs in 60% of wards 2020: Achieve WDCs/VDCs in 80% of wards	2
3. Vaccine Supply Quality and Logistics			
Availability of bundled vaccines at service delivery sites	To continue to make bundled vaccines available at service delivery points	2016 - 2020: Sustain 100% vaccines bundled at service delivery points	1

Sustain and expand cold chain system at all levels	To acquire needed cold chain equipment and establish cold chain maintenance system at all levels	2016: 50% of all states have effective cold chain management systems 2016: >50% of expansion plan implemented 2018: 60% of all states have effective cold chain management systems 2018: >60% of expansion plan implemented 2020: > 90% of all states have effective cold chain management system 2020: > 80% of expansion plan implemented	1
Establish a waste management system for immunization	Acquire the needed waste management equipment and establish maintenance of the incinerators at state levels	2016: 70% of all states have a functional and fully operational incinerator 2017: 100% of all states have functional and fully operational incinerators 2020: Maintain at least 90% functionality and operational capacity of all incinerators	2
4. Accelerated Disease Control and Surveillance			
Polio eradication	To interrupt polio virus transmission and achieve certification by 2018	2018: Achieve certification of the cessation of all types of the wild polio virus	1
Measles morbidity and mortality reduction	To reduce measles morbidity and mortality by >90% by 2020	2018: >70 % reduction in cases and outbreaks 2018: Achieve > 87% measles coverage 2020: >90% reduction in cases and outbreaks 2020: Achieve > 95% measles coverage	3
Maternal and neonatal tetanus elimination (MNTE)	To eliminate maternal and neonatal tetanus by 2020	2018: >70 % of LGAs have < 1 case per 1,000 live births 2018: Achieve >80% TT2 coverage 2020: >90 % of LGAs have < 1 case per 1,000 live births 2020: Achieve 100% TT2 coverage	3

5. Health Management Information System			
Strengthening Health Management Information System	To achieve at least 98 % timeliness, completeness and accuracy of reporting from DVD-MT & DHIS by 2020	**Installation of computers & software:** 2016: 20% of states have computers and software application installed (i.e. 154 LGAs yearly) 2018: 60% of states have computers and software installed 2020: 100% of states have computers and software installed. **Data Tools Availability:** 2016: Revised data tools (EPI data tool & HMIS) available in 90% of HFs (public and private). 2018: Revised data tools (EPI data tool & HMIS) available in all (100%) HFs. **Data Reporting:** 2016: 95% Reporting from DVD-MT, 60% from DHIS & generate data from 40% of private health facilities (HFs) 2018: 97% Reporting from DVD-MT, 85% from DHIS & generate data from 50% of private HFs 2020: 98% Reporting from DVD-MT, 98% from DHIS & generate data from 60% of private HFs.	1
6. Human Resource management, Costing & Financing			
Strengthening PHC system (through capacity building and operationalization of PHCUOR)	To enhance the capacity of health workers and EPI managers at all levels	**Health Workers Trainings:** 2016: 50% of HWs trained on integrated PHC services. 50% of M&E officers trained on data tools / management. 2017: > 75% of HWs trained on integrated PHC services. 75% of M&E officers trained on data tools / management. 2018: 100% of HWs trained on PHC services. 100% of M&E officers trained on data tools / management. **Training of EPI Managers (MLM):** 2016: > 50% of EPI managers at state / LGAs trained on MLM 2017: > 75 % of EPI managers at state / LGAs trained on MLM	1

		2018: 100% of EPI managers at state / LGAs trained on MLM.	
Improve costing and financing for immunization services	To ensure at least 10% annual budget increase and execution for RI at the federal, states and LGAs for immunization services	2016: 30% budget allocation of requirements at all levels 2017: 40% allocation of requirement 2018: 50% allocation of requirement 2019: 60% allocation of requirement 2020: 70% allocation of requirement	2
7. Integration, Research and Evaluation			
Promote integrated services for high impact interventions	To integrate RI services with other PHC Maternal and Child survival intervention programs	2016: 25% of states achieve joint Supportive Supervision (SS), review meetings and routine administration of Vit A / other child survival interventions (e.g. LLIN) with RI 2018: 35% of states achieve joint SS, review meetings and routine administration of Vit A / other interventions 2020: 50% of states achieve joint SS, review meetings and routine administration of Vit A / other interventions	2
Research and development	To conduct operational research to generate evidence for informed decision to improve RI system.	2016: Establish a standing inter-agency research working group 2017: Conduct KAP studies on drivers of immunization and costing of delivering of immunization services at HF level. 2018: Conduct KAP studies in 222 communities in 111 LGAs in 36 states plus FCT to determine reasons for high drop-out rate (20% and above)	2
Evaluation	To evaluate RI services offered	2016: Conduct MICS survey 2016: Conduct NICS survey 2018: Conduct NDHS survey 2019: Conduct NICS survey	2
8. Governance and Accountability: Programme Management			

Update of the national immunization Policy	To update the current national immunization policy to cover all the new and underutilized vaccines by 2016	2016: Review / circulation of updated national immunization policy to all stakeholders	1
PHC Roles and responsibilities for Federal, States, LGAs and wards levels	To define the roles and responsibilities of federal, State, LGA, and ward levels, private sector and Partners	2016: Dissemination of guidelines and protocol of the new health bill; and intense advocacy for at least 50% implementation by the states 2018: >60% implementation by the states 2020: >80% implementation by the states	2
Strengthening structures for implementation of Programs	To strengthen PHC system through primary health care under one roof (PHCUOR), partnership and coordination at all levels by 2020	**Laws establishing PHCUOR:** 2016: 70% of states have laws establishing PHCUOR 2018: 80% of states have laws establishing PHCUOR 2020: 90% of states have laws establishing PHCUOR Regular ICC Meetings: 2016: 30% states achieve regular ICC meetings 2018: 40% states achieve regular ICC meetings 2020: 50% states achieve regular ICC meetings	2
Accountability Framework	To establish accountability at all levels for RI system strengthening by 2020	2016: 20% of states achieve regular scorecards reports 2018: 40% of states achieve 40% scorecard reports 2020: 50% of states achieve regular scorecard reports.	2

2.4. Alignment of Nigeria cMYP with Regional and Global goals (GVAP)

The national cMYP is aligned with most of GVAP and regional targets. The information on alignment of cMYP specific objectives with the GVAP and regional goals and objectives are presented in Annex 2 and Annex 3of this plan.

2.5. Monitoring and Evaluation

2.5.1. Monitoring and Evaluation Plan and Framework

The cMYP 2016 – 2020 provides a comprehensive overview of the Immunization Programme and also provides guidance to national and sub-national levels for incorporation into their annual plans. It informs national policies in setting national targets for all immunization indicators. NPHCDA, partners and other stakeholders will do the monitoring for the cMYP through an annual joint review.

The monitoring framework has been developed with a set of relevant indicators to measure the performance of the cMYP (

Annex). These indicators would be monitored and feedback would be provided to policy and programme managers. Data for measuring these indicators would be collected routinely and supplemented with periodic reviews and surveys.

The cMYP will also be monitored indirectly with data from periodic Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS). Surveillance System will be monitored by the NPHCDA (Disease Control unit) in collaboration with the surveillance units in State/LGAs to closely monitor post introduction activities. In 2018, a mid-term evaluation will be organized to evaluate progress and performance in the implementation of programs and plans and the progress towards achieving set targets and objectives.

Final evaluation of the cMYP 2016 – 2020 will be done in 2020 in collaboration with key stakeholder, partners and civil society organizations. This evidence obtained through the monitoring and evaluation will help EPI in identifying the root causes of failures and under achievements to gaps in implementation and learning lessons from best practices of high achievers so that implementation processes can be modified or improved, where and when required.

3. Immunization Program Costing and Financing

3.1. Current program costs and financing

3.1.1. Program costs in the baseline year

The total cost of immunization system was USD 409,182,001 million in 2013. 16.3 percent of the total cost was spent on vaccine supply and logistics for routine immunization. In comparison, 44.4% of the total expenditure was allocated to SIAs (including both vaccines and operational costs). The remaining costs were allocated to program management (22.1%), advocacy and communication (8.8%), monitoring and disease surveillance (4.6%) and service delivery (1.9%). The contribution of shared health system costs was 1.9%. Further details are given in the Figure 31 and Figure 30.

Figure 29: Baseline Cost Profile of Immunization Program in 2013

Cost Category	Expenditure in 2013 (USD)
Vaccine Supply and Logistics (Routine Immunization Only)	$66,520,635
Service Delivery	$7,898,381
Advocacy and Communication	$36,013,854
Monitoring and Disease Surveillance	$18,894,062

Program Management	$90,355,915
Supplemental Immunization Activities (SIAs) (includes vaccine and operation costs)	$181,672,551
Shared Health Systems Costs	$7,826,603
Total	409,182,001

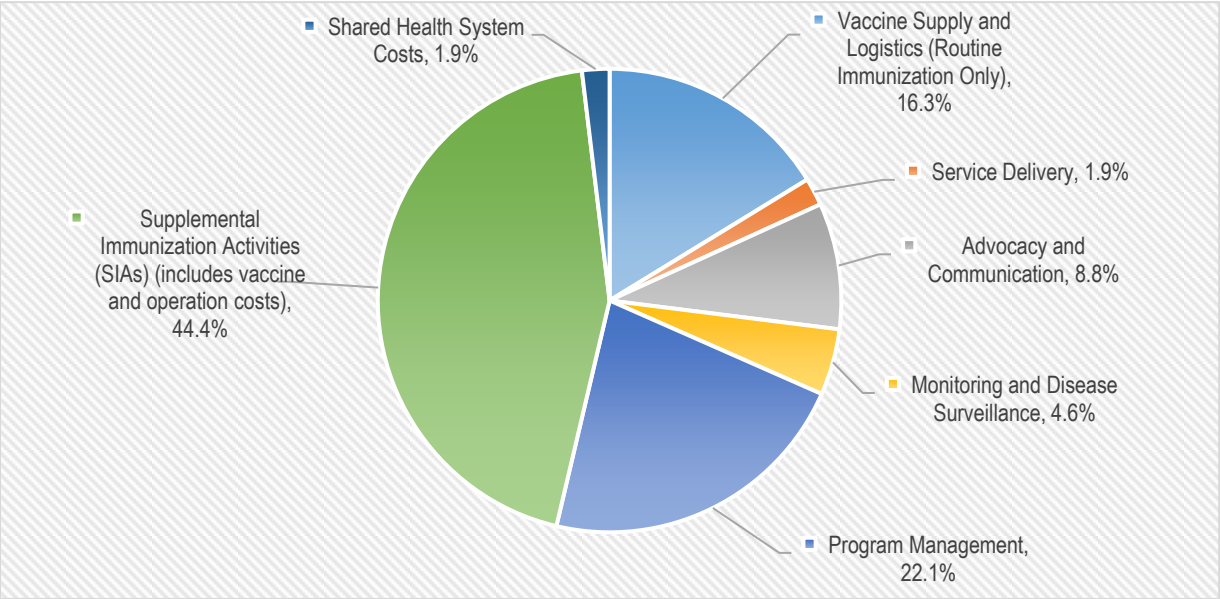


Figure 30: Baseline Cost Profile in 2013: Category-wise proportional distribution

ROUTINE IMMUNIZATION

The baseline cost profile for Routine Immunization in 2013 shows that "other routine recurrent costs" (65.1%) and "vaccines and injection supplies" (27.90%) were the major drivers for expenditure on routine immunization activities. Further analysis is grouped under 5 categories: Personnel, Vaccines and Injection Supplies, Cold Chain Equipment, Vehicles, Transportation and Other Routine Recurrent Costs (Figure 31).

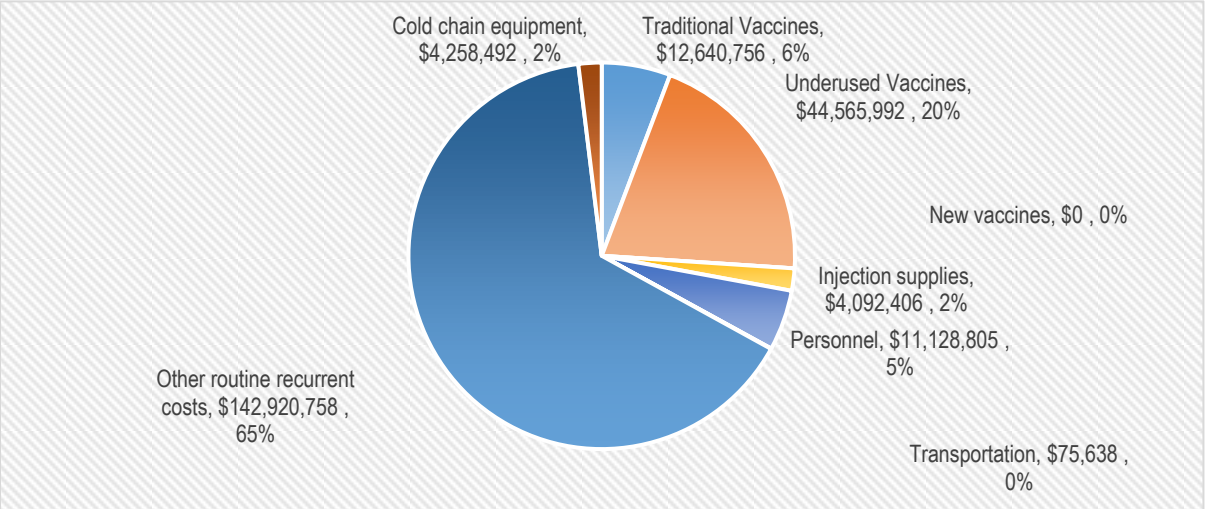


Figure 31: Baseline Cost Profile for Routime Immunization in 2013

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 analysis of the baseline cost profiles (2013) shows that USD 11,128,805 million was incurred on personnel cost which constituted to 5.1% of the total expenditure on Routine Immunization Program. Further analysis shows that 70.25% of this cost was spent on payment of salaries and allowances. In comparison, 29.71% and 0.04% was spent on payment for per-diems for vaccinators and mobile teams and per-diems for supervisory and monitoring staff respectively. The 99% of expenditure incurred under 'Personnel' was borne by the government (government staff at regional and provincial levels) and Dangote Foundation contributed 1% of required funds. This analysis highlights that salaries and allowance were mainly dependent upon the allocations of the government at various levels.

2. Vaccines and Injection Supplies

This category consists of: Traditional Vaccines and Underused Vaccines, and Injections and supplies. The traditional vaccines include BCG, Hepatitis-B birth-dose, OPV, Measles, Yellow Fever and Tetanus Toxoid. The underused vaccines include Pentavalent. No new vaccines were administered in baseline year within the routine immunization program. The EPI introduced

PCV in 2014 and IPV in 2015. All vaccines were procured through the UNICEF SD procurement mechanism with support from different funding agencies.

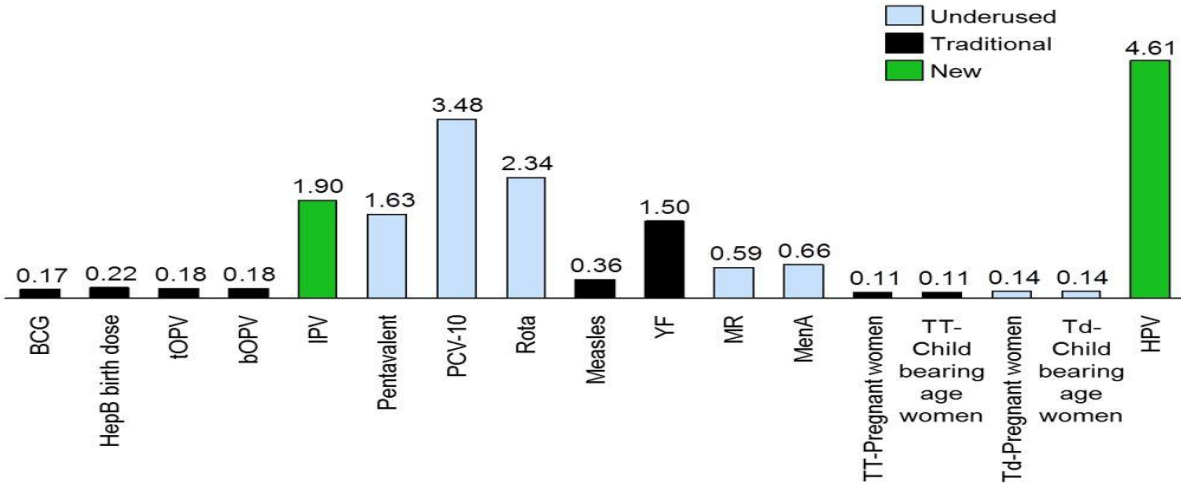


Figure 32: Vaccine Prices (US$)

In 2013, 27.90% of the total expenditure was incurred on vaccines and injections supplies, a major driver of the costs required for Routine Immunization implementation besides the personnel and other routine recurrent costs. In the coming years, this cost will further increase because the government plans to introduce new vaccines: Meningitis A in 2017, Rotavirus vaccine in 2018 and HPV vaccine in 2019.

3. Cold Chain Equipment

In 2013, an amount of USD 4,258,492 million, 1.9% of the total baseline expenses for Routine Immunization, was spent on procurement and supply of cold chain equipment.

4. Transportation

The analysis shows that the expenditure on transportation contributed to 0.03% (USD57,638) of the total expenditure for routine immunization in 2013. EPI is responsible for in-country shipment of vaccines and injections supplies from vendors overseas. Transportation of vaccines and injection supplies from national to regional to provincial level was responsibility of Federal EPI. The in-country shipments from overseas are charged as freight charges and are included in the total cost of the vaccines and supplies.

5. Other routine recurrent costs

The other routine recurrent cost category was the main driver of the Routine Immunization program in the baseline year and comprised expenditures for cold chain maintenance and overheads, maintenance of other capital equipment, building overheads (electricity, water etc.), short-term trainings, IEC/social mobilization, disease surveillance, program management and other routine recurrent costs.

The total expenditure against routine recurrent costs was estimated as USD 142,920,758 million, 65.1% of the total baseline expenditure for Routine Immunization. Out of this, 0.7% and 10.8% was incurred on cold chain maintenance/overheads and building overheads respectively; 3.4% - on Short-term training, 25.2% - for IEC/Social Mobilization, 10.9% - for disease surveillance and 48.8% of costs incurred on program management. Other routine recurrent consumed 0.2% (USD 250,000) of this cost category.

SUPPLEMENTAL IMMUNIZATION ACTIVITIES (SIAs)

Of the total immunization expenditure, 45.26% of funds (USD 181,672,551 million) was spent on Supplemental immunization activities (SIAs) or campaigns: Polio Eradication Initiative (PEI), MenAfric Vac A Campaign and Yellow Fever campaign. The total expenditure on PEI was 87.51% (USD 158,974,569 million); MenAfric Vac A campaign – 8.94% (USD 16.234,479 million) and Yellow Fever – 3.56% (USD 6,463,503 million).

SHARED HEALTH SYSTEM COSTS

It is important to mention that the Government of Nigeria also contributed USD 7,826,603 million as the Shared Health System costs which formed 1.9% of the total expenditure on immunization system.

3.1.2. Current Program Financing

In 2013, the total spending on EPI in Nigeria was shared among the Federal and State Governments, Gavi, WHO, UNFIP, DFID and BMGF.

In 2013, the Government was largest financer of the EPI which provided 63% of the total resources. The GAVI support covered the expenditure for vaccine procurement and accounted for 17% of routine immunization costs. The details of Baseline Financing are presented in the below Figure 33.

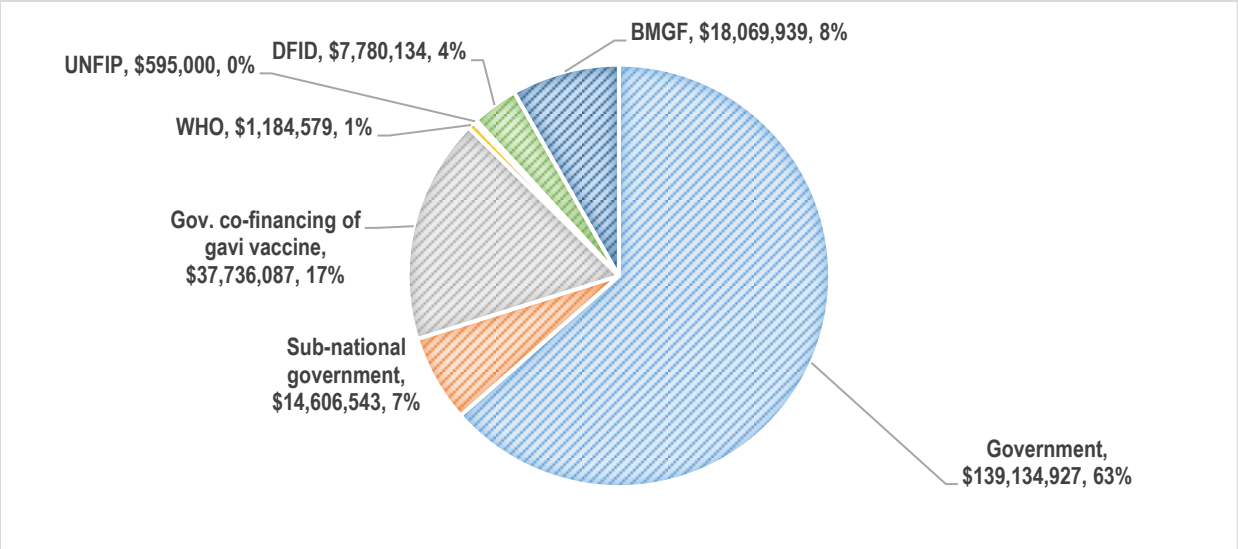


Figure 33: Baseline Financing Profile in 2013

Figure 34: Immunization program baseline indicators (2013)

Total Immunization Expenditures (USD)	**$401,355,398**
Campaigns (USD)	**$181,672,551**
Routine Immunization only (USD)	**$219,682,847**
Per Capita (Routine Only) (USD)	$1.56
Per DTP3 child (Routine Only) (USD)	$47
% Vaccines and supplies (Routine)	27.9%
% Government funding	122.0%
% Total health expenditures	1.7%
% Government health expenditures	39.5%
% GDP	0.1%
Total Shared Costs (USD)	**$7,826,603**
% Shared health systems cost	1.9%
TOTAL (USD)	**$409,182,001**

The total expenditure on PEI was 39.61% (USD 158,974,569 million), MenAfric Vac A – 4.04% (USD 16,234,479 and YF campaign – 1.61% (USD 6,463,503 million) of the total immunization expenditure excluding shared health system costs.

The next section present details on future resource requirements.

3.2. Future resource requirements

3.2.1. Overview

Total resource requirement for 2015-2020 is estimated at USD 3,420,474,976 dollars as shown in Figure 35: SIA is expected to absorb 25.30% of resources and the remaining to be allocated to routine immunization (including shared health system costs). The share of vaccines and logistics (for routine immunization) amounts to nearly USD 1,311,735,725 dollars (38.35% of total resource requirements). The contribution of shared health system costs is estimated at 2.24%.

Figure 35: Total resource requirements (2016-2020) by immunization system components

Cost Category	USD	%
Vaccine Supply and Logistics (Routine Immunization Only)	$1,311,735,725	38.35
Service Delivery	$43,955,909	1.29

Advocacy and Communication		$624,215,404	18.25
Monitoring and Disease Surveillance		$195,512,045	5.72
Program Management		$303,035,910	8.86
Supplemental Immunization Activities (SIAs) (includes vaccine and operation costs)		$865,491,605	25.30
Shared Health Systems Costs	$	76,528,378	2.24
Total	**$**	**3,420,474,976**	

Total resource requirements increase from USD 409 million in 2013 up to USD 3.4 billion in 2020, 736% higher than the baseline cost estimates in 2013.

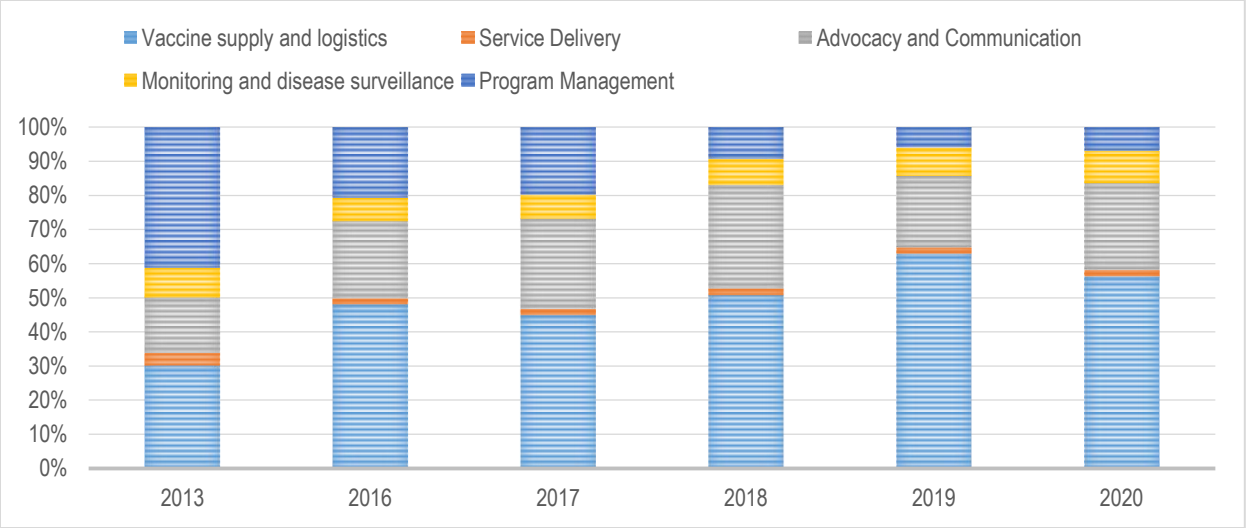


Figure 36: Year-wise resource requirements by immunization system components

3.2.2. Future resource requirement: detailed analysis

Figure 37 presents details of the estimated resource requirement from 2016 to 2020. The future resource requirement is separately presented under routine immunization costs, campaign cost and shared health system costs.

Figure 37: Future resource requirements by immunization system components for 2016-2020

COST CATEGORY	2016	2017	2018	2019	2020
	USD	USD	USD	USD	USD
ROUTINE IMMUNIZATION COSTS					
Vaccine supply and logistics (routine only)	$219,124,942	$216,988,437	$258,880,925	$326,740,947	$290,000,473

Service delivery	$7,911,638	$7,902,514	$9,378,776	$9,379,065	$9,383,917
Advocacy and Communication	$103,455,635	$127,423,766	$153,941,993	$108,507,781	$130,886,230
Monitoring and disease surveillance	$30,424,917	$34,058,844	$38,893,481	$43,427,113	$48,707,690
Program management	$94,352,933	$94,937,907	$47,499,575	$30,789,031	$35,456,463
Supplemental immunization activities (SIAs)	$226,911,963	$283,971,470	$207,820,411	$90,796,754	$55,991,008
Shared Health Systems Costs (EPI Portion)	$9,053,476	$9,943,109	$31,214,500	$12,634,825	$13,682,467
GRAND TOTAL	**$691,235,504**	**$775,226,047**	**$747,629,661**	**$622,275,517**	**$584,108,248**

ROUTINE IMMUNIZATION COSTS

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 National Immunization Program of Nigeria plans to improve coverage rate of different vaccines.[38]

The government also plans to introduce three new vaccines: Men A vaccine in 2017, Rotavirus vaccine in 2018 and HPV vaccine in 2019. The cMYP 2016-2020 considers implementation of switch plan to replace currently used tOPV by bOPV vaccine in the national routine immunization schedule. All these vaccines will be financed through GAVI. The introduction of new vaccines will have financial implications 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.

In order to achieve the immunization coverage targets, the additional resource requirement for procuring vaccines and injection supplies in 2020 will significantly increase in comparison to the baseline year 2013. In 2013 financial requirements for vaccine and injection supplies was USD 66,520,635 million, while in 2020 the same component will require USD 290,000,473 million.

2. Personnel

[38]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 by National EPI office in the draft cMYP 2016-2020 costing tool.

The National EPI office plans to increase the availability of qualified human resources for the immunization program at Federal, State, LGA and Ward levels.

The addition of new staff will require a substantial increase in resource allocation for immunization program. By 2020, the funds required for payment of salaries and allowances will be increased by around 19% as of 2013. The EPI will require USD113.3 million in 2020 as compared to USD11,1 million in 2013. Total amount required for this cost category during the entire cMYP period is USD 62,163,149 or 2.51% of the total cost of Routine Immunization.

3. Transportation

Expansion in the EPI program coverage will result in increase in demand for resources for transportation. These expenses also include expected expenditures on transportation for mobile and outreach immunization services. In 2013, USD 75,638 dollars were spent on transportation. By 2020, the immunization system is required to increase this expenditure by 34.72%. In absolute numbers, USD 464,362 is estimated to be required to meet the transportation needs during the cMYP period. The National EPI office will revise these estimates on yearly basis in order to ensure realistic projections for resource requirement.

4. Vehicles

An amount of USD 3,9 million is required for procuring vehicles required for the immunization staff and supply of vaccines and injection supplies. These projections are based on the price list provided by National EPI office and the total number of vehicles that are planned to be procured.

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 are introduced over the course of 2016-2020 by increasing the overall cold storage space and also by replacing the old chain equipment that has completed its average useful life of 7 years. It includes set up of cold houses at the national level and operationalization of three hubs in Kano, Lagos and Abuja.

It is estimated that USD 3,36 million will be required to expand cold chain system at all levels.

6. Other routine 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, programme management and other routine recurrent costs. The national 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 an amount of US$2.47 billion is estimated to be required for meeting the expenditure planned under other routine recurrent costs which is nearly 45% of the total resource requirement under routine immunization (Figure 38).

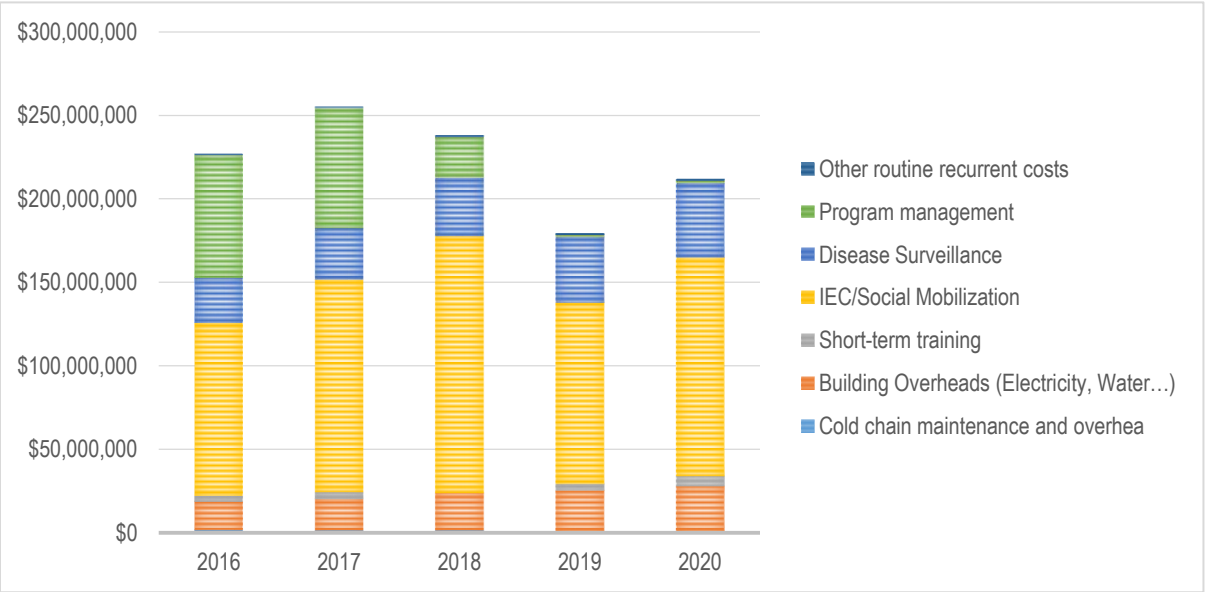


Figure 38: Year-wise resource requirements by key componnets of routine recurrnet costs

SUPPLEMENTAL IMMUNIZATION ACTIVITIES (SIAs)

The Government of Nigeria plans to conduct special immunization campaigns (SIAs) in the next 5 years These include:

1) Polio campaign under Polio Eradication Initiative every year with expected coverage of 90%
2) Measles campaign in 2017 and 2019 with expected coverage of 95%
3) MenAfric Vac campaign in 2016 with expected coverage rate of 90%;
4) Maternal and Neonatal Tetanus (MNT) campaign for women of child bearing age (15-45 years) in 2016, 2017 and 2018 with expected coverage rates at 80%, 85% and 88% respectively;
5) Yellow Fever campaign in all years during this five-year period with expected coverage of 95%;
6) HPV in 2017 and 2018 with the coverage rate 70% and 80%;
7) CSM reactive campaigns in all years covered by this cMYP cycle with expected coverage of 95%; and
8) Measles reactive campaign in 2016 with expected coverage rate 95%.

Of the total resources requirement for immunization system, 25.3% of funds (USD 865,4 million) are estimated to be spent on SIAs during 2016-2020.

SHARED HEALTH SYSTEM COSTS

The contribution of Shared Health System costs is estimated at USD 76.5 million, 2.24% of the total resource requirement. This contribution is required on account of shared personnel costs and shared transportation costs for immunization system.

3.3. Future financing and funding gaps of the immunization program

The total financing of the Routine Immunization program is estimated at USD 2.55 billion if only secured financing is considered and at approximately USD3.1 billion with probable financing.

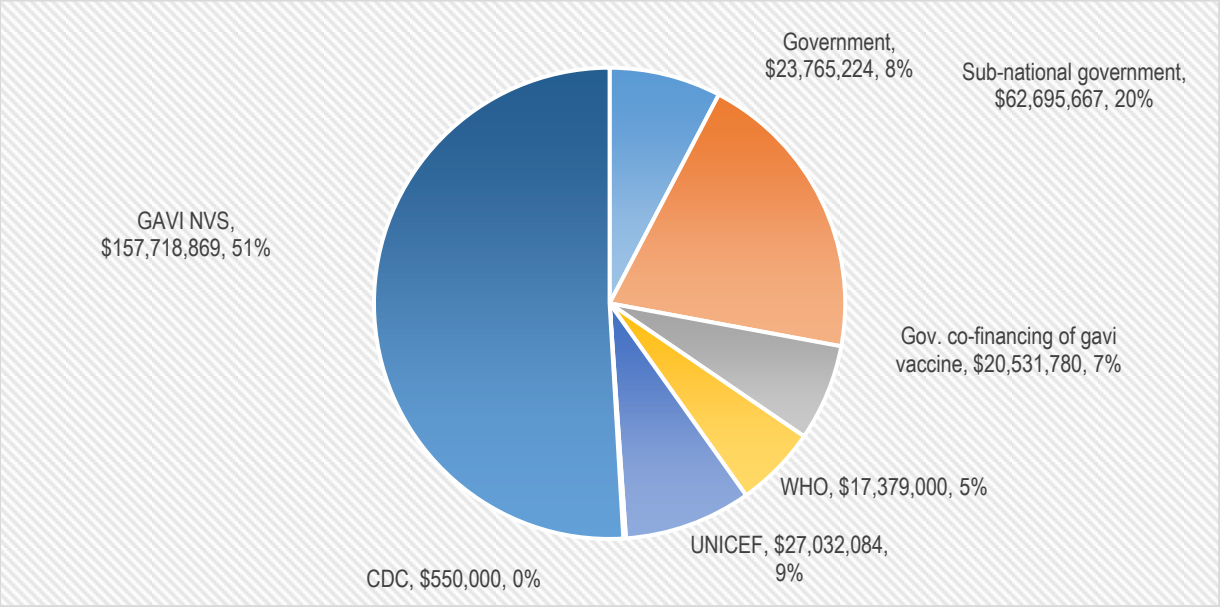


Figure 39: Financing structure by sources of financing

The projections on secure and probable funding presented in the above Figure indicate that:

- GAVI (NVS), Central and Local Governments, WHO, UNICEF and CDC are the main sources of secure financing for immunization program for the next five year period, whereas Gavi will contribute 51% of secured funding, Government – 35% (including co-financing of Gavi vaccines), UNICEF, WHO and CDC 9%, 5% and 0.03%respectively.
- The secured contribution from the government of Nigeria amounts to nearly 49.92% of the total secured financing (USD 737 million). This covers remunerations and allowances of the Government staff, procurement of routine immunization vaccines and co-financing share for the GAVI-supported vaccines.
- The GAVI-NVS support is available for procurement of the underused and new vaccines, as well as introduction of the new vaccines during the cMYP period. An amount of USD 691 million is estimated to be channeled through GAVI-NVS during 2016-2020.

- The total volume for secure financing from UNICEF is estimated USD 29.6 million.
- WHO contribution is estimated at 18.1 million; and
- CDC contribution – USD 0.55 million.

Considering only the secure funds, there is a substantial funding gap of USD 1.9 billion (57%) for the period of 5 years. However, the funding gap is reduced to 41% (USD 1.4 billion) when probable funding is also accounted for.

As shown in Figure 40 financing projection reaches maximum in 2017 (USD 481.7 million) and decreases gradually (due to uncertainty about external funding) while resource requirements keeps growing. This translates into widening funding gap from USD 261 million (38%) in 2016 to USD 216 million (38%) in 2020.

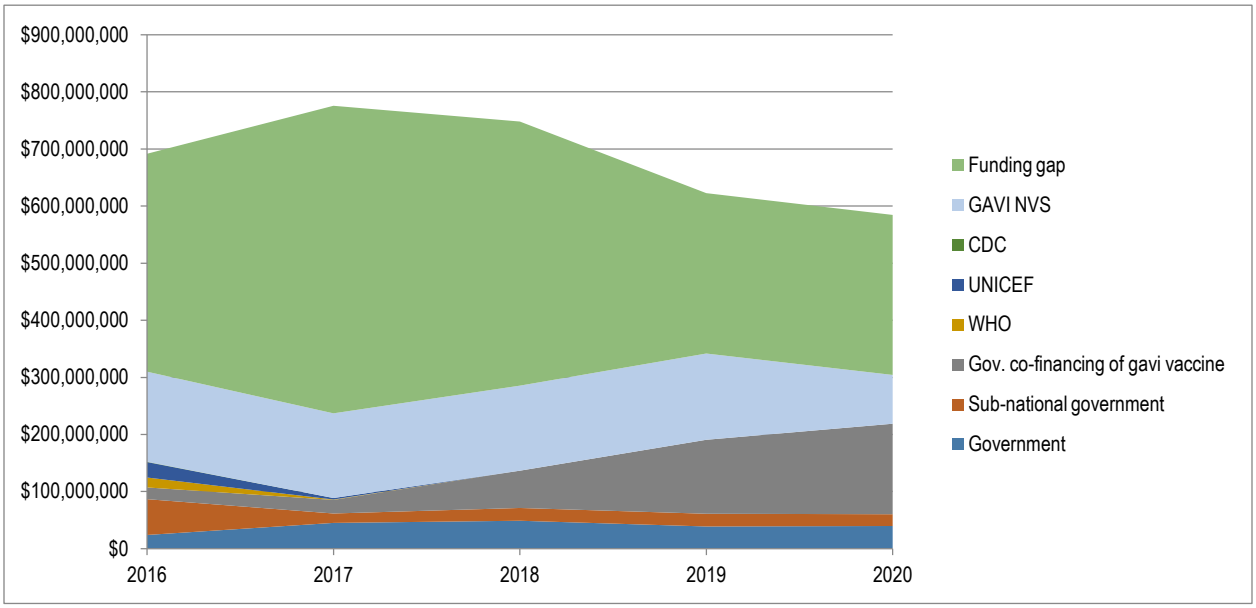


Figure 40: Financing and funding gap by Years with secured funds only (2016-2020)

3.4. Funding gap analysis

Funding gap amounts to USD 1.9billion with only secured financing and USD 1.4billion if probable financing is considered:

Figure 41: Funding gap (without shared costs) by types of financing (2016-2020)

Composition of Funding Gap	Gap (secured)	Gap (secured + probable)
	USD	USD
Vaccines & Injection Supplies	$114,507,099	$111,568,020

Activities & Other Recurrent Costs	$1,006,480,309	$879,772,833
Logistics(Vehicles & Other Equipment)	$7,253,785	$7,253,785
SIAs (Campaigns)	$787,694,178	$394,476,066
Total Funding Gap	$1,915,935,371	$1,393,070,703

Figure 42reveals that although the funding gap with only secure financing varies across different components, it comprises of shortfall of secure resources across all the immunization components: Vaccines & Injection Supplies (6%), Activities & Other Recurrent Costs (53%), Logistics including Vehicles, Cold Chain and Other Equipment (0.38%) and SIAs (41%).

Figure 42: Funding Gap with Secured Funds only – cMYP 2016-2020 (USD million)

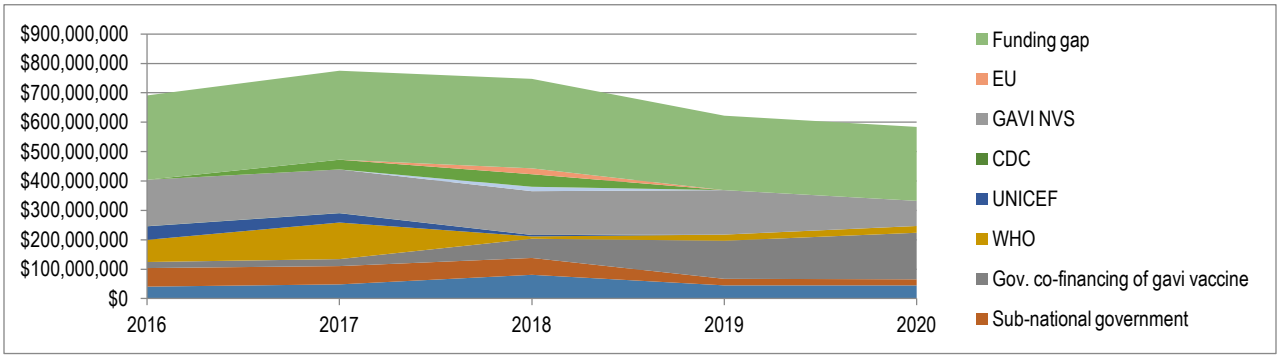
	2016	2017	2018	2019	2020	total	%
Vaccines & injection supplies	$21.9	$20.8	$21.9	$24.4	$25.5	$114.5	6%
Activities and other recurrent costs	$138.8	$237.0	$219.3	$140	$191	$926.5	53%
Logistics (vehicles, cold chain and other equipment)	$0.7	$3.0	$1.8	$1.5	$0.3	$7.3	0.38%
Supplemental immunization activities	$169.3	$276.0	$195.6	$90.8	$56.0	$787.7	41%
Total funding gap	**$324.7**	**$539.5**	**$445.4**	**$251.2**	**$267.5**	**$1,828.4**	

Figure 43 indicates that the probable financing allows filling the funding gap to a certain extent leaving the unfunded requirement of resources ranging from 0.52% to 63% for different immunization system components: Vaccines & Injection Supplies (8%), Activities & Other Recurrent Costs (63%), Logistics including Vehicles, Cold Chain and Other Equipment (0.52%) and SIAs (28%).

Figure 43: Funding Gap with Secured and Probable funds – cMYP 2016-2020 (USD million)

	2016	2017	2018	2019	2020	total	%
Vaccines & injection supplies	$19.0	$20.8	$21.9	$24.4	$25.5	$111.6	8%
Activities and other recurrent costs	$181.8	$157.5	$224.4	$143.0	$175.2	$879.8	63%
Logistics (vehicles, cold chain and other equipment)	$0.7	$3.0	$1.8	$1.5	$0.3	$7.3	0.52%
Supplemental immunization activities	$78.5	$122.7	$58.4	$84.4	$50.5	$394.5	28%
Total funding gap	**$230.9**	**$299.5**	**$306.5**	**$236.8**	**$231.0**	**$1,304.8**	

Figure 44: Funding gap with secure and probable financing for 2016-2020 (without shared costs)



This funding gap is further analyzed under 4 categories: Vaccines and Injection Supplies, Activities and other recurrent costs, Logistics and SIAs.

1. Vaccines and Injection Supplies

The immunization program is dependent upon Government (traditional vaccines, co-financing of Gavi vaccines and injection supplies), Gavi NVS (new and underused vaccines). Sufficient funding for procurement of traditional vaccines still remains one of the main challenges of the immunization system. Existing funding gap for procurement of traditional vaccines and meeting government co-financing commitments indicates that the Government needs to increase allocation of additional resources from the budget or mobilize other donors to fill the funding gap.

2. Activities and other recurrent costs

Probable financing allows significantly decreases the funding gap related activities and other routine recurrent costs. The funding gap for this component is USD 1,006,480,309 with secured funds only, while if the probable funds are secured the funding gap for this component will decrease by USD 126,707,476 and will equal to USD 879,772,833.

Besides other expenditures, this category requires resource allocation for technical assistance for developing performance management system, technical assistance for third party monitoring, trainings, formative research and EPI Coverage Survey. These activities are essential for developing and strengthening EPI in Nigeria. Without these important activities it will be impossible to improve the quality of immunization services through establishing performance-based practices and ensuring accountability in management practices.

3. Logistics (vehicles, cold chain and other equipment)

The EPI faces funding gap of nearly USD 7.2 million required for expanding cold-chain capacity over the period of cMYP. If this funding gap is not addressed, it will delay the expansion in immunization coverage.

4. Supplementary Immunization Activities (SIAs) /Campaigns

Securing of probable funding will significantly decrease the funding gap for implementation of this component of the program. With the secured funding only the funding gap for SIAs is USD 787,694,178 while the funding gap will equal to USD 394,476,066 if secured and probable funds are considered. The funding gap for implementation of SIAs increases likelihood of various epidemics in the country.

3.5. Financial sustainability

Financial sustainability of immunization program is the primary responsibility of the FMoH. This aspect is critical for the attainment of immunization outcomes. However, the financial projections show that the cost per Penta-3 child (all costs included) is estimated to significantly increase from USD 46.55 in 2013 to USD 65.11 in 2020. The macroeconomic and sustainability indicators indicate that the immunization system is highly dependent upon external funding in Nigeria. It includes both direct financing of EPI and also indirect financing of immunization services as part of PHC service provision. The FMoH is well aware of the complexities and difficulties associated with this situation. Therefore, the current cMYP not only focuses on availability of vaccines, injection supplies, cold chain, and other logistics but also to reform and strengthen the existing EPI management structures and business processes by employing the following strategies:

- 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
- Synchronization of EPI with PEI and non-polio efforts and more efficient sharing of the resources on the ground (including joint micro-planning at LGA, Ward and HF level) can serve as an effective sustainability strategy in terms saving financial resources and achieving programmatic synergies
- Establishing accountability mechanism through third party monitoring, regular immunization coverage surveys and objective performance reviews.

Considering only the secure funds, there is a substantial funding gap of USD 1.9 billion (57%) for the period of 5 years. However, the funding gap is reduced to 41% (USD 1.4 billion) when probable funding is also accounted for. The current financial projections indicate that the Federal and State governments estimate to increase their own investments in immunization system by almost 6 times during the next five years, from USD 140 million in 2013 to USD 883.4 million in 2020 (25.83% of required resources). If funds necessary to finance planned strategies and activities could not be mobilized, then the financial sustainability will be restored by postponing the planned interventions pending availability of funds. However, it will affect programmatic effectiveness dramatically although financial sustainability (in terms of balancing resource requirements and funding) will be achieved. Therefore, the national EPI managers plan

to develop their skills in planning and management in order to compete with other government departments for allocation of additional resources but also to persuade the donor's for bridging the gaps in resource availability.

The FMoH is well cognizant of the fact that the funding gap for the overall sustainability (programmatic and financial) is not limited to a single component of the immunization system. Therefore, an integrated and holistic approach has been adopted to ensure achieving best value for the money. However, keeping in view the rapidly expanding health sector coverage in Nigeria, the funding gap structure and severity of shortage related to **"Activities and other recurrent costs"** raises concerns on the quality and reliability of immunization services and overall performance.

Annex 1: Specific objectives, Strategies and Activities of cMYP 2016-2020

Immunization system component	Specific objective	Strategy	Activities
1. Service delivery			
Routine Immunization Coverage	1.1. To achieve > 95% Pent 3 coverage in at least 90% of the state/ LGAs by 2020	1.1.1. Implement and sustain Reaching Every Community (REC) approach in all the states plus FCT	1.1.1.1. Develop a list of high risk communities and collaborate with local authorities for households registration for immunization and other health services 1.1.1.2. Refresher training on REC approach 1.1.1.3. Monitoring the implementation of REC at the HF/LGA levels 1.1.1.4. Conduct supportive supervisory visits at the operational level 1.1.1.5. Expand RI services to all HFs by 2020, with initial priority to expand fixed RI sessions 1.1.1.6. Organize workshops on micro planning with the states / LGAs / Wards
New Vaccine Introduction	1.2. To achieve 95% coverage of PCV, bOPV, IPV, MenAfriVac A & 2nd dose Measles; 92% of Rota vaccine; 85% of HPV (for 9-14-years old girls) by 2020	1.2.1. Update National Immunization Policy (NIP)	1.2.1.1. Conduct workshop to review and update NIP and other relevant documents linked to new vaccines
		1.2.2. Update of the basic guide and REW manual	1.2.2.1. Get stakeholder consensus on updates 1.2.2.2. Finalize updated material
		1.2.3. Introduction of PCV vaccine into the national schedule and immunize all eligible infants	1.2.3.1. Conduct micro planning for phase 3 PCV introduction in 15 states plus FCT 1.2.3.2. Introduce PCV in the remaining 15 Phase 3 states + FCT 1.2.3.3. Conduct PCV post introduction evaluation 1.2.3.4. Document lessons learnt l

		1.2.4. Introduction of IPV vaccine into the national schedule and immunize all eligible infants	1.2.4.1. ConductIPV post introduction evaluation Document lessons learnt
		1.2.5. Introduction of rotavirus vaccines introduction and immunize all eligible infants	1.2.5.1. Implement preparatory activities for ROTA introduction 1.2.5.2. Introduce Rotavirus vaccine into the RI schedule 1.2.5.3. Conduct ROTA post introduction evaluation 1.2.5.4. Document lessons learnt
		1.2.6. Switch from tOPV to bOPV in the National schedule	1.2.6.1. Implement preparatory activities (advocacy, sensitization ,training, cold chain assessment) 1.2.6.2. National switch from tOPV to bOPV
		1.2.7. Introduction of HPV vaccine into the national schedule	1.2.7.1. Conduct demonstration project 1.2.7.2. Introduce HPV into RI schedule 1.2.7.3. Conduct HPV vaccine post introduction evaluation 1.2.7.4. Document lessons learnt
		1.2.8. Introduction of MenAfriVac A into the immunization schedule	1.2.8.1. Implement preparatory activities for MenAfri Vac Introduction 1.2.8.2. Introduction of MenAfriVac 1.2.8.3. Conduct vaccine post introduction evaluation 1.2.8.4. Document lessons learnt
		1.2.9. Introduction of 2nd dose measles into the immunization schedule	1.2.9.1. Implement preparatory activities for measles 2nd dose introduction 1.2.9.2. Introduce 2nd dose measles into RI schedule 1.2.9.3. Conduct vaccine post introduction evaluation 1.2.9.4. Document lessons learnt
		1.2.10. Switch to Td	1.2.10.1. Implement preparatory activities for Td introduction 1.2.10.2. Introduce Td into the RI schedule

			1.2.10.3. Conduct Td vaccine post introduction evaluation 1.2.10.4. Document lessons learnt
Immunization Equity	1.3. To reduce the percentage gap in Penta 3 between highest and lowest socio-economic quintiles from 70% in 2013 to 30% by 2020	1.3.1. Improve RI Service delivery	1.3.1.1. Scale up outreach and mobile sessions to reach the hard-to-reach communities at least four (4) times a year 1.3.1.2. Increase immunization services (fixed and outreaches) in the hard-to-reach communities 1.3.1.3. Increase frequency of routine immunization sessions in urban facilities **1.3.1.4. Conduct supportive supervision and monitoring of RI (fixed and out reach sessions)**
Immunization Demand	1.4. To reduce the Penta1-Penta3 and BCG-MCV1 drop-out to less than 10% in all the LGAs	1.4.1. Tracking system for defaulters	1.4.1.1. Develop tracking tool for defaulters 1.4.1.2. Pilot of the tracking tool 1.4.1.3. Scale up of the use of tracking tool
2. Advocacy, Communication, Community participation, Demand Generation			
Planning for Communication and participation	2.1. To ensure the availability of an integrated communication plan for routine / supplemental immunization and surveillance activities in at least 75% of the states / LGAs by 2020	2.1.1. Development of integrated communication plan	2.1.1.1. Develop with other programs an integrated plan of communication 2.1.1.2. implement the developed integrated communication plan 2.1.1.3. Evaluate the implementation of the communication plan
Advocacy and Programme Communication	2.2. To build the capacity of at least 80% of the health workers and other stakeholders at all levels for RI communication	2.2.1. Capacity building of personnel for immunization programme communication	2.2.1.1. Develop training materials for Health educators, Health Workers, TBAs at all levels 2.2.1.2. Train Health educators as mobilizers 2.2.1.3. Inter-personal communication training of health workers 2.2.1.4. Orientation of CORPS on demand creation and awareness on traditional and new vaccine schedules

	2.3. To create awareness, participation and demand for routine immunization at the community level	2.3.1. Advocacy to decision makers for ownership of the immunization programme	2.3.1.1. Advocacy meetings with the President, First Lady, National Assembly, Ministries of Finance, information & Communication, Education, Women Affairs, Youths and Sports on roles and responsibilities 2.3.1.2. Advocacy meetings with State Governors, LGA Chairmen, Houses of Assembly, Councilors, their wives, Ministries of Health, Local Government, Education, Women Affairs, Religious Affairs, Information, Youth, Paramount / Traditional / Religious Rulers and other stakeholders on roles and responsibilities
	2.4. To seek buy-in and accept reports on immunization as part of their social corporate responsibility	2.4.1. Advocacy to Media Chief Executives for support to RI activities	2.4.1.1. Advocacy meetings with Media Chief Executives (NTA, FRCN, NAN & other government / private Media) on roles and responsibilities
	2.5. To advocate to relevant stakeholders for adequate budgeting and timely releases of funds	2.5.1. Advocacy to relevant ministries and department for adequate budgeting and timely release of funds	2.5.1.1. Advocate to all relevant ministries and departments for adequate budgeting and timely release of funds 2.5.1.2. Advocate to Private companies / Organizations / NGOs for budgetary gap reduction
Community Participation& Demand Creation	2.6. To create awareness, participation and demand for routine immunization at the community level	2.6.1. Social / Community mobilization	2.6.1.1. Implementation of "Jigawa commitment" on immunization 2.6.1.2. Replicate and implement a new "Jigawa" commitment in the South 2.6.1.3. Establishment and reactivation of WDCs / VHCs & CBOs 2.6.1.4. Engage WDCs/ VDCs & CBOs to mobilize caregivers to access and utilize integrated services in their communities 2.6.1.5. Develop ward social mobilization plans 2.6.1.6. Organize meetings with NGOs , CBOs,FBOs etc. and community members to ensure their

			participation on immunization communication activities
		2.6.2. Mass Media Engagement	2.6.2.1. Sensitize media organizations on immunization issues as corporate social responsibility to attract free/discounted space/airtime 2.6.2.2. Develop a comprehensive media plan 2.6.2.3. Develop spot messages, jingles and sms for different stakeholders / target audience (RI and SIAs) 2.6.2.4. Negotiate for free inclusion of programme information in identified programmes / newspapers 2.6.2.5. Negotiate rates and timings of broadcast of spots PSAs and jingles with National, States and Private print and electronic media

3. Vaccine Security, Cold Chain and Logistics Management

Vaccine Security & Cold chain supply	3.1. To ensure availability of quality bundled vaccines at all levels at all times	3.1.1. Regular high quality vaccines and devices supply at all levels	3.1.1.1. Forecast, order and supply vaccines to all states / LGAs / SDPs 3.1.1.2. Procure additional cold chain equipment to bridge identified gaps from the EVMA, according to 5 year cold chain plan
	3.2. To Improve vaccine arrival procedure from 65% (2014) to 90% in 2020	3.2.1. Ease the bottleneck of vaccine by expanding the arrival points from 1 to 3	3.2.1.1. Develop and use of a standardized arrival form for consumables
Vaccine Management	3.3. To Improve temperature monitoring system from 66% (2014) to 95% in 2020	3.3.1. Put in place a system of early detection and action for safe-keeping of the vaccines	3.3.1.1. Place functional temperature recorders in all cold rooms 3.3.1.2. Map temperature of all cold and freezer rooms 3.3.1.3. Review monthly and keep temperature records at all levels.
	3.4. To Improve storage capacity store from 74% (2014) to 85% in 2020	3.4.1. Expand the cold chain capacity according to the rehabilitation plan	3.4.1.1. Redesignfour (4) hubs at Lagos, Abuja, Enugu and Kano to address the storage capacity gaps.

			3.4.1.2. Expand the cold, dry and transport capacity at all levels to meet the current needs including the NUVI plans 3.4.1.3. Develop and use a written contingency plan for every facility that stores vaccines, and getting buy-in for its use 3.4.1.4. Develop a forecast of CCE spare parts needs, and implement stock management system of spare parts across levels of the cold chain
	3.5. To Increase quality of building, equipment and transport from 72% (2014) to 80% in 2020	3.5.1. Put in place reserved space for dry store at an integrated supply chain	3.5.1.1. Construction of additional dry stores to meet vaccines bundling requirements at all levels.
	3.6. To enhance the maintenance system from 53% (2014) to 70% in 2020	3.6.1. Put in place a system of planned preventative maintenance at all levels	3.6.1.1. Continue implementation of planned preventive maintenance, its record and apply it at all levels
	3.7. To increase the quality of the stock management from 62% (2014) to 80% in 2020	3.7.1. Implement automated stock management system at all levels	3.7.1.1. Implement live computerized stocks management system
	3.8. To improve the distribution from 65% (2014)to 90% in 2020	3.8.1. Apply push system up to service delivery point including release of operational funds	3.8.1.1. Continue application of push system for vaccines and devices at all levels tied to the coverage (quarterly from national to zones and states, monthly from LGA to HF)
	3.9. To improve the quality of the vaccine management system from 82% (2014) to 95 % in 2020	3.9.1. Build capacity of cold chain officers to maintain cold chain equipment	3.9.1.1. Train health workers on vaccine forecast, stock management, vaccine wastage management, monitoring and supportive supervision 3.9.1.2. Provide adequate revised management tools at all levels 3.9.1.3. Monitor and supervise teams at the sub-national levels 3.9.1.4. Expand the use of incinerators at state and service delivery levels for proper immunization waste management
	3.10. To improve the IMS including the supportive	3.10.1. Performance management dashboard at all levels	3.10.1.1. Regular monitoring of Logistic management

	function from 70% (2014) to 90%		information system 3.10.1.2. Monitor and evaluate direct delivery of vaccines and supplies from the national to the HFs level
4. Accelerated Disease Control and Surveillance			
Accelerated- Disease Control Initiatives	4.1. To sustain interruption of wild polio virus transmission in 2016 and certification in all LGAs by 2018	4.1.1. Improved RI coverage with polio vaccine	4.1.1.1. Increase RI sessions (fixed and outreach) in identified polio high risk LGAs/wards
		4.1.2. High quality SIAs (campaigns and mop ups based on surveillance data)	4.1.2.1. Conduct social mobilization activities to cover RI and SIAs (not SIAs alone) 4.1.2.2. Conduct 2 National IPDs and additional 3 - 4 SNIDs in the high risk states every year 4.1.2.3. Conduct Planned 'Polio End Game' Activities (mop up operations)
	4.2. To eliminate Maternal-neonatal tetanus by 2018	4.2.1. Improved RI coverage with TT	4.2.1.1. Conduct biannual MNCHW (including TT administration for pregnant women)
		4.2.2. TT campaigns in high risk areas	4.2.2.1. Use existing community mob/linkage activities to effectively target pregnant women
		4.2.3. Clean delivery	4.2.3.1. Conduct TT campaigns for WCBA in identified MNT high risk LGAs/wards 4.2.3.2. Produce and disseminate IEC materials on TT importance /vaccinations 4.2.3.3. Capacity building (Train, retrain, equip) of health workers and TBAs on clean delivery practices 4.2.3.4. Provide mama kits and delivery kits for clean delivery
	4.3. To eliminate type A meningitis by 2017	4.3.1. Surveillance - Mop up Campaigns - where cases are reported.	4.3.1.1. Conduct mop up based on surveillance reports 4.3.1.2. Continue case detection, reporting and investigation of all outbreaks
	4.4. To reduce measles morbidity by 90% and mortality by 95% by 2020	4.4.1. Improved RI coverage for measles	4.4.1.1. Conduct biannual MNCHW to provide opportunity to vaccinate missed children under I year

		4.4.2. Quality SIAs	4.4.2.1. Conduct measles catch up campaigns (every 2 - 3yrs based on surveillance reports)
		4.4.3. Integration with polio eradication	4.4.3.1. Add polio to measles SIAs
		4.4.4. Integration with Vitamin A	4.4.4.1. Include Vit A in measles SIAs
	4.5. Reduce yellow fever morbidity by 80% and mortality by > 90% by 2020	4.5.1. Campaigns with yellow fever vaccine	4.5.1.1. Conduct preventive vaccination campaigns with yellow fever
Integrated disease surveillance	4.6. To strengthen & sustain integrated disease surveillance for targeted VPDs by 2020	4.6.1. Integrated disease surveillance and response	4.6.1.1. Active AFP surveillance in all states plus FCT combined with other VPDs (MNT & measles) surveillance 4.6.1.2. Training & retraining of HCWs, DSNOs on case identification & reporting in all Wards 4.6.1.3. Establish data base on IDSR 4.6.1.4. Hold monthly meetings with FP for AFP surveillance
		4.6.2. Strengthen case-base and laboratory-based surveillance	4.6.2.1. identify laboratories for collaboration on Polio & measles lab base surveillance 4.6.2.2. Upgrade, expand functionalize laboratory network 4.6.2.3. Provide laboratories with equipment's, consumables and ensure regular funding. 4.6.2.4. Train & retrain laboratory workers 4.6.2.5. Train managers and frontline health workers on data management for effective feedback on surveillance and performance 4.6.2.6. Provide feedback on surveillance and performance data to states & LGAs
		4.6.3. Capacity building on community surveillance for targeted VPDs by 2020	4.6.3.1. Mapping, selection of communities and advocacy to community gate keepers 4.6.3.2. Training/community sensitization of CBOs, WDC, Market Women Association, Motorcycle riders association on community surveillance

		4.6.4. Monitoring and reporting AEFI	4.6.4.1. Integrate AEFI surveillance with disease surveillance 4.6.4.2. Provide appropriate AEFI data tools at SDPs 4.6.4.3. Training of HCWs, & RI FP on AEFIs 4.6.4.4. Conduct regular monitoring and reporting of AEFI 4.6.4.5. Sustain the National AEFI Committee & Establish State Level AEFI committees 4.6.4.6. Conduct Bi-annual AEFI Committee meetings at State and National levels
	4.7. To strengthen epidemic preparedness and response to VPDs by 2020	4.7.1. Ensure an effective and efficient Epidemic response system	4.7.1.1. Reactivation of existing Epidemic Preparedness & Response Committees 4.7.1.2. Conduct regular meetings of EPR Committees 4.7.1.3. Preposition emergency drugs & supplies 4.7.1.4. Ensure adequate funding and logistics for preparedness and prompt response to disease outbreaks 4.7.1.5. Conduct outbreak investigation for reported cases

5. Health Management Information System Strengthening

HMIS	5.1. To ensure availability of quality data on RI by 2020 with reporting rate of immunization on DHIS to 95% by 2020	5.1.1. Provision of appropriate equipment and data capturing tools at all levels	5.1.1.1. Conduct regular supportive supervision so that each HF is visited at least 6-monthly 5.1.1.2. Provide appropriate data capturing tools and equipment at LGA and HF levels 5.1.1.3. Train facility Health Record officers on DHIS mobile 5.1.1.4. Procure Mobile Phones for data reporting from the health facilities 5.1.1.5. Conduct advocacy to community leaders, religious leaders & WDCs on data ownership and use of data for action 5.1.1.6. Develop community data tools

			5.1.1.7. Renew signing of MOU on PPP for RI data with private health facilities 5.1.1.8. Fast track scale up of DHIS by adding the RI module for complete RI Reporting 5.1.1.9. Collaborate with NPoC to improve birth registration and redefine denominator for Birth registration 5.1.1.10. Provide regular feedback to states, LGAs and Partners 5.1.1.11. Provide training health workers on NDHIS
		5.1.2. Regular and sustained data validation system	5.1.2.1. Conduct quarterly DQA at all levels 5.1.2.2. Establish integrated data management teams at the States and LGA levels 5.1.2.3. Conduct monthly meetings of data mgt teams 5.1.2.4. Conduct regular national data survey on RI 5.1.2.5. Conduct SMART survey on RI 5.1.2.6. Train and retrain data officers data validation
6. Human Resource for Health, Costing and Financing			
Human Resource management	6.1. To build the capacity of frontline heath workers and EPI managers for RI by 2020	6.1.1. Building capacity of health workers for quality service delivery	6.1.1.1. Provide Integrated PHC Management Training for frontline health workers 6.1.1.2. Provide MLM training for EPI managers 6.1.1.3. Provide cold chain/vaccine management training for SIOs, LIOs, CCOs, ZTOs, WFPs, etc. 6.1.1.4. Ensure Utilization on the job training methods such as Mentorship, and supportive supervision
		6.1.2. Improve PHC staff retention and motivation of PHC workforce	6.1.2.1. Develop performance based management system (annual reviews, rewards/promotions, sanctions) 6.1.2.2. Implement the developed performance based management system
	6.2. To ensure adequate human resources in	6.2.1. Implement Ward Minimum health care package at	6.2.1.1. Perform assessment to determine current HR gaps

	accordance with the Ward minimum health care package for HRH by 2020		all levels of government		by disposition and cadre to determine optimization strategy
				6.2.1.2.	Redistribute health care workers to areas of low staff availability
				6.2.1.3.	Recruit Health workers to fill identified HR gaps
				6.2.1.4.	Implement PHC under-one roof to achieve appropriate staffing: Task shifting, wage control by SPHCDA
Financing	6.3. To ensure sustainable, adequate and timely release of funds at all levels of government by 2020	6.3.1.	Secure financing for traditional and new vaccines & devices	6.3.1.1.	Perform Advocacy for the application of the National health bill at all levels
				6.3.1.2.	Prepare and submit annual request for funding of traditional funding
				6.3.1.3.	Prepare and submit request for co-financing of new-vaccines
		6.3.2.	Increase budgetary support for RI at all level	6.3.2.1.	Advocate to governors forum and ALGON for increase budgetary allocation and timely release of funds
				6.3.2.2.	Tracking of budget by higher levels of government
		6.3.3.	Additional resource mobilization	6.3.3.1.	Set up basket funds for PHC activities
				6.3.3.2.	Conduct Sensitization meeting with policy makers (NGF & ALGON) on provision of dedicated funds for MNCHW and other related programs
				6.3.3.3.	Expand PPP base for RI services
7. Integrated research and evaluation					
Integration of programs	7.1. 90% of children receiving BCG vaccine should be provided with LLIN by 2018	7.1.1.	Integration of immunization services with other health interventions	7.1.1.1.	Improve collaboration with Malaria Elimination Programme at all levels and put in place LLIN distribution
				7.1.1.2.	Conduct periodic joint monitoring missions
				7.1.1.3.	Put in place other incentive (e.g. deworming) for full

			immunization instead of LLIN
			7.1.1.4. Include vitamin A administration during measles SIAs and MNCHW
	7.2. Increase the percentage of health facilities that offer daily vaccination from 10% in 2014 to 50% by 2020	7.2.1. Implement *the policy of one solar refrigerator per ward*	7.2.1.1. Conduct cold chain needs assessment
			7.2.1.2. Develop a cold chain distribution plan
			7.2.1.3. Procure the cold chain equipment
			7.2.1.4. Train health workers on cold chain maintenance
			7.2.1.5. Advocacy to LGA and state to ensure ownership
Research and Evaluation	7.3. To improve the evidence base for decision making & planning on immunization programs	7.3.1. Operational Research	7.3.1.1. Establish a standing inter-agency research working group
			7.3.1.2. Conduct NICS on immunization
			7.3.1.3. Conduct NDHS on RI services
			7.3.1.4. Conduct MICS Survey
			7.3.1.5. Conduct economic evaluations (e.g. cost effectiveness analysis) of new vaccines and of strategies to improve immunization
			7.3.1.6. Conduct baseline assessment with the introduction of each new vaccine
			7.3.1.7. Conduct KAP survey pre and post introduction of new vaccines
			7.3.1.8. Conduct impact assessments after 3 years of a new vaccine introduction
			7.3.1.9. Conduct annual KAP for immunization services
			7.3.1.10. Conduct an assessment of the impact of WDCs on RI service delivery
			7.3.1.11. Conduct biannual Communication Reviews
		7.3.2. Improve coordination between RI program and all other MNCH program areas	7.3.2.1. Establish joint planning meetings at least every two months at national and state level
			7.3.2.2. Produce joint commodities distribution plans at all

			levels leveraging existing logistic systems 7.3.2.3. Conduct joint training of health workers across all program areas
8. Governance Accountability and Program Management			
Accountability Framework	8.1. To ensure all levels apply accountability frame work which delineates roles and responsibilities of the Federal, states, LGAs and wards as well as the private sector and development partners by 2020	8.1.1. To entrench the accountability framework for routine immunization in annual routine immunization operational plan at the Federal State and Local government level	8.1.1.1. Develop annual operational plan for routine immunization federal, state and LGA Level 8.1.1.2. Develop governance structure to include all appropriate stakeholders (federal, state, LGA, community, wards & partners/donors) 8.1.1.3. Appoint a facilitator at zonal level & State level to organize the review meetings and document results 8.1.1.4. Develop budgeting tracking tool to monitor expenditure for Routine Immunization at the Federal, state and local government levels 8.1.1.5. Train civil society and WDC on the use of tracking tools
	8.2. To Institutionalize performance management system for the accountability framework by 2017	8.2.1. Scale up the use of Key performance metrics to measure success on selected quantifiable out comes and processes	8.2.1.1. Hold zonal Coordination meeting with state reps. (state PHC/LGAs/Religious /Traditional) to ask them to commit to putting accountability framework in place 8.2.1.2. Development of score card at national and state levels, selecting indicators from Accountability framework 8.2.1.3. Support States to define baseline and targets for their new scorecard, to be monitored quarterly 8.2.1.4. Printing and dissemination of national and state kevel scorecards 8.2.1.5. Train and retrain of state and local government stakeholders on use of score card and core indicators for routine immunization accountability

		8.2.2. Ensure optimal application ofmodalitiesof the established framework.	8.2.2.1. Hold quarterly review at National level 8.2.2.2. Hold zonal meetings every qtr to review progress performed along the Accountability framework 8.2.2.3. Hold quarterly review at state level with state PHC Executive Director, Partners, Religious organizations, SIOs, Cold Chain officers and zonal coordinators to monitor progress and constituency in using the framework 8.2.2.4. Hold monthly review at LGA Level 8.2.2.5. Use and report quarterly on the accountability scorecard. Adapt as required
Program Management	8.3. To establish national presence to link national and state-level policy, planning and partners coordination in at least 70% of the states by 2020	8.3.1. Strengthening of the ICC (National and state levels)	8.3.1.1. Assist the states in the establishment of ICC at the state level 8.3.1.2. Hold ICC technical meetings (once in every 2 months) at national / states 8.3.1.3. Hold emergency ICC meetings as the need may arise 8.3.1.4. Conduct Bi-annual review meetings with the states on PHCUOR
		8.3.2. mplement Primary Health Care Under One Roof (PHCUOR)	8.3.2.1. Advocate to decision makers at state / LGAs to enact laws establishing PHCUOR 8.3.2.2. Develop and disseminate policy on PHCUOR
		8.3.3. Strengthening Partnership	8.3.3.1. review protocols for engagement of partners for providing RI services (e.g. private health institutions, NGOs working on health-related issues, etc.) 8.3.3.2. Conduct training for HF staff of private institutions on RI services and reporting
	8.4. To ensure evidence-based planning and implementation of RI activities through a robust M & E process	8.4.1. Institutionalize a comprehensive M & E system	8.4.1.1. Monitor immunization coverage monthly, sending feedback report to states and LGAs

			8.4.1.2. Monitor and verify vaccine stock distribution 8.4.1.3. Monitor overall impact of RI on morbidity and mortality rates of under 5 children

Annex 2: Alignment of Nigeria cMYP 2016-2020 with Global and Regional Goals

GVAP Goals 2011-2020	Regional Framework for implementation of GVAP in Afro	National objectives
1. Achieve world free of poliomyelitis	to complete interruption of poliovirus transmission 1. and ensure virus containment	- To sustain interruption of wild polio virus transmission in 2016 and certification in all LGAs by 2018
2. Meet global and regional disease elimination targets (includes neonatal, tetanus, measles and rubella elimination targets)	to attain the elimination of measles and make progress in the elimination of rubella and congenital 2. rubella syndrome	- To eliminate Maternal-neonatal tetanus by 2018 - To eliminate type A meningitis by 2017 - To reduce measles morbidity by 90% and mortality by 95% by 2020 - Reduce yellow fever morbidity by 80% and mortality by > 90% by 2020 - 90% of children receiving BCG vaccine should be provided with LLIN by 2018
3. Meet vaccination coverage targets in every region, country and community	to improve immunization coverage beyond the current levels to attain and maintain elimination/control of other vaccine-preventable diseases	- To achieve > 95% Pent 3 coverage in at least 90% of the state/ LGAs by 2020 - To reduce the percentage gap in Penta 3 between highest and lowest socio-economic quintiles from 70% in 2013 to 30% by 2020 - To reduce the Penta1-Penta3 and BCG-MCV1 drop-out to less than 10% in all the LGAs - To ensure the availability of an integrated communication plan for routine / supplemental immunization and surveillance activities in at least 75% of the states / LGAs by 2020 - To build the capacity of at least 80% of the health workers and other stakeholders at all levels for RI communication - To create awareness, participation and demand for routine immunization at the community level To seek buy-in and accept reports on immunization as part of their social corporate responsibility - To advocate to relevant stakeholders for adequate budgeting and timely releases of funds - To create awareness, participation and demand for routine immunization at the community level - To ensure availability of quality bundled vaccines at all levels at all times - To Improve vaccine arrival procedure from 65% (2014) to 90% in 2020 - To Improve temperature monitoring system from 66% (2014) to 95% in 2020 - To Improve storage capacity store from 74% (2014) to 85% in 2020 - To Increase quality of building, equipment and transport from 72% (2014) to 80% in 2020 - To enhance the maintenance system from 53% (2014) to 70% in 2020 - To increase the quality of the stock management from 62% (2014) to 80% in 2020 - To improve the distribution from 65% (2014)to 90% in 2020 - To improve the quality of the vaccine management system from 82% (2014) to 95 % in 2020 - To improve the IMS including the supportive function from 70% (2014) to 90% - To strengthen & sustain integrated disease surveillance for targeted VPDs by 2020 - To strengthen epidemic preparedness and response to VPDs by 2020 - To ensure availability of quality data on RI by 2020 with reporting rate of immunization on DHIS to 95% by 2020 - To build the capacity of frontline heath workers and EPI managers for RI by 2020

		- To ensure adequate human resources in accordance with the Ward minimum health care package for HRH by 2020 - To ensure sustainable, adequate and timely release of funds at all levels of government by 2020 - Increase the percentage of health facilities that offer daily vaccination from 10% in 2014 to 50% by 2020 - To improve the evidence base for decision making & planning on immunization programs - To ensure all levels apply accountability frame work which delineates roles and responsibilities of the Federal, states, LGAs and wards as well as the private sector and development partners by 2020 - To Institutionalize performance management system for the accountability framework by 2017 - To establish national presence to link national and state-level policy, planning and partners coordination in at least 70% of the states by 2020 - To ensure evidence-based planning and implementation of RI activities through a robust M & E process
4. Develop and introduce new and improved vaccines and technologies	1.	- To achieve 95% coverage of PCV, bOPV, IPV, MenAfriVac A & 2nd dose Measles; 92% of Rota vaccine; 85% of HPV (for 9-14-years old girls) by 2020
5. Exceed MDG4 target for reducing child mortality	2.	-

Annex 3: GVAP Checklist

GVAP Strategies	Key Activities	Activity included in cMYP			
		Yes	No	Not applicable	New activity needed
Strategic objective 1: All countries commit to immunization as a priority.					
Establish and sustain commitment to immunization.	Ensure legislation or legal framework in all countries, including provisions for a budget line for immunization, and for monitoring and reporting.	✓			
	Develop comprehensive national immunization plans that are part of overall national health plans through a bottom-up process including all stakeholders.	✓			
	Set ambitious but attainable country-specific targets within the context of morbidity and mortality reduction goals.	✓			
	Scrutinize, defend, and more closely follow immunization budgets, disbursements and immunization programme activities.	✓			
	Support local civil society organizations and professional associations to contribute to national discussions of immunizations and health.	✓			
Inform and engage opinion leaders on the value of immunization.	Explore models to promote collaboration between the stakeholders that generate evidence on immunization and those who use it to set priorities and formulate policies.	✓			
	Develop and disseminate the evidence base on the public health value of vaccines and immunization and the added value of achieving equity in access and use of immunization.	✓			
	Develop and disseminate the evidence base for the broad economic benefits of immunization for individuals, households, communities, and countries.	✓			

	Include immunization in the agendas of governing body meetings at all levels and in other social, health and economic forums.	✓			
Strengthen national capacity to formulate evidence-based policies.	Create or strengthen independent bodies that formulate national immunization policies (for example, NITAGs or regional technical advisory groups).	✓			
	Develop more effective ways for National Regulatory Agencies (NRAs), Health Sector Coordination Committees (HSCCs), and Interagency Coordination Committees (ICCs) to support immunization programmes as part of disease control programmes and preventive health care.	✓			
	Create regional forums and peer-to-peer exchange of information, best practices and tools.	✓			
	Create expanded and more transparent mechanisms for aggregating, sharing, and using information to monitor commitments.	✓			
Strategic objective 2: Individuals and communities understand the value of vaccines and demand immunization as both their right and responsibility.					
Engage individuals and communities on the benefits of immunization and hear their concerns.	Engage in a dialogue which both transmits information and responds to people's concerns and fears.	✓			
	Utilize social media tools and lessons from commercial and social marketing efforts.	✓			
	Leverage new mobile and Internet-based technologies.	✓			
	Include immunization in the basic education curriculum.		✓		
	Conduct communications research.	✓			
Create incentives to stimulate demand.	Create incentives to households and health workers for immunization, where appropriate and while respecting the autonomy of beneficiaries (for example, cash or in-kind transfers, bundling of services, media recognition).	✓			
	Conduct social research to improve the delivery of immunization services and the ability to meet the needs of diverse communities.	✓			

Build advocacy capacity.	Recruit new voices, including those of educators, religious leaders, traditional and social media personalities, family physicians, community health workers, and trained immunization champions (among others).	✓			
	Train healthcare workers on effective communication techniques, especially to address vaccine hesitancy and to respond to reports of serious adverse events following immunization in order to maintain trust and allay fears.	✓			
	Engage, enable and support in-country CSOs to advocate to local communities and policy-makers and in local and global media regarding the value of vaccines.	✓			
	Create national or regional advocacy plans that involve in-country CSOs.	✓			
	Link global, national and community advocacy efforts with professional and academic networks.	✓			
Strategic objective 3: The benefits of immunization are equitably extended to all people.					
Develop and implement new strategies to address inequities.	Recast "Reaching Every District" to "Reaching Every Community" to address inequities within districts.	✓			
	Engage underserved and marginalized groups to develop locally tailored, targeted strategies for reducing inequities.	✓			
	Introduce appropriate new vaccines in national immunization programs (see also Objective 5).	✓			
	Establish a life course approach to immunization planning and implementation, including new strategies to ensure equity across the life span.			✓	
	Prevent and respond to vaccine-preventable diseases during disease outbreaks, humanitarian crises, and in conflict zones.	✓			
Build knowledge base and capacity to enable equitable delivery.	Track each individual's immunization status, leveraging immunization registries, electronic databases and national identification number systems.	✓			

	Take advantage of community structures to enhance communication and deliver services (for example, traditional birth attendants, birth registries).	✓			
	Involve CSOs in community outreach and planning.	✓			
	Develop new approaches to community engagement for urban and peri-urban areas.	✓			
	Train health workers and CSOs on how to engage communities, identify influential people who can assist in planning, organizing and monitoring health and immunization programmes, identify community needs and work with communities to meet those needs.	✓			
	Conduct operational and social science research to identify successful strategies to reduce inequities and improve the quality and delivery of immunization services.	✓			
Strategic objective 4: Strong immunization systems that are an integral part of a well-functioning health system.					
Develop comprehensive and coordinated approaches.	Ensure that global vaccine programs focusing on eradication and elimination goals are incorporated into national immunization programs.	✓			
	Ensure that new vaccine deployment is accompanied by comprehensive disease control plans	✓			
	Ensure coordination between the public and private sectors for new vaccine introduction, reporting of vaccine-preventable diseases and administration of vaccines, and ensure quality of vaccination in the public and private sectors.	✓			
	Consider the inclusion of vaccines in health programs across the life course.			✓	
Strengthen monitoring and surveillance systems.	Improve the quality of all immunization administrative data and promote its analysis and use at all administrative levels to improve programme performances.	✓			
	Develop and promote the use of new technologies for collection, transmission and analysis of immunization data.	✓			

	Further strengthen, improve quality and expand disease surveillance systems to generate information based on laboratory confirmed cases for decision-making, monitoring the impact of immunization on morbidity and mortality and changes in disease epidemiology.	✓			
	Ensure capacity for vaccine safety activities, including capacity to collect and interpret safety data, with enhanced capacity in countries that introduce newly developed vaccines.	✓			
Strengthen capacity of managers and frontline workers.	Ensure that immunization and other primary health care programs have adequate human resources to schedule and deliver predictable services of acceptable quality.	✓			
	Increase levels of pre-service, in-service and post-service training for human resources, and develop new, relevant curricula that approach immunization as a component of comprehensive disease control.	✓			
	Promote coordinated training and supervision of community-based health workers.	✓			
Strengthen infrastructure and logistics.	Innovate to improve cold chain capacity and logistics, as well as waste management.	✓			
	Minimize the environmental impact of energy, materials and processes used in immunization supply systems, both within countries and globally.	✓			
	Staff supply systems with adequate numbers of competent, motivated and empowered personnel at all levels.	✓			
	Establish information systems that help staff accurately track the available supply.	✓			
Strategic objective 5: Immunization programmes have sustainable access to predictable funding, quality supply and innovative technologies.					
Increase total amount of funding.	Establish a commitment for governments to invest in immunization according to their ability to pay and the expected benefits.	✓			
	Engage new potential domestic and development partners and diversify sources of funding.	✓			

	Develop the next generation of innovative financing mechanisms.			✓	
Increase affordability for middle-income countries.	Explore differential pricing approaches to define explicit criteria for price tiers and the current and future prices to be made available to lower middle-income and middle-income countries.			✓	
	Explore pooled negotiation or procurement mechanisms for lower-middle-income and middle income countries.			✓	
Improve allocation of funding in low- and middle-income countries.	Strengthen budgeting and financial management in-country to better integrate financial and health care planning and priority setting.	✓			
	Coordinate funding support from development partners and other external sources.	✓			
	Evaluate and improve funding support mechanisms on the basis of their effectiveness in reaching disease goals.	✓			
	Base funding on transparency and objectivity in order to ensure the sustainability of programs.	✓			
	Promote the use of cost and cost-benefit arguments in fund raising, decision-making, and defense of immunization funding.	✓			
	Explore pay-for-performance funding systems.		✓		
Secure quality supply	Build and support networks of regulators and suppliers to share best practices and to improve quality assurance capabilities and quality control.			✓	
	Develop tools to strengthen global standardization of manufacturing and regulatory processes.			✓	
	Strengthen national regulatory systems and develop globally harmonized regulations.			✓	
	Ensure a forum where countries can communicate expected demand for vaccines and technologies and provide guidance to manufacturers on desired product profiles.			✓	
Strategic objective 6: Country, regional and global R&D innovations maximize the benefits of immunization.					

Expand capabilities and increase engagement with end-users.	Engage with end users to prioritize vaccines and innovations according to perceived demand and added value.			✓	
	Establish platforms for exchange of information on immunization research and consensus building.			✓	
	Build more capacity and human resources in low- and middle-income countries to conduct R&D and operational research.			✓	
	Increase networking among research centers for efficient building of partnerships among high-, middle- and low-income countries' institutions.			✓	
	Promote collaboration between traditional research disciplines and scientists from disciplines not previously engaged in vaccine research.			✓	
Enable the development of new vaccines	Research on the fundamentals of innate and adaptive immune responses, particularly in humans.			✓	
	Research on immunologic and molecular characteristics of microbes.			✓	
	Improve understanding of the extent and causes of variation in pathogen and human population responses to vaccines.			✓	
Accelerate development, licensing and uptake of vaccines.	Promote greater access to technology, know-how and intellectual property for adjuvants and their formulation into vaccines.			✓	
	Develop non-syringe delivery mechanisms and vaccine packaging that best suit the needs and constraints of countries' programs.			✓	
	Develop thermo-stable rotavirus and measles vaccines.			✓	
	Develop new bioprocessing and manufacturing technologies.			✓	
	Develop a global, regulatory science research agenda.			✓	
	Adopt best practices in portfolio and partnership management for R&D			✓	

Improve programme efficiencies and increase coverage and impact.	Research the use of more effective information through modern communication technologies.	✓			
	Conduct representative epidemiological, immunological, social and operational studies and investigations of vaccine impact to guide health economics analysis.	✓			
	Perform operational research on improved delivery approaches for life course immunization, and vaccination in humanitarian emergencies, fragile states and countries in and emerging from conflict.	✓			
	Perform research on interference effects and optimum delivery schedules.			✓	
	Perform research to develop improved diagnostic tools for conducting surveillance in low-income countries.			✓	

Annex 4: Monitoring and Evaluation Framework of cMYP Nigeria 2016-2020

System Components	General Objectives	Specific Objectives	Indicator	Government staff responsible	Partners responsible	Data source	Freq data collection	Responsible for data collection	Year	Value	2016	2017	2018	2019	2020
1. Immunization Service Delivery															
a. Routine Immunization coverage	90% of States / LGAs to achieve at least 95% fully immunized children against Vaccine Preventable Diseases before the age of 12 months by 2020	To achieve >95% Pentavalent 3 coverage in at least 90% of states / LGAs by 2020	Penta 3 coverage rate	DDC&I, Head RI	RIWG	DHIS2 &DVD-MT	Monthly	DDC&1 NPHCDA	Nov-14	53.50%	90.00%	94.00%	94.00%	94.00%	95%
		To achieve >90% HBV0 coverage in at least 90% of states / LGAs by 2020	HBV0 coverage rate	DDC&I, Head RI	RIWG	DHIS2 &DVD-MT	Monthly	DDC&1 NPHCDA	Dec-15	78.00%	80.00%	82.00%	84.00%	86.00%	90%
b.New vaccine introduction		To achieve 95% coverage of PCV, bOPV, IPV, MenAfriVac A & 2nd dose Measles; 92% of Rota vaccine; 85% of HPV (for 9-14-years old girls) by 2020	PCV3 coverage rate	DDC&I, Head RI	RIWG	DHIS2 &DVD-MT	Monthly	DDC&1 NPHCDA	Dec-14	0%	90%	94%	94%	94%	95%
			ROTA2 coverage rate	DDC&I, Head RI	RIWG	DHIS2 &DVD-MT	Monthly	DDC&1 NPHCDA	Dec-14	0%	NA	NA	80%	90%	92%
			HPV2 coverage rate	DDC&I, Head RI	RIWG	DHIS2 &DVD-MT	Monthly	DDC&1 NPHCDA	Dec-14	0%	NA	70%	90%	80%	85%
			bOPV coverage	DDC&I, Head RI	RIWG	DHIS2 &DVD-MT	Monthly	DDC&1 NPHCDA	Dec-14	0%	70%	94%	94%	94%	95%

			rate												
			IPV coverage rate	DDC&I, Head RI	RIWG	DHIS2 &DVD-MT	Monthly	DDC&1 NPHCDA	Dec-14	0%	90%	94%	94%	94%	95%
			MenAfriVac coverage rate	DDC&I, Head RI	RIWG	DHIS2 &DVD-MT	Monthly	DDC&1 NPHCDA	Dec-14	0%	NA	80%	90%	94%	95%
c. Immunization equity		To reduce the percentage gap in Penta 3 between highest and lowest socio-economic quintiles to 30% by 2020	% difference in Penta 3 coverage between highest and lowest socio-economic quintiles	DDC&I, Head RI	RIWG	Survey	Annually	DDC&1 NPHCDA	Dec-14	NA	60%	50%	40%	35%	30%
d. Immunization Demand		To reduce the Penta1-Penta3 and BCG-MCV1 drop-out to less than 10% in all the LGAs	Penta 1-3 drop out rates	DDC&I, Head RI	RIWG	DHIS2 &DVD-MT	Monthly	DDC&1 NPHCDA	Dec-14	10.70%	10%	9%	8%	6%	4%
			BCG-MCV1 drop out rate	DDC&I, Head RI	RIWG	DHIS2 &DVD-MT	Monthly	DDC&1 NPHCDA	Dec-14		10%	9%	8%	6%	4%
Immunization System	General Objectives	Specific Objectives	Indicator	Government staff responsible	Partners responsi	Data source	Frequency data	Responsible for data	Year	Value	2016	2017	2018	2019	2020

Components					ble		collection	collection							
2. Advocacy and Communication, Community Participation and Demand Generation															
Planning for Communication	All levels to strengthen immunization systems through effective communication, community participation and demand creation by 2020	To ensure the availability of an integrated communication plan for routine / supplemental immunization and surveillance activities in at least 75% of the states / LGAs by 2020	% of states with an integrated communication plan	Director Social mobilization, communication and Advocacy (DSMC&A)	Social mobilization working group	Survey	Annually	DCHS NPHCDA	2014	NA	15%	30%	45%	60%	75%
Planning for Communication			% of LGAs with functional WDCs	DSMC&A	Social mobilization working group	Survey	Annually	DCHS NPHCDA	2014	TBD	40% increase from baseline	60% increase from baseline	80% increase from baseline	100% increase from baseline	100%
Advocacy and Programme Communication		To build the capacity of at least 80% of the health workers and other stakeholders at all levels for RI communication	% of health workers that have been trained in RI communication over the past 5 years	DSMC&A	Social mobilization working group	Survey	Annually	DCHS NPHCDA	2014	NA	20%	40%	60%	80%	100%
			% of health care workers	DSMC&A	Social mobilization working	Survey	Annually	DCHS NPHCDA	2014	NA	20%	40%	60%	80%	100%

			with good knowledge of RI communication		group										
Immunization system component		Specific Objectives	Indicators	Government staff responsible	Partners responsible	Data Source	Frequency of data collection	Responsible for data collection	Year	Value	2016	2017	2018	2019	2020
Community Participation & Demand Creation		To create awareness, participation and demand for routine immunization at the community level	% of mothers with awareness of RI schedule	DSMC&A	Social mobilization working group	Survey	Annually	DCHS NPHCDA	2014	NA	20%	40%	60%	80%	100%
			Coverage rates of all antigens % of mothers with high acceptance immunization	DDC&I/ Head RI	RIWG	DHIS2 &DVD-MT	Monthly	DCHS NPHCDA	2014	NA	50% increase from baseline	100% increase from baseline	100%	100%	100%
3. Vaccine Security, Cold Chain and Logistics Management															

Vaccine Security & Cold chain supply	All levels to strengthen immunization systems through improved vaccine security and logistics management, immunization safety.	To ensure availability of quality bundled vaccines at all levels at all times	% of state cold stores experiencing stock-outs on consumables or immunization supplies	Head, Logistics	Logistics working group	Stock dashboard/ LMIS	Monthly	State CCOs / DHCL NPHCDA	2014	TBD	20% increase from baseline	40% increase from baseline	60% increase from baseline	80% increase from baseline	100% increase from baseline
			% of LGA cold stores with stock-outs on consumables or immunization supplies	Head, Logistics	Logistics working group	Stock dashboard/ LMIS	Monthly	State CCOs / DHCL NPHCDA	2014	TBD	20% increase from baseline	40% increase from baseline	60% increase from baseline	80% increase from baseline	100% increase from baseline
Immunization System Components	General Objectives	Specific Objectives	Indicator	Government staff responsible	Partners responsible	Data source	Freq data collection	Responsible for data collection	Year	Value	2016	2017	2018	2019	2020
			% of Health facilities that store vaccines that have experienced stock -outs on	Head, Logistics	Logistics working group	Stock dashboard/ LMIS	Monthly	State CCOs / DHCL NPHCDA	2014	TBD	20% increase from baseline	40% increase from baseline	60% increase from baseline	80% increase from baseline	100% increase from baseline

			consumables or immunization supplies												
		To Improve vaccine arrival procedure from 65% (2014) to 90% in 2020	% of facilities using standardized arrival form for consumables	Head, Logistics	Logistics working group	Vaccine Arrival procedure report	Quarterly	State CCOs / DHCL NPHCDA	2014	TBD	20% increase from baseline	40% increase from baseline	60% increase from baseline	80% increase from baseline	100% increase from baseline
Vaccine Management		To Improve temperature monitoring system at LGAs from 66% (2014) to 95% in 2020	% of cold chain facilities at LGA level that are experiencing temperature heat excursions	Head, Logistics	Logistics working group	LMIS	Monthly	State CCOs / DHCL NPHCDA	2014	NA	20% increase from baseline	40% increase from baseline	60% increase from baseline	80% increase from baseline	100% increase from baseline
			% of Cold chain equipment with continuous monitoring devices	Head, Logistics	Logistics working group	EVMA	Monthly	State CCOs / DHCL NPHCDA	2014	66%	72%	78%	84%	90%	94%

			Indicators	Government staff responsible	Partners responsible	Data Source	Frequency of data collection	Responsible for data collection	Year	Value	2016	2017	2018	2019	2020
		To Improve storage capacity store from 74% (2014) to 85% in 2020	% stores without adequate cold storage capacity need - state level	Head, Logistics	Logistics working group	EVMA	Annually	State CCOs / DHCL NPHCDA	2014	74%	76%	78%	80%	82%	85%
			% stores without adequate cold storage capacity need - LGA level	Head, Logistics	Logistics working group	EVMA	Annually	State CCOs / DHCL NPHCDA	2014	TBD	20% increase from baseline	40% increase from baseline	60% increase from baseline	80% increase from baseline	100% increase from baseline
			Proportion of available dry vaccine storage to vaccine dry storage capacity need	Head, Logistics	Logistics working group	EVMA	Annually	State CCOs / DHCL NPHCDA	2014	TBD	20% increase from baseline	40% increase from baseline	60% increase from baseline	80% increase from baseline	100% increase from baseline
		To Increase quality of building, equipment and transport from 72% (2014) to	Structural integrity score of buildings, equipment and transport	Head, Logistics	Logistics working group	EVMA	Annually	State CCOs / DHCL NPHCDA	2014	72%	74%	76%	78%	79%	80%

		80% in 2020													
		To enhance the maintenance system from 53% (2014) to 70% in 2020	CCE maintenance score	Head, Logistics	Logistics working group	EVMA	Annually	State CCOs / DHCL NPHCDA	2014	53%	56%	59%	62%	65%	70%
Immunization System Components	General Objectives	Specific Objectives	Indicator	Government staff responsible	Partners responsible	Data source	Freq data collection	Responsible for data collection	Year	Value	2016	2017	2018	2019	2020
			% LGAs with PPM system in place	Head, Logistics	LWG	EVMA	Annually	State CCOs / DHCL NPHCDA	2014	TBD	20% increase from baseline	40% increase from baseline	60% increase from baseline	80% increase from baseline	100% increase from baseline
		To increase the quality of the stock management from 62% (2014) to 80% in	% of states reporting regularly on stock levels	Head, Logistics	LWG	Feedback received	Annually	State CCOs / DHCL NPHCDA	2014	100%	100%	100%	100%	100%	100%
			% of all sites using a computerized stock management tool	Head, Logistics	LWG	Feedback received	Annually	State CCOs / DHCL NPHCDA	2014	0%	50%	100%	100%	100%	100%

		2020	% of HCWs receiving stock management tools	Head, Logistics	LWG		Annually	State CCOs / DHCL NPHCDA	2014	TBD	100%	100%	100%	100%	100%
		To improve the distribution from 65% (2014)to 90% in 2020	% of sites receiving vaccines in the right quantity and the right time	Head, Logistics	LWG	EVMA	Annually	State CCOs / DHCL NPHCDA	2014	65%	68%	71%	74%	77%	80%
		To improve the quality of the vaccine managem ent system from 82% (2014) to 95 % in 2020	% of health care workers trained in stock management techniques	Head, Logistics	LWG	Training records	Annually	State CCOs / DHCL NPHCDA	2014	TBD	100%	100%	100%	100%	100%
		To improve the IMS including the supportive function from 70% (2014) to	% of LGA's reporting stock data	Head, Logistics	Logistics working group	LMIS	Monthly	State CCOs / DHCL NPHCDA	2014	TBD	100%	100%	100%	100%	100%

		90%													
Immunization System Components	General Objectives	Specific Objectives	Indicator	Government staff responsible	Partners responsible	Data source	Freq data collection	Responsible for data collection	Year	Value	2016	2017	2018	2019	2020
4. Accelerated Disease Control and Surveillance															
Accelerated-Disease Control Initiatives	All levels to accelerate efforts to achieve polio eradication, MNT and epidemic men A meningitis elimination, measles and yellow fever control; and strengthen surveillance for targeted vaccine preventable diseases by 2020	To sustain interruption of wild polio virus transmission in 2016 and certification in all LGAs by 2018	Number of Wild Polio Virus cases reported	DDC&I/ Head RI	RIWG	Surveillance reports	Annually	DDC&I NPHCDA	2014	6	0	0	0	0	0
		To eliminate Maternal-neonatal tetanus by 2018	Number of children affected by maternal neo-natal tetanus	DDC&I/ Head RI	RIWG	Surveillance reports	Annually	DDC&I NPHCDA	2014	TBD	20% reduction on baseline	40% reduction on baseline	60% reduction on baseline	80% reduction on baseline	100% reduction on baseline
		To eliminate type A meningitis by 2017	Number of meningitis A cases reported	DDC&I/ Head RI	RIWG	Surveillance reports	Annually	DDC&I NPHCDA	2014	TBD	20% reduction on baseline	40% reduction on baseline	60% reduction on baseline	80% reduction on baseline	100% reduction on baseline
		To reduce measles morbidity by	Measles cases confirmed	DDC&I/ Head RI	RIWG	Surveillance reports	Annually	DDC&I NPHCDA	2014	870	696	522	348	174	0

		90% and mortality by 95% by 2020	Measles mortality	DDC&I/ Head RI	RIWG	Surveillance reports	Annually	DDC&I NPHCDA	2014	20	0	0	0	0	0
		Reduce yellow fever morbidity by 80% and mortality by > 90% by 2020	Yellow fever cases confirmed	DDC&I/ Head RI	RIWG	Surveillance reports	Annually	DDC&I NPHCDA	2014	TBD	20% reduction on baseline	40% reduction on baseline	60% reduction on baseline	80% reduction on baseline	100% reduction on baseline
			Yellow fever mortality	DDC&I/ Head RI	RIWG	Surveillance reports	Annually	DDC&I NPHCDA	2014	TBD	20% reduction on baseline	40% reduction on baseline	60% reduction on baseline	80% reduction on baseline	100% reduction on baseline
Integrated disease surveillance	All levels to strengthen surveillance for integrated vaccine preventable diseases including comprehensive and timely data management	To strengthen & sustain integrated disease surveillance for targeted VPDs by 2020	TBD												
		To strengthen epidemic preparedness and response to VPDs by 2020	Average time taken to respond to suspected VPDs	DDC&I/ Head RI	RIWG	Surveillance reports	Annually	DDC&I NPHCDA	2014	NA	TBD	TBD	TBD	TBD	TBD
5. Health Management Information System Strengthening															
HMIS	To develop and strengthen a health management	To ensure availability of quality data on RI by 2020 with reporting rate	% of states that are utilizing the RI	Head, DPRS NPHCDA	M&E working group	DHIS2 &DVD-MT	Monthly	DPRS NPHCDA	2014	3%	67%	100%	100%	100%	100%

	information system that is comprehensive, timely and complete by 2020	of immunization on DHIS to 95% by 2020	module of the DHIS												
			% of health facilities (both public and private) reporting complete data in the DHIS 2.0	Head, DPRS NPHCDA	M&E working group	DHIS2 &DVD-MT	Monthly	DPRS NPHCDA	2014	TBD	100%	100%	100%	100%	100%
			% of health facilities(both public and private reporting data in a timely manner	Head, DPRS NPHCDA	M&E working group	DHIS2 &DVD-MT	Monthly	DPRS NPHCDA	2014	TBD	100%	100%	100%	100%	100%
			% gap between Penta 3 coverage through DHIS and WHO/UNICEF	Head, DPRS NPHCDA	M&E working group	DHIS2 &DVD-MT	Monthly	DPRS NPHCDA	2014	TBD	50% reduction on baseline	100% reduction on baseline	0	0	0

			estimate												
6. Human Resource for Health, Costing and Financing															
Human Resource management	All levels to strengthen immunization systems through improved human resource development, adequate financing / resource mobilization	To build the capacity of frontline heath workers and EPI managers for RI by 2020	% of health workers that have been trained in RI communication	DD PHCS & Head RI	RIWG	Survey	Annually	DPHCS NPHCDA	2014	NA	20% increase from baseline	40% increase from baseline	60% increase from baseline	80% increase from baseline	100% increase from baseline
			% of health care workers with good knowledge of RI communication	DD PHCS & Head RI	RIWG	Survey	Annually	DPHCS NPHCDA	2014	NA	20% increase from baseline	40% increase from baseline	60% increase from baseline	80% increase from baseline	100% increase from baseline
		To ensure adequate human resources in accordance with the Ward minimum health care package	Number of health care workers per ward	DD PHCS & Head RI	RIWG	Survey	Annually	DPHCS NPHCDA	2014	NA	TBD	TBD	TBD	TBD	TBD

		for HRH by 2020													
Financing		To ensure sustainable, adequate and timely release of funds at all levels of government by 2020	% of health facilities that receive funding for RI	DD FA & Head RI	RIWG	DHIS2 &DVD-MT	Monthly	DFA NPHCDA	2014	NA	100%	100%	100%	100%	100%
			Total Funding Gap for RI commoditi es 1	DD FA & Head RI	RIWG	Survey	Annually	DFA NPHCDA	2014	$3.9 M	0	0	0	0	0
7. Integration, Research and Evaluation															
Integration of programmes	To promote integrated services for high impact interventions , research and development	1. 90% of children receiving BCG vaccine should be provided with LLIN by 2018	% of children receiving BCG that receive LLIN	DDC&I/ Head RI	RIWG	Survey	Annually	DPRS NPHCDA	2014	NA	20% increase from BL	40% increase from BL	60% increase from BL	80% increase from BL	100% increase from BL
		1. 90% of children receiving BCG vaccine should be provided with LLIN by	% of children receiving BCG that receive	DDC&I/ Head RI	RIWG	Survey	Annua lly	DPRS NPHCDA	2014	NA	20% increase from BL	40 % incr eas e fro	60% increase from BL	80% increa se from BL	100% increase from BL

		2018	LLIN									m BL			
		2. Increase the percentage of health facilities that offer daily vaccination from 10% in 2014 to 50% by 2020	% of HFs that offer daily vaccination	DDC&I/ Head RI	RIWG	Survey	Annually	DPRS NPHCDA	2014	NA	20% increase from BL	40 % increase from BL	60% increase from BL	80% increase from BL	100% increase from BL
Research and Evaluation		3.To improve the evidence base for decision making & planning on immunization programs	% of states using coverage surveys as evidence base for annual planning ?	DDC&I/ Head RI	RIWG	Survey	Annually	DPRS NPHCDA	2014	NA	20% increase from BL	40 % increase from BL	60% increase from BL	80% increase from BL	100% increase from BL
8. Governance and Accountability: Programme Management															
Accountability Framework	To establish good governance, partnership, coordination and accountability at all levels for routine	To ensure all levels apply accountability frame work which delineates roles and responsibilities of the Federal,	% of States with an accountability framework (annual activity plan and	DDC&I/ Head RI	RIWG	Survey	Annually	DPRS NPHCDA	2014	4	24	36	36	36	36

	immunization system strengthening by 2020	states, LGAs and wards as well as the private sector and development partners by 2020	M&E dashboard)												
			% of LGA's with an accountability framework (annual activity plan and M&E dashboard)	DDC&I/ Head RI	RIWG	Survey	Annually	DPRS NPHCDA	2014	0	155	310	465	620	774
			% of Wards with an accountability framework (annual activity plan and M&E dashboard)	DDC&I/ Head RI	RIWG	Survey	Annually	DPRS NPHCDA	2014	0	TBD	TBD	TBD	TBD	TBD
		To Institutionalize performance management system for the accountability	% of states performing quarterly reviews of	DDC&I/ Head RI	RIWG	Survey	Annually	DPRS NPHCDA	2014	4	24	36	36	36	36

		framework by 2017	their annual plan and M&E dashboard												
		To Institutionalize performance management system for the accountability framework by 2018	% of states where EPI staff is provided with a performance review at least once every year	DDC&I/ Head RI	RIWG	Survey	Annually	DPRS NPHCDA	2014	0	20%	40%	60%	80%	100%
Strengthening structures for implementation of Programmes		To establish national presence to link national and state-level policy, planning and partners coordination in at least 70% of the states by 2020	% of states with functional RI TWG meeting at least once every month	DDC&I/ Head RI	RIWG	Survey	Annually	DPRS NPHCDA	2014	NA	100%	100%	100%	100%	100%

		To ensure evidence-based planning and implementation of RI activities through a robust M & E process	% of states with an M&E system for data collection, assessment and use	DDC&I/ Head RI	RIWG	Survey	Annually	DPRS NPHCDA	2014	TBD	100%	100%	100%	100%	100%

Annex 5: Resource Requirements, Financing and Gaps

Secured funds only

Resource Requirements, Financing And Gaps	2016	2017	2018	2019	2020	2016 - 2020
Total resource requirements	$682,182,028	$765,282,938	$716,415,161	$609,640,691	$570,425,781	$3,343,946,598
Total resource requirements Routine Only	$455,270,065	$481,311,468	$508,594,750	$518,843,937	$514,434,773	$2,478,454,993
Per capita	$2.37	$2.42	$2.48	$2.45	$2.36	$2.42
Per DTP targeted child	$69.47	$68.00	$69.48	$68.53	$65.02	$68.02
Total secure funding	**$420,226,356**	**$283,561,488**	**$316,266,195**	**$415,653,002**	**$353,840,685**	**$1,789,547,725**
Government	$50,598,165	$53,233,050	$53,396,833	$53,624,433	$53,813,985	$264,666,466
Sub-national government	$104,999,572	$52,330,939	$48,694,891	$61,489,575	$56,096,857	$323,611,834
Gov. co-financing of Gavi vaccine	$20,531,780	$23,788,325	$65,291,789	$129,488,247	$158,461,726	$397,561,867
WHO	$17,379,000	$3,260,000		$20,000,000		$40,639,000
UNICEF	$68,448,971	$2,633,075				$71,082,046
CDC	$550,000					$550,000
GAVI NVS	$157,718,869	$148,316,099	$148,882,681	$151,050,747	$85,468,116	$691,436,512
Funding gap with secured funds only	**$261,955,672**	**$481,721,450**	**$400,148,966**	**$193,987,689**	**$216,585,096**	**$1,554,398,873**
% of total needs	**38%**	**63%**	**56%**	**32%**	**38%**	**46%**
Probable funding	**$93,766,519**	**$245,487,586**	**$138,967,281**	**$14,376,488**	**$36,427,954**	**$529,025,828**
Government	$16,216,319	$13,277,239	$13,277,239	$13,277,239	$13,277,239	$69,325,275
Sub-national government	$437,838	$45,794,465	$35,000,000			$81,232,303
WHO	$58,007,917	$123,697,363	$8,000,000	$900,000	$22,900,000	$213,505,280
UNICEF	$19,104,445	$29,054,119	$5,000,000	$199,249	$250,715	$53,608,528
CDC		$570,000				$570,000
Germany KFW			$15,000,000			$15,000,000
BMGF		$33,094,400	$42,690,042			$75,784,442
EU			$20,000,000			$20,000,000
Funding gap with secured and probable	**$168,189,153**	**$236,233,864**	**$261,181,685**	**$179,611,201**	**$180,157,142**	**$1,025,373,046**
% Of total needs	**25%**	**31%**	**36%**	**29%**	**32%**	**31%**

Annex 6: Timeline of Implementation

Key activities		2016	2017	2018	2019	2020
SO1.1:	To achieve > 95% Pent 3 coverage in at least 90% of the state/ LGAs by 2020					
1.1.1.	**Implement and sustain Reaching Every Ward (REW) approach in all the states plus FCT**					
1.1.1.1.	Develop a list of high risk communities and collaborate with local authorities for households registration for immunization and other health services	X		X		X
1.1.1.2.	Refresher training on REW approach	X	X	X	X	X
1.1.1.3.	Monitoring the implementation of REW at the HF/LGA levels	X	X	X	X	X
1.1.1.4.	Conduct supportive supervisory visits at the operational level	X	X	X	X	X
1.1.1.5.	Expand RI services to all HFs by 2020, with initial priority to expand fixed RI sessions	X	X	X	X	X
1.1.1.6.	Organize workshops on micro planning with the states / LGAs / Wards	X	X	X	X	X
SO1.2:	To achieve 95% coverage of PCV, bOPV, IPV, MenAfriVac A & 2nd dose Measles; 92% of Rota vaccine; 85% of HPV (for 9-14-years old girls) by 2020					
1.2.1.	**Update National Immunization Policy (NIP)**					
1.2.1.1.	Conduct workshop to review and update NIP and other relevant documents linked to new vaccines	X			X	
1.2.2.	**Update of the basic guide and REW manual**	X			X	
1.2.2.1.	Finalize updated material	X			X	
1.2.3.	**Introduction of PCV vaccine into the national schedule and immunize all eligible infants**					
1.2.3.1.	Conduct micro planning for phase 3 PCV introduction in 15 states plus FCT	X				
1.2.3.2.	Introduce PCV in the remaining 15 Phase 3 states + FCT	X				
1.2.3.3.	Conduct PCV post introduction evaluation	X				
1.2.3.4.	Document lessons learnt	X				
1.2.4.	**Introduction of IPV vaccine into the national schedule and immunize all eligible infants**					
1.2.4.1.	ConductIPV post introduction evaluation	X				
1.2.4.2.	Document lessons learnt	X				
1.2.5.	**Introduction of rotavirus vaccines introduction and immunize all eligible infants**					
1.2.5.1.	Implement preparatory activities for ROTA introduction		X	X		
1.2.5.2.	Introduce Rotavirus vaccine into the RI schedule				X	
1.2.5.3.	Conduct ROTA post introduction evaluation				X	
1.2.5.4.	Document lessons learnt				X	
1.2.6.	**Switch from tOPV to bOPV in the National schedule**					
1.2.6.1.	Implement preparatory activities (advocacy, sensitization ,training, cold chain assessment)	X				
1.2.6.2.	National switch from tOPV to bOPV	X				
1.2.7.	**Introduction of HPV vaccine into the national schedule**					
1.2.7.1.	Conduct demonstration project		X	X	X	
1.2.7.2.	Introduce HPV into RI schedule				X	
1.2.7.3.	Conduct HPV vaccine post introduction evaluation				X	
1.2.7.4.	Document lessons learnt				X	
1.2.8.	**Introduction of MenAfriVac A into the immunization schedule**					
1.2.8.1.	Implement preparatory activities for MenAfri Vac Introduction	X	X			
1.2.8.2.	Introduction of MenAfriVac		X			
1.2.8.3.	Conduct vaccine post introduction evaluation		X			

Key activities		2016	2017	2018	2019	2020
1.2.8.4.	Document lessons learnt		X			
1.2.9.	**Introduction of 2nd dose measles into the immunization schedule**					
1.2.9.1.	Implement preparatory activities for measles 2nd dose introduction			X		
1.2.9.2.	Introduce 2nd dose measles into RI schedule			X		
1.2.9.3.	Conduct vaccine post introduction evaluation			X		
1.2.9.4.	Document lessons learnt			X		
1.2.10.	**Switch to Td**					
1.2.10.1.	Implement preparatory activities for Td introduction	X				
1.2.10.2.	Introduce Td into the RI schedule	X				
1.2.10.3.	Conduct Td vaccine post introduction evaluation	X				
1.2.10.4.	Document lessons learnt	X				
SO1.3: To reduce the percentage gap in Penta 3 between highest and lowest socio-economic quintiles from 70% in 2013 to 30% by 2020						
1.3.1.	**Improve RI Service delivery**					
1.3.1.1.	Scale up outreach and mobile sessions to reach the hard-to-reach communities at least four (4) times a year	X	X	X	X	X
1.3.1.2.	Increase immunization services (fixed and outreaches) in the hard-to-reach communities	X	X	X	X	X
1.3.1.3.	Increase frequency of routine immunization sessions in urban facilities	X	X	X	X	X
1.3.1.4.	Conduct supportive supervision and monitoring of RI (fixed and out reach sessions)	X	X	X	X	X
SO1.4: To reduce the Penta1-Penta3 and BCG-MCV1 drop-out to less than 10% in all the LGAs						
1.4.1.	**Tracking system for defaulters**					
1.4.1.1.	Develop tracking tool for defaulters	X				
1.4.1.2.	Pilot of the tracking tool		X	X	X	X
1.4.1.3.	Scale up of the use of tracking tool		X	X	X	X
SO2.1: To ensure the availability of an integrated communication plan for routine / supplemental immunization and surveillance activities in at least 75% of the states / LGAs by 2020						
2.1.1.	**Development of integrated communication plan**					
2.1.1.1.	Develop with other programs an integrated plan of communication	X				
2.1.1.2.	implement the developed integrated communication plan		X	X	X	X
2.1.1.3.	Evaluate the implementation of the communication plan		X	X	X	X
SO2.2: To build the capacity of at least 80% of the health workers and other stakeholders at all levels for RI communication						
2.1.2.	**Capacity building of personnel for immunization programme communication**					
2.1.2.1.	Develop training materials for Health educators, Health Workers, TBAs at all levels	X		X		
2.1.2.2.	Train Health educators as mobilizers	X	X	X	X	X
2.1.2.3.	Inter-personal communication training of health workers	X	X	X	X	X
2.1.2.4.	Orientation of CORPS on demand creation and awareness on traditional and new vaccine schedules	X	X	X	X	X
SO2.3: To create awareness, participation and demand for routine immunization at the community level						
2.3.1.	**Advocacy to decision makers for ownership of the immunization programme**					
2.3.1.1.	Advocacy meetings with the President, First Lady, National Assembly, Ministries of Finance, information & Communication, Education, Women Affairs, Youths and Sports on roles and responsibilities	X	X	X	X	X

Key activities		2016	2017	2018	2019	2020
2.3.1.2.	Advocacy meetings with State Governors, LGA Chairmen, Houses of Assembly, Councilors, their wives, Ministries of Health, Local Government, Education, Women Affairs, Religious Affairs, Information, Youth, Paramount / Traditional / Religious Rulers and other stakeholders on roles and responsibilities	X	X	X	X	X
SO2.4:	To seek buy-in and accept reports on immunization as part of their social corporate responsibility					
2.4.1.	**Advocacy to Media Chief Executives for support to RI activities**					
2.4.1.1.	Advocacy meetings with Media Chief Executives (NTA, FRCN, NAN & other government / private Media) on roles and responsibilities	X	X	X	X	X
SO2.5:	To advocate to relevant stakeholders for adequate budgeting and timely releases of funds					
2.5.1.	**Advocacy to relevant ministries and department for adequate budgeting and timely release of funds**					
2.5.1.1.	Advocate to all relevant ministries and departments for adequate budgeting and timely release of funds	X	X	X	X	X
2.5.1.2.	Advocate to Private companies / Organizations / NGOs for budgetary gap reduction	X	X	X	X	X
SO2.6:	To create awareness, participation and demand for routine immunization at the community level					
2.6.1.	**Social / Community mobilization**					
2.6.1.1.	Implementation of "Jigawa commitment" on immunization					
2.6.1.2.	Replicate and implement a new "Jigawa" commitment in the South	X	X	X	X	X
2.6.1.3.	Establishment and reactivation of WDCs / VHCs & CBOs	X	X	X	X	X
2.6.1.4.	Engage WDCs/ VDCs & CBOs to mobilize caregivers to access and utilize integrated services in their communities	X	X	X	X	X
2.6.1.5.	Develop ward social mobilization plans	X	X	X	X	X
2.6.1.6.	Organize meetings with NGOs , CBOs,FBOs etc. and community members to ensure their participation on immunization communication activities		X	X	X	X
2.6.1.7.	Collaborate with partners to support mobilization and community participation	X	X	X	X	X
2.6.2.	**Mass Media Engagement**					
2.6.2.1.	Sensitize media organizations on immunization issues as corporate social responsibility to attract free/discounted space/airtime	X	X	X	X	X
2.6.2.2.	Develop a comprehensive media plan	X				
2.6.2.3.	Develop spot messages, jingles and sms for different stakeholders / target audience (RI and SIAs)	X	X	X	X	X
2.6.2.4.	Negotiate for free inclusion of programme information in identified programmes / newspapers	X	X	X	X	X
2.6.2.5.	Negotiate rates and timings of broadcast of spots PSAs and jingles with National, States and Private print and electronic media	X	X	X	X	X
SO3.1:	To ensure availability of quality bundled vaccines at all levels at all times					
3.1.1.	**Regular high quality vaccines and devices supply at all levels**					
3.1.1.1.	Forecast, order and supply vaccines to all states / LGAs / SDPs	X	X	X	X	X
3.1.1.2.	Procure additional cold chain equipment to bridge identified gaps from the EVMA, according to 5 year cold chain plan	X	X			
SO3.2:	To Improve vaccine arrival procedure from 65% (2014) to 90% in 2020					
3.2.1.	**Ease the bottleneck of vaccine by expanding the arrival points from 1 to 3**					
3.2.1.1.	Develop and use of a standardized arrival form for consumables	X	X	X	X	X
SO3.3:	To Improve temperature monitoring system from 66% (2014) to 95% in 2020					
3.3.1.	**Put in place a system of early detection and action for safe-keeping of the vaccines**					
3.3.1.1.	Place functional temperature recorders in all cold rooms	X				
3.3.1.2.	Map temperature of all cold and freezer rooms	X				
3.3.1.3.	Review monthly and keep temperature records at all levels	X	X	X	X	X
SO3.4:	To Improve storage capacity store from 74% (2014) to 85% in 2020					
3.4.1.	**Expand the cold chain capacity according to the rehabilitation plan**					
3.4.1.1.	Redesignfour (4) hubs at Lagos, Abuja, Enugu and Kano to address the storage capacity gaps.	X	X			

Key activities		2016	2017	2018	2019	2020
3.4.1.2.	Expand the cold, dry and transport capacity at all levels to meet the current needs including the NUVI plans	X				
3.4.1.3.	Develop and use a written contingency plan for every facility that stores vaccines, and getting buy-in for its use	X	X	X	X	X
3.4.1.4.	Develop a forecast of CCE spare parts needs, and implement stock management system of spare parts across levels of the cold chain	X	X	X	X	X
SO3.5:	To Increase quality of building, equipment and transport from 72% (2014) to 80% in 2020					
3.5.1.	**Put in place reserved space for dry store at an integrated supply chain**					
3.5.1.1.	Construction of additional dry stores to meet vaccines bundling requirements at all levels.	X	X			
SO3.6:	To enhance the maintenance system from 53% (2014) to 70% in 2020					
3.6.1.	**Put in place a system of planned preventative maintenance at all levels**					
3.6.1.1.	Continue implementation of planned preventive maintenance, its record and apply it at all levels	X	X	X	X	X
SO3.7:	To increase the quality of the stock management from 62% (2014) to 80% in 2020					
3.7.1.	**Implement automated stock management system at all levels**					
3.7.1.1.	Implement live computerized stocks management system	X				
SO3.8:	To improve the distribution from 65% (2014)to 90% in 2020					
3.8.1.	**Apply push system up to service delivery point including release of operational funds**					
3.8.1.1.	Continue application of push system for vaccines and devices at all levels tied to the coverage (quarterly from national to zones and states, monthly from LGA to HF)	X	X	X	X	X
SO3.9:	To improve the quality of the vaccine management system from 82% (2014) to 95 % in 2020					
3.9.1.	Build capacity of cold chain officers to maintain cold chain equipment					
3.9.1.1.	Train health workers on vaccine forecast, stock management, vaccine wastage management, monitoring and supportive supervision	X			X	
3.9.1.2.	Provide adequate revised management tools at all levels	X	X	X	X	X
3.9.1.3.	Monitor and supervise teams at the subnational levels	X	X	X	X	X
3.9.1.4.	Expand the use of incinerators at state and service delivery levels for proper immunization waste management	X	X			
SO3.10:	To improve the IMS including the supportive function from 70% (2014) to 90%					
3.10.1.	**Performance management dashboard at all levels**					
3.10.1.1.	Regular monitoring of Logistic management information system	X	X	X	X	X
3.10.1.2.	Monitor and evaluate direct delivery of vaccines and supplies from the national to the HFs level	X	X	X	X	X
SO4.1:	To sustain interruption of wild polio virus transmission in 2016 and certification in all LGAs by 2018					
4.1.1.	**Improved RI coverage with polio vaccine**					
4.1.1.1.	Increase RI sessions (fixed and outreach) in identified polio high risk LGAs/wards	X	X	X	X	X
4.1.2.	**High quality SIAs (campaigns and mop ups based on surveillance data)**					
4.1.2.1.	Conduct social mobilization activities to cover RI and SIAs (not SIAs alone)	X	X	X	X	X
4.1.2.2.	Conduct 2 National IPDs and additional 3 - 4 SNIDs in the high risk states every year	X	X	X		
4.1.2.3.	Conduct Planned 'Polio End Game' Activities (mop up operations)				X	X
SO4.2:	To eliminate Maternal-neonatal tetanus by 2018					
4.2.1.	**Improved RI coverage with TT**					
4.2.1.1.	Conduct biannual MNCHW (including TT administration for pregnant women)					
4.2.2.	**TT campaigns in high risk areas**					
4.2.2.1.	Use existing community mob/linkage activities to effectively target pregnant women					
4.2.3.	**Clean delivery**					

Key activities		2016	2017	2018	2019	2020
4.2.3.1.	Conduct TT campaigns for WCBA in identified MNT high risk LGAs/wards					
4.2.3.2.	Produce and disseminate IEC materials on TT importance /vaccinations					
4.2.3.3.	Capacity building (Train, retrain, equip) of health workers and TBAs on clean delivery practices					
4.2.3.4.	Provide mama kits and delivery kits for clean delivery	X	X	X	X	X
SO4.3:	To eliminate type A meningitis by 2017					
4.3.1.	**Surveillance - Mop up Campaigns - where cases are reported.**					
4.3.1.1.	Conduct mop up based on surveillance reports	X				
4.3.1.2.	Continue case detection, reporting and investigation of all outbreaks					
SO4.4:	To reduce measles morbidity by 90% and mortality by 95% by 2020					
4.4.1.	**Improved RI coverage for measles**					
4.4.1.1.	Conduct biannual MNCHW to provide opportunity to vaccinate missed children under I year	X	X	X	X	X
4.4.2.	**Quality SIAs**					
4.4.2.1.	Conduct measles catch up campaigns (every 2 - 3yrs based on surveillance reports)		X			X
4.4.3.	**Integration with polio eradication**					
4.4.3.1.	Add polio to measles SIAs		X			X
4.4.4.	**Integration with Vitamin A**					
4.4.4.1.	Include Vit A in measles SIAs		X			X
SO4.5:	Reduce yellow fever morbidity by 80% and mortality by > 90% by 2020					
4.5.1.	**Campaigns with yellow fever vaccine**					
4.5.1.1.	Conduct preventive vaccination campaigns with yellow fever			X		
SO4.6:	To strengthen & sustain integrated disease surveillance for targeted VPDs by 2020					
4.6.1.	**Integrated disease surveillance and response**					
4.6.1.1.	Active AFP surveillance in all states plus FCT combined with other VPDs (MNT & measles) surveillance	X	X	X	X	X
4.6.1.2.	Training & retraining of HCWs, DSNOs on case identification & reporting in all Wards	X		X		X
4.6.1.3.	Establish data base on IDSR	X				
4.6.1.4.	Hold monthly meetings with FP for AFP surveillance	X	X	X	X	X
4.6.2.	**Strengthen case-base and laboratory-based surveillance**					
4.6.2.1.	identify laboratories for collaboration on Polio & measles lab base surveillance		X			
4.6.2.2.	Upgrade, expand functionalize laboratory network		X	X		
4.6.2.3.	Provide laboratories with equipment's, consumables and ensure regular funding.		X	X		
4.6.2.4.	Train & retrain laboratory workers		X		X	
4.6.2.5.	Train managers and frontline health workers on data management for effective feedback on surveillance and performance		X		X	
4.6.2.6.	Provide feedback on surveillance and performance data to states & LGAs	X	X	X	X	X
4.6.3.	**Capacity building on community surveillance for targeted VPDs by 2020**					
4.6.3.1.	Mapping, selection of communities and advocacy to community gate keepers	X	X			
4.6.3.2.	Training/community sensitization of CBOs, WDC, Market Women Association, Motorcycle riders association on community surveillance	X	X			
4.6.4.	**Monitoring and reporting AEFI**					
4.6.4.1.	Integrate AEFI surveillance with disease surveillance	X				
4.6.4.2.	Provide appropriate AEFI data tools at SDPs	X	X	X	X	X
4.6.4.3.	Training of HCWs, & RI FP on AEFIs		X		X	

Key activities		2016	2017	2018	2019	2020
4.6.4.4.	Conduct regular monitoring and reporting of AEFI	X	X	X	X	X
4.6.4.5.	Sustain the National AEFI Committee & Establish State Level AEFI committees	X	X	X	X	X
4.6.4.6.	Conduct Bi-annual AEFI Committee meetings at State and National levels		X		X	
SO4.7:	To strengthen epidemic preparedness and response to VPDs by 2020					
4.7.1.	**Ensure an effective and efficient Epidemic response system**					
4.7.1.1.	Reactivation of existing Epidemic Preparedness & Response Committees	X				
4.7.1.2.	Conduct regular meetings of EPR Committees	X	X	X	X	X
4.7.1.3.	Preposition emergency drugs & supplies		X	X	X	X
4.7.1.4.	Ensure adequate funding and logistics for preparedness and prompt response to disease outbreaks	X	X	X	X	X
4.7.1.5.	Conduct outbreak investigation for reported cases	X	X	X	X	X
SO5.1:	To ensure availability of quality data on RI by 2020 with reporting rate of immunization on DHIS to 95% by 2020					
5.1.1.	**Provision of appropriate equipment and data capturing tools at all levels**					
5.1.1.1.	Conduct regular supportive supervision so that each HF is visited at least 6-monthly	X	X	X	X	X
5.1.1.2.	Provide appropriate data capturing tools and equipment at LGA and HF levels	X	X	X	X	X
5.1.1.3.	Train facility Health Record officers on DHIS mobile		X	X	X	
5.1.1.4.	Procure Mobile Phones for data reporting from the health facilities		X			
5.1.1.5.	Conduct advocacy to community leaders, religious leaders & WDCs on data ownership and use of data for action		X		X	
5.1.1.6.	Develop community data tools		X			
5.1.1.7.	Renew signing of MOU on PPP for RI data with private health facilities	X				
5.1.1.8.	Fast track scale up of DHIS by adding the RI module for complete RI Reporting	X	X	X	X	
5.1.1.9.	Collaborate with NPoC to improve birth registration and redefine denominator for Birth registration	X	X			
5.1.1.10.	Provide regular feedback to states, LGAs and Partners	X	X	X	X	X
5.1.1.11.	Provide training health workers on NDHIS					
5.1.2.	**Regular and sustained data validation system**					
5.1.2.1.	Conduct quarterly DQA at all levels	X	X	X	X	X
5.1.2.2.	Establish integrated data management teams at the States and LGA levels	X				
5.1.2.3.	Conduct monthly meetings of data mgt teams		X	X	X	X
5.1.2.4.	Conduct regular national data survey on RI	X	X	X	X	X
5.1.2.5.	Conduct SMART survey on RI	X	X	X	X	X
5.1.2.6.	Train and retrain data officers data validation		X		X	
SO6.1:	To build the capacity of frontline heath workers and EPI managers for RI by 2020					
6.1.1.	**Building capacity of health workers for quality service delivery**					
6.1.1.1.	Provide Integrated PHC Management Training for frontline health workers	X	X	X		
6.1.1.2.	Provide MLM training for EPI managers	X	X	X		
6.1.1.3.	Provide cold chain/vaccine management training for SIOs, LIOs, CCOs, ZTOs, WFPs, etc.		X		X	
6.1.1.4.	Ensure Utilization on the job training methods such as Mentorship, and supportive supervision	X	X	X	X	X
6.1.2.	**Improve PHC staff retention and motivation of PHC workforce**	X	X			
6.1.2.1.	Develop performance based management system (annual reviews, rewards/promotions, sanctions)	X	X			
6.1.2.2.	Implement the developed performance based management system	X	X	X	X	X
SO6.2:	To ensure adequate human resources in accordance with the Ward minimum health care package for HRH by 2020					

Key activities		2016	2017	2018	2019	2020
6.2.1.	**Implement Ward Minimum health care package at all levels of government**					
6.2.1.1.	Perform assessment to determine current HR gaps by disposition and cadre to determine optimization strategy	X	X			
6.2.1.2.	Redistribute health care workers to areas of low staff availability	X	X	X	X	X
6.2.1.3.	Recruit Health workers to fill identified HR gaps	X	X	X	X	X
6.2.1.4.	Implement PHC under-one roof to achieve appropriate staffing: Task shifting, wage control by SPHCDA	X	X	X	X	X
SO6.3:	To ensure sustainable, adequate and timely release of funds at all levels of government by 2020					
6.3.1.	**Secure financing for traditional and new vaccines & devices**					
6.3.1.1.	Perform Advocacy for the application of the National health bill at all levels	X	X	X		
6.3.1.2.	Prepare and submit annual request for funding of traditional funding	X	X	X	X	X
6.3.1.3.	Prepare and submit request for co-financing of new- vaccines	X	X	X	X	X
6.3.2.	**Increase budgetary support for RI at all level**					
6.3.2.1.	Advocate to governors forum and ALGON for increase budgetary allocation and timely release of funds	X	X	X	X	X
6.3.2.2.	Tracking of budget by higher levels of government	X	X	X	X	X
6.3.3.	**Additional resource mobilization**					
6.3.3.1.	Set up basket funds for PHC activities	X	X	X		
6.3.3.2.	Conduct Sensitization meeting with policy makers (NGF & ALGON) on provision of dedicated funds for MNCHW and other related programs	X	X	X	X	X
6.3.3.3.	Expand PPP base for RI services	X	X	X	X	X
SO7.1:	90% of children receiving BCG vaccine should be provided with LLIN by 2018					
7.1.1.	**Integration of immunization services with other health interventions**					
7.1.1.1.	Improve collaboration with Malaria Elimination Programme at all levels and put in place LLIN distribution		X	X		
7.1.1.2.	Conduct periodic joint monitoring missions		X		X	
7.1.1.3.	Put in place other incentive (e.g. deworming) for full immunization instead of LLIN		X	X		
7.1.1.4.	Include vitamin A administration during measles SIAs and MNCHW	X	X	X	X	X
SO7.2:	Increase the percentage of health facilities that offer daily vaccination from 10% in 2014 to 50% by 2020					
7.2.1.	**Implement *the policy of one solar refrigerator per ward***					
7.2.1.1.	Conduct cold chain needs assessment	X			X	
7.2.1.2.	Develop a cold chain distribution plan	X	X	X	X	X
7.2.1.3.	Procure the cold chain equipment	X	X	X	X	X
7.2.1.4.	Train health workers on cold chain maintenance		X		X	
7.2.1.5.	Advocacy to LGA and state to ensure ownership	X				
SO7.3:	To improve the evidence base for decision making & planning on immunization programs					
7.3.1.	**Operational Research**					
7.3.1.1.	Establish a standing inter-agency research working group	X				
7.3.1.2.	Conduct NICS on immunization		X		X	
7.3.1.3.	Conduct NDHS on RI services			X		
7.3.1.4.	Conduct MICS Survey	X				X
7.3.1.5.	Conduct economic evaluations (e.g. cost effectiveness analysis) of new vaccines and of strategies to improve immunization		X		X	
7.3.1.6.	Conduct baseline assessment with the introduction of each new vaccine	X	X			
7.3.1.7.	Conduct KAP survey pre and post introduction of new vaccines	X	X	X	X	X

Key activities		2016	2017	2018	2019	2020
7.3.1.8.	Conduct impact assessments after 3 years of a new vaccine introduction				X	
7.3.1.9.	Conduct annual KAP for immunization services	X	X	X	X	X
7.3.1.10.	Conduct an assessment of the impact of WDCs on RI service delivery				X	
7.3.1.11.	Conduct biannual Communication Reviews	X	X	X	X	X
7.3.2.	**Improve coordination between RI program and all other MNCH program areas**					
7.3.2.1.	Establish joint planning meetings at least every two months at national and state level	X	X	X	X	X
7.3.2.2.	Produce joint commodities distribution plans at all levels leveraging existing logistic systems	X	X	X		
7.3.2.3.	Conduct joint training of health workers across all program areas	X	X	X		
SO8.1: To ensure all levels apply accountability frame work which delineates roles and responsibilities of the Federal, states, LGAs and wards as well as the private sector and development partners by 2020						
8.1.1.	**To entrench the accountability framework for routine immunization in annual routine immunization operational plan at the Federal State and Local government level**					
8.1.1.1.	Develop annual operational plan for routine immunization federal, state and LGA Level	X	X	X	X	X
8.1.1.2.	Develop governance structure to include all appropriate stakeholders (federal, state, LGA, community, wards & partners/donors)	X				
8.1.1.3.	Appoint a facilitator at zonal level & State level to organize the review meetings and document results	X				
8.1.1.4.	Develop budgeting tracking tool to monitor expenditure for Routine Immunization at the Federal, state and local government levels	X				
8.1.1.5.	Train civil society and WDC on the use of tracking tools	X	X	X	X	X
SO8.2: To Institutionalize performance management system for the accountability framework by 2017						
8.2.1.	**Scale up the use of Key performance metrics to measure success on selected quantifiable out comes and processes**					
8.2.1.1.	Hold zonal Coordination meeting with state reps. (state PHC/LGAs/Religious /Traditional) to ask them to commit to putting accountability framework in place	X	X	X	X	X
8.2.1.2.	Development of score card at national and state levels, selecting indicators from Accountability framework	X				
8.2.1.3.	Support States to define baseline and targets for their new scorecard, to be monitored quarterly	X	X	X	X	X
8.2.1.4.	Printing and dissemination of national and state kevel scorecards	X				
8.2.1.5.	Train and retrain of state and local government stakeholders on use of score card and core indicators for routine immunization accountability	X	X	X	X	X
8.2.2.	**Ensure optimal application of modalities of the established framework.**					
8.2.1.1.	Hold quarterly review at National level	X	X	X	X	X
8.2.1.2.	Hold zonal meetings every qtr to review progress performed along the Accountability framework	X	X	X	X	X
8.2.1.3.	Hold quarterly review at state level with state PHC Executive Director, Partners, Religious organizations, SIOs, Cold Chain officers and zonal coordinators to monitor progress and constituency in using the framework	X	X	X	X	X
8.2.1.4.	Hold monthly review at LGA Level	X	X	X	X	X
8.2.1.5.	Use and report quarterly on the accountability scorecard. Adapt as required					
SO8.3: To establish national presence to link national and state-level policy, planning and partners coordination in at least 70% of the states by 2020						
8.3.1.	**Strengthening of the ICC (National and state levels)**					
8.3.1.1.	Assist the states in the establishment of ICC at the state level	X				
8.3.1.2.	Hold ICC technical meetings (once in every 2 months) at national / states	X	X	X	X	X
8.3.1.3.	Hold emergency ICC meetings as the need may arise	X	X	X	X	X
8.3.1.4.	Conduct Bi-annual review meetings with the states on PHCUOR	X	X	X	X	X
8.3.2.	**Implement Primary Health Care Under One Roof (PHCUOR)**					
8.3.2.1.	Advocate to decision makers at state / LGAs to enact laws establishing PHCUOR	X	X	X	X	X
8.3.2.2.	Develop and disseminate policy on PHCUOR	X				

Key activities		2016	2017	2018	2019	2020
8.3.3.	**Strengthening Partnership**					
8.3.3.1.	review protocols for engagement of partners for providing RI services (e.g. private health institutions, NGOs working on health-related issues, etc.)	X				
8.3.3.2.	Conduct training for HF staff of private institutions on RI services and reporting	X	X	X	X	X
SO8.4:	To ensure evidence-based planning and implementation of RI activities through a robust M & E process					
8.4.1.	**Institutionalize a comprehensive M & E system**					
8.4.1.1.	Monitor immunization coverage monthly, sending feedback report to states and LGAs	X	X	X	X	X
8.4.1.2.	Monitor and verify vaccine stock distribution	X	X	X	X	X
8.4.1.3.	Monitor overall impact of RI on morbidity and mortality rates of under 5 children					X

Annex 7: Projected Resource Requirements by Category of Immunization System

Cost category	2016	2017	2018	2019	2020	Total for 2016-2020
Routine recurrent costs	**US$**	**US$**	**US$**	**US$**	**US$**	**US$**
Traditional Vaccines	$28,943,544	$30,059,751	$30,748,330	$31,838,565	$33,155,388	$154,745,578
Underused Vaccines	$160,465,109	$156,498,629	$198,299,578	$202,674,960	$213,406,579	$931,344,855
New vaccines	$20,724,620	$18,240,680	$18,673,561	$80,890,301	$33,739,084	$172,268,246
Injection supplies	$6,595,325	$7,594,814	$7,828,637	$9,096,275	$8,663,133	$39,778,185
Personnel	$11,128,805	$11,128,805	$13,301,846	$13,301,846	$13,301,846	$62,163,149
Transportation	$88,894	$79,770	$96,756	$97,045	$101,897	$464,362
Other routine recurrent costs	$226,632,861	$254,720,600	$237,835,118	$179,445,626	$211,802,628	$1,110,436,833
Vehicles	$681,286	$749,416	$1,545,670	$922,383	$0	$3,898,755
Cold chain equipment	$9,621	$2,239,002	$265,254	$576,935	$264,218	$3,355,030
Total Routine Immunization	**$455,270,065**	**$481,311,468**	**$508,594,750**	**$518,843,937**	**$514,434,773**	**$2,478,454,993**
Supplemental immunization activities	$226,911,963	$283,971,470	$207,820,411	$90,796,754	$55,991,008	$865,491,605
Shared Health System Costs	$9,053,476	$9,943,109	$31,214,500	$12,634,825	$13,682,467	$76,528,378
Total	**$691,235,504**	**$775,226,047**	**$747,629,661**	**$622,275,517**	**$584,108,248**	**$3,420,474,976**