NIGERIA STRATEGY FOR IMMUNISATION AND PHC SYSTEM STRENGTHENING [NSIPSS]

2018 – 2028

Final Draft

April 18, 2018

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Acronyms

AD	Auto-Disable
AEFI	Adverse Events Following Immunisation
AFENET	African Field Epidemiology Network
AFP	Acute Flaccid Paralysis
APR	GAVI Annual Progress Report
BCG	Bacille Calmette Guerin
BGSP	Basic Guide for Service Providers
BMGF	Bill & Melinda Gates Foundation
CAR	Central African Republic
CCA	Cold Chain Assessment
CCE	Cold Chain Equipment
CCEM	Cold Chain Equipment Manager
CCO	Cold Chain Officer
CDC	Centers for Disease Control and Prevention
CF	Correction Factor
CHAI	Clinton Health Access Initiative
CHPBN	Community Health Practitioners Board of Nigeria
CME	Continuing Mandatory Education
cMYP	Comprehensive Multi-Year Plan
CSM	Cerebrospinal Meningitis
CSO	Civil Society Organization
DFID	Department for International Development, United Kingdom
DHIS	District Health Information System
DPT	Diphtheria Pertussis Tetanus
DPT3	Diphtheria Pertussis Tetanus 3rd dose
DQA	Data Quality Assessments
DQS	Data Quality Surveys
DVD MT	District Vaccine and Devices Monitoring Tool
ED	Executive Director
EPI	Expanded Programme on Immunisation
EPR	Emergency Preparedness and Response Committees
ERC	Expert Review Committee
EVM	Effective Vaccine Management
EVM assessment	Effective Vaccine Management Assessment 2011
EYE	Eliminating Yellow Fever Epidemics
FCT	Federal Capital Territory
FGoN	Federal Government of Nigeria
FMOH	Federal Ministry of Health
FP	Fixed Post
GAVI	GAVI Alliance
GIS	Geographic Information System
H2H	House-to-House
HCW	Health Care Worker
HEFRON	Health Reform Foundation of Nigeria
Hep B	Hepatitis B
HFs	Health Facilities
Hib	Haemophillus Influenza Type b
HMIS	Health Management Information System

HPV	Human Papilloma Virus
HRH	Human Resources for Health
HW	Health Worker
IBD	Invasive Bacterial Disease
ICC	Inter-Agency Coordinating Committee
ICG	International Coordinating Group on Vaccine Provision
ICH	Institute of Child Health
IEC	Information Education and Communication
IPC	Interpersonal Communication
IPDs	Immunisation Plus Days
IRPT	Inventory Replacement and Planning Tool
IVAC	International Vaccine Access Center
JHU	Johns Hopkins University
KPI	Key Performance Indicator
LARI	Landscape Analysis of Routine Immunisation in Nigeria
LB	Live Birth
LCCO	Local Cold Chain Officer
LGA	Local Government Area
LIDs	Local Immunisation Days
LIOs	Local Immunisation Officers
LQAS	Lot Quality Assurance Sampling
MCSP	Maternal and Child Survival Programme
MDAs	Ministries Departments and Agencies
MDGs	Millennium Development Goals
MDVP	Multi Dose Vial Policy
M&E	Monitoring and Evaluation
MLM	Mid-Level Management
MNCH	Maternal Neonatal Child Health
MNCHW	Maternal Neonatal Child Health Week
MNT	Maternal and Neonatal Tetanus
MNTE	Maternal and Neonatal Tetanus Elimination
MoBNP	Ministry of Budget and National Planning
MoF	Ministry of Finance
MoUs	Memorandum of Understanding
NCDC	Nigerian Center for Disease Control
NDHS	National Demographic Health Survey
NEC	National Economic Council
NGI-TAG	National Technical Advisory Group on Immunisation
NGF	Nigerian Governors' Forum
NGOs	Non-Governmental Organizations
NHMIS	National Health Management Information System
NICS	National Immunisation Coverage Survey
NLWG	National Logistics Working Group
NRIS	National Routine Immunisation Strategy
NNT	Neonatal Tetanus
NPHCDA	National Primary Health Care Development Agency
NPI	National Programme on Immunisation
NPopC	National Population Commission
NSHDP	National Strategic Health Development Plan
NSTOP	Nigeria Stop Transmission of Polio
NUVI	New and Underutilized Vaccines Introduction

OIRIS	Optimization and Integration of Routine Immunisation Sessions
OPV	Oral Polio Vaccine
OR	Outreach
PBM	Paediatric Bacterial Meningitis
PCN	Pharmacist Council of Nigeria
PCV	Pneumococcal Conjugate Vaccines
PEI	Polio Eradication Initiative
PHC	Primary Health Care
PIE	Post-Introduction Evaluation for Pentavalent vaccine
PHCUOR	Primary Health Care Under One Roof
PPM	Planned Preventive Maintenance
PPMVs	Private Patent Medicine Vendors
PPP	Public Private Partnership
PQS	Performance, Quality, and Safety
PRRINN/MNCH	Programme to Revitalize Routine Immunisation in Northern Nigeria
REW	Reach Every Ward
RI	Routine Immunisation
SCCO	State Cold Chain Officer
SCI	Save the Children International
SIAs	Supplemental Immunisation Activities
SIOs	State Immunisation Officers
SMS	Short Message Service
SMT	Stock Management Tool
SOML	Save One Million Lives
SOPs	Standard Operating Procedures
SPHCDA	State Primary Health Care Development Agency
TBAs	Traditional Birth Attendants
TBD	To Be Determined
Td	Tetanus and fractional Diphtheria
ToT	Training of Trainers
TT	Tetanus Toxoid
TWG	Training Working Group
UCI	Universal Childhood Immunisation
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development [1]
UNTH	University of Nigeria Teaching Hospital
VHW	Village Health Worker
VPDs	Vaccine preventable diseases
VCM	Volunteer Community Mobilizers
W/VDCs	Ward/Village Development Committees
WHO	World Health Organization
WPV	Wild Polio Virus
WUENIC	WHO UNICEF Joint Estimates of National Immunisation Coverage
YF	Yellow Fever

1. Foreword

This note introduces the strategy framework which reaffirms the Federal Government of Nigeria's commitment (including the Ministry of Finance and the Ministry of Budget and Planning) to transforming Nigeria's immunisation landscape and asks for a reset of the partnership of the Nigerian Government with Gavi, other donors and partners.

This new partnership should be understood in the context of the unique challenges Nigeria faces in improving its immunisation landscape, primary health care system and health outcomes.

The Government of Nigeria appreciates all donors' support to date and therefore anticipates a bold and renewed partnership that will strengthen and improve immunisation outcomes and ensure that the country is able to sustain its programme after Gavi support ends. This strategy reaffirms our commitment to the Gavi Principles of Engagement, which we have been abiding by.

Honourable Minister of Health	Honourable Minister of Budget and National Planning
Honourable Minister of Finance	Executive Director/CEO, National Primary Health Care Development Agency

2. Acknowledgement

This strategic plan was developed by stakeholders from a wide range of backgrounds and expertise in routine immunisation and primary health care delivery. With a common goal of reducing morbidity and mortality from vaccine-preventable diseases, as well as strengthening the primary health care system in Nigeria over the next ten (10) years and beyond, these stakeholders have focused their attention on successful strategies that will achieve the stated goal.

Federal Ministry of Health
National Primary Health Care Development Agency
Federal Ministry of Budget and National Planning
Federal Ministry of Finance
Nigeria Governors' Forum
Conference of State Houses of Assembly of Nigeria
African Field Epidemiology Network
Bill & Melinda Gates Foundation
Clinton Health Access Initiative
Department for International Development
Embassy of Norway
EU-Support for Immunisation Governance in Nigeria
European Union
GAVI, the Vaccine Alliance
Global Affairs Canada
Health Reform Foundation of Nigeria
Health Systems Consult Limited
Johns Hopkins International Vaccine Access Center
McKinsey & Company
Maternal and Child Survival Programme
Nigeria Stop Transmission of Polio
Solina Health Limited
Sydani Initiative for International Development
United Nations Children's Fund (UNICEF)
United States Agency for International Development (USAID)
United States Centers for Disease Control and Prevention (US CDC)
World Bank
World Health Organization (WHO)

All these and others not mentioned in this document are appreciated. We also acknowledge all sources of our data and information provided in this document

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National Primary Health Care Development Agency

3. Executive summary

The Government of Nigeria in collaboration with partners and donors developed the Nigeria Strategy for Immunisation and PHC System Strengthening (NSIPSS) to guide and galvanize efforts aimed at achieving sustainable immunisation outcomes and strengthening the primary healthcare system. This strategy document describes the programmatic decisions that have been made by Nigeria and outlines how the programme will be managed and financed. It presents the country's plan for transitioning to financial ownership of the immunisation and primary health care health system over a ten-year period, from 2018-2028 – in line with Nigeria's proposed timeline for graduating from Gavi support. It further lays out potential areas of support from Gavi during the transition. Although Nigeria is one of the largest recipients of GAVI grants in Africa having received ~ US$770 million and US$707 million in approvals and disbursements respectively from 2001 to June 2017, the relationship between the Nigeria and Gavi continues to be an important and valuable partnership, with the goal of reaching those millions of children whose lives can be saved by immunisation.

Nigeria has pledged ownership of the immunisation programme and has outlined programmatic strategies and innovations and sustainable financing solutions, to address inequities in access to vaccines and ensure every eligible child is reached with vaccination. However, these proposed financing solutions may not be able to address the challenges facing immunisation within a short timeframe. Thus, the Nigerian Government urges the Gavi Board to take this into account in considering the country's request for an extension of the Gavi transition timelines to ten years. The Board should consider Nigeria's recognition of the sizable challenges facing the health sector, the progress made thus far towards addressing them; its unique economic situation; the scale of the immunisation and PHC emergency the country faces and the understanding that without continued and sustained investments, the gains can be lost.

Additionally, it is also important to consider that routine immunisation is a public health emergency in Nigeria with over 4.3 million unimmunized children – the country with the highest number of unimmunized children in the world – more than a quarter of all unimmunized children globally. After Gavi's huge investment in the past, the country has finally been making demonstrable progress towards reaching them, but this progress will inevitably be threatened if Nigeria must remain within the agreement previously discussed. Gains will undoubtedly be reversed, with a lot of lives lost. Routine immunisation in Nigeria is projected to save millions of lives over the period from 2018 to 2028. Underperformance in this area for Nigeria can thus only be counted in the hundreds of thousands. This is a sobering reflection for the government of Nigeria, whose primary responsibility this is, and will of course also be for Gavi.

Sustaining immunisation coverage and equity

The NSIPSS builds on progress that has already been made in recent times and also on strategies that have the best potentials to achieve sustainable immunisation coverage, within the Nigerian context. While coverage has not moved forward in the last five years looking at survey data, some critical elements of the system have clearly demonstrated measurable improvements. There has been a heavy focus on supply chain, and after a coordinated push from the National Emergency Routine Immunisation Coordinating Centre(NERICC), vaccine availability at LGA level – the last level before facility – improved from ~30% in 2014 to ~80% today. This is a remarkable improvement in performance and is a pre-requisite to any realistic chance of a change in coverage. Now that vaccines are actually available at states and LGAs, 26 states (in addition to 8 already implementing) have also signed up to a programme of direct vaccine delivery to health facilities, replacing the old ad-hoc collection system, which largely involved out of pocket payment by healthcare workers. This strategy ensures vaccines get to the health facility, and that there is real demand for vaccines once they arrive.

This renewed focus on immunisation is reflected in the financial commitments and financing approaches laid out in this strategy, as well as in the high-level engagements of the Presidency, Ministries, National Assembly, State Governors, Development Agencies and Civil Society, towards ownership and sustainability of the immunisation programme. In addition, the Federal Government has shown concrete commitment through an official Letter of Commitment that outlines its planned funding mechanisms such as increased annual budgetary allocation for immunisation, Service Wide Votes, First-Line Charge, and the Basic Health Care Provision Fund (BHCPF). Additional funding approaches include World Bank loans and donor funding. The country has also committed to a schedule of payments to full responsibility for its co-financing of routine vaccines on a vaccine-by-vaccine basis. In addition, Government is also committed to repaying outstanding funds from the audit, as rectifying this breach of trust is of great importance stating the country's commitment to financial transparency and accountability of the. Out of this, $5.3 million has already been repaid and the outstanding $5.317 million has been included in the 2018 national budget for payment to Gavi.

At the level of the National Primary Health Care Development Agency (NPHCDA) there have been significant changes in financial management. Following the findings of the Gavi audit in 2015, a new leadership team is in place and has instituted transformational changes within the organization's structure and management, particularly as regards financial management processes. In June 2017, the agency, under the leadership of the new Executive Director, Dr Faisal Shuaib declared a state of National Emergency on Routine Immunisation, elevating the political importance of the programme and putting in place a tightly managed structure dedicated to driving measurable change in the 18 lowest performing states and sustaining the gains in the better performing states. NPHCDA firmly believes that the heart of the country's challenge in immunisation in the past has been poor management, and aims to transform this entirely, inspired in part by the ongoing success in ending polio, which must to some extent be attributed to robust coordination and management. In January 2017, the President officially launched the government's Primary Healthcare Revitalization programme. More recently, in February 2018, the President launched the Community Health Influencers, Promoters and Services (CHIPS) programme to strengthen PHC demand generation and service delivery. These high-level changes are a game-changer for immunisation and other services in the medium to long term. More importantly, they provide a platform for Nigeria to build a resilient health system for her citizens.

The NPHCDA is proposing a strategy that is genuinely different from previous ones. It includes

- A more realistic coverage targets for the country, specifically 84% Penta 3 national coverage by 2028. (Note this is a weighted average figure, not expecting all states to reach this target; some will only just pass 69%). This adjusted target, along with a more gradual introduction of vaccines, significantly reduces the cost for routine immunisation and PHC from 2018 to 2028. This reflects Government's commitment to a model that is financially sustainable.
- Intense focus on leadership and accountability, at national as well as state and Local Government Area (LGA), powered by an overhaul of the data system, with explicit plans to end falsification and improve data quality. For the first time, survey rather than administrative data has been accepted by government, marking a significant change in position.
- Clear and explicit path to financial sustainability**,** backed by a strong Letter of Commitment and schedule to gradually takeover funding of co-financed vaccines, with $29m budgeted provided for vaccines procurement in the NPHCDA 2018 budget – over 100% increase from the 2017 provision. Government commits to 10% annual increase in vaccine co-financing, introduction of vaccine co-financing into service wide votes under the NPHCDA to ensure timely release for procurement of vaccines, and World Bank loans, in the short term. In the medium to long term government plans to list vaccine financing as a first line in the budget for sustainable financing and FMOH and NPHCDA are already working with the National Assembly to initiate the process.

- Emphasis on improving sustainable coverage and equity through the optimization and integration of routine immunisation sessions (OIRIS), implementation of the revised REW strategy and other tailored service delivery strategies to reach the unreached in the communities.
- New emphasis on demand generation, with the introduction of innovative demand generation strategies that focus on improving knowledge, awareness, behaviour and increase in community participation and ownership of immunisation and primary health care.
- Increased focus on vaccine utilization and accountability, recognizing the multiple challenges facing the vaccine supply chain and logistics. Innovative approaches such as redesigning of the national storage architecture into "three hubs" with stores at Abuja, Lagos and Kano which will improve cold chain capacity; cold chain equipment optimization plan (CCEOP) to ensure that all wards in the country are equipped with at least 1 Solar CCE per ward; vaccine vial retrieval to improve vaccine accountability; and scaling up planned preventive maintenance.
- Concrete plans to revitalize the human resources for health, who are the main drivers of any sustainable improvement in the health system

Financing the immunisation system

Nigeria requires a total of approximately $3.6 billion for procurement of loaded vaccines and implementation of outlined strategies in this document. Of this amount $2.7 billion is earmarked for vaccines for routine immunisation and supplementary immunisation activities (SIAs), with $1.95 billion to be provided by the Nigerian Government, and $773.2 million requested from Gavi. An estimated $850.57 million is required for operationalizing the strategies in the document from 2018-2028 (RI and SIA), with $121.9 million for capital expenditure and $728.6 million for recurrent expenditure. Additional analysis and discussions between Nigeria, Gavi and other donors is still ongoing to determine the proportion of the operational costs that is already being covered or will be covered by other donor projects.

Nigeria is putting forward the following to define the support requested from GAVI to achieve its ambitions in transforming its immunisation landscape

- A vaccine-by-vaccine transition, with accelerated transition of Penta by 2024, PCV in 2026 and continuing with all yet to be introduced vaccines until 2028.
- A slower, phased introduction of new vaccines, weighing considerations of equity against programmatic and financial readiness.
- $773.2 million for vaccines for routine immunisation and supplemental immunisation activities (SIAs) between 2018 – 2028.
- An overall increase in the HSS ceiling to $260m in addition to commitments already made for CCEOP, Lagos Hub and SIA operational costs, to permit a catalytic overhaul in demand generation; supply over the last mile, data management and PHC and human resource for health. These funds will be tied to performance and reviewed annually.

It is important to note that the NSIPSS used the best available data for projection of coverage targets and estimation of operational costs. A joint review of the strategy with Gavi and other donors will be conducted in 2019 using the results from the ongoing surveys and state specific costs to validate or review the projections and assumptions used. This requires a commitment to flexibility from Gavi and other donors to reflect the realities on ground.

Furthermore, the country welcomes the opportunity to discuss how best to work together with Gavi to achieve a sustainable improvement in immunisation coverage and equity.

4. Background

4.1. Socio-economic overview

Nigeria is a federal republic comprising 36 states and a Federal Capital Territory (FCT); within these states are 774 LGAs and 9,565 wards. The states are grouped into six geo-political zones; South-South, South East, South West, North East, North West, and North Central. The population of Nigeria is currently estimated at 184[1] million, with an estimated birth cohort of 7.3 million children.

Nigeria shares many of the social and economic problems associated with developing countries. Between 2014-2016, the country's GDP dropped by 29%[2], due to fluctuations in global oil prices, coinciding with a period of economic recession, the first to be recorded in the last 29 years. In 2016 year, the percentage of the population living below the national poverty line reached 67% from 28.1% in the 80s, highlighting a steady decline in the population's standard of living.

The total annual expenditure of the health sector accounts for 3.7 % of GDP and about 8.2% of total government spending as at 2014[3]. Household out-of-pocket expenditure as a proportion of total health is over 70%, which is very high. It is estimated that on average health care consumes more than half of total household expenditure in about 4% of cases and over a quarter in 12%.

4.2. Health Sector Overview

Structure

In Nigeria, there are over 10,000 health facilities, publicly and privately owned, that are spread across all 774 Local Government Areas (LGA) in the 36 states and Federal Capital Territory (FCT). The public health care system is mirrored on the three levels of government with Federal government responsible for tertiary care, state governments responsible for secondary care, and LGAs for primary care.

Important challenges hindering the delivery of public health services and development in Nigeria include poor government funding of the health sector, insufficient number of functional Primary health care (PHC) facilities, inadequate and inequitable distribution of qualified human resources for health, poor literacy levels and insecurity.

Disease burden

Nigeria is one of the developing countries faced with the "double burden" of persisting high prevalence of communicable diseases and rising prevalence of non-communicable diseases. Key health indicators such as maternal and infant mortality are worse than the Sub-Saharan African average and Nigeria is not on track to achieving most of the health-related sustainable development goals (SDGs) by 2030. Every single day, Nigeria loses about 2,300 under-five year olds and 145[4] women of childbearing age. This makes the country the second largest contributor to the under–five and maternal mortality rate in the world.

[1] National Population Commission
[2] World Bank
[3] World Bank
[4] UNICEF

Preventable or treatable infectious diseases such as malaria, pneumonia, diarrhoea, measles and HIV/AIDS account for more than 70% of the estimated one million under-five deaths in Nigeria[5]. Malaria is Nigeria's most important public health challenge and is responsible for 60% of outpatient visits to health facilities in Nigeria, 30% of childhood deaths and 11% of maternal deaths.

Although the quality of health services, coverage, and accessibility still present major challenges, there has been a steady, though slow decline in infant mortality rate (127 per 1,000 live births in 1990 to 70 in 2016) and in the under-five mortality rates (from 214 per 1,000 live births in 1990 to 120 in 2016).[6] Despite the reduction in mortality rates, Nigeria is not on target to achieve SDG 3.2, to reduce neonatal mortality to at ≤ 12 per 1,000 live births and under-5 mortality to ≤ 25 per 1,000 live births by 2030[7] (**Figure 1**).

It is important to note that wide regional disparities exist in child health indicators with the North-East and North-West geopolitical zones of the country having the worst child survival figures.

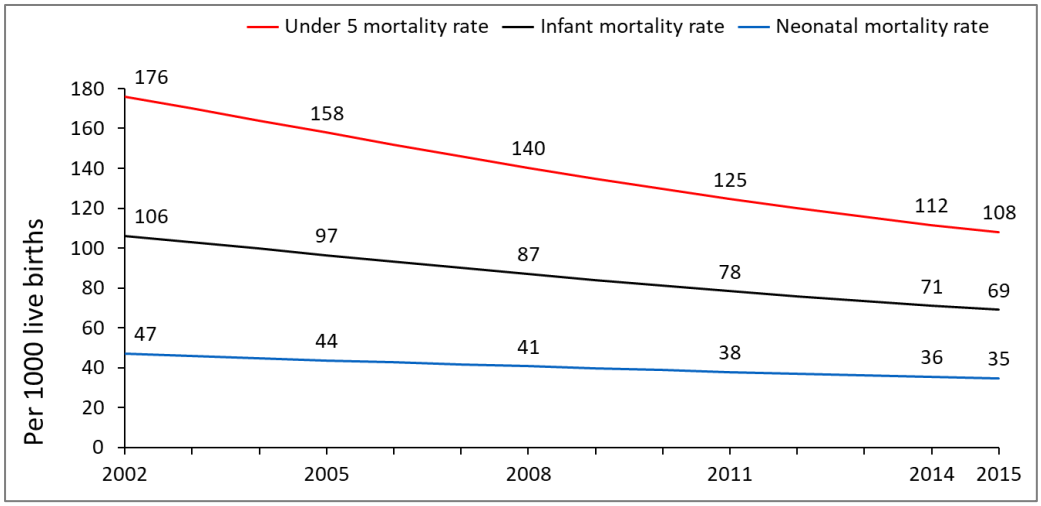

Figure 1: *Trends in under-five, infant and neonatal mortality rates from 2002-2015*[1]

Service provision

Nigeria has 5 hospital beds per 10,000 population. In the early 1990s, the role of Primary Health Centers (PHCs) was expanded to include the provision of preventive medicine and healthcare services at the grass root level; however, most of the PHC facilities in present-day Nigeria lack the capacity to provide essential healthcare services due to several factors such as inadequate number of trained health care workers, poor distribution of healthcare workers, weak supportive supervision, inadequate drug supply and sub-optimal cold chain.

The inability of PHCs to provide basic medical services to the Nigerian population has resulted in increased influx of patients to the secondary and tertiary facilities, which has begun to overwhelm

[5] UNICEF
[6] WHO Global Health Observatory Data Repository, MICS/NICS 2016
[7] MDGs, United Nations

these facilities, and an increased number of private health facilities established in Nigeria over the years. The most recent data in 2017 shows that Nigeria has a total of 34,173 public (22,850) and private (11,323) hospitals. Though recent data on growth rate of hospitals, diagnostic centers and laboratories is not available, there has been a visible growth in the number of private health facilities in Lagos, Abuja, Port Harcourt, Kano, Enugu and all the other major cities. Demographic health survey 2008 showed that over 65% of the population access health care from the private sector. Patent medicine vendors and other "informal" providers account for the bulk of the private sector patronage.

Expanded programme on immunisation (EPI)

Nigeria has the highest number of unimmunized children in the world, estimated at 4.3 million children in 2018. In recent years, the coverage of DPT3/Penta 3, a key indicator of a country's performance of RI, has fallen from 52% in 2014 to 33% in 2016 (**Figure 2**). Fluctuations have also been observed in the coverage of other antigens given in the country.

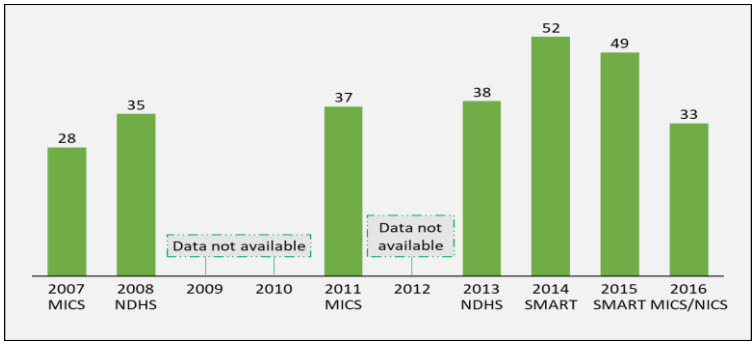

Figure 2: *National DPT3/Penta 3 survey coverage in Nigeria 2007 - 2016*

Evidence from the recent 2016 MICS/NICS survey indicates that wide variations exist in RI performance across the country's zones with the South East and South West zones showing high RI performance, while the North East and North West show low-performance. This disparity is driven by several factors which include socio-economic status, culture, and personal beliefs of the care givers (**Figure 4**).

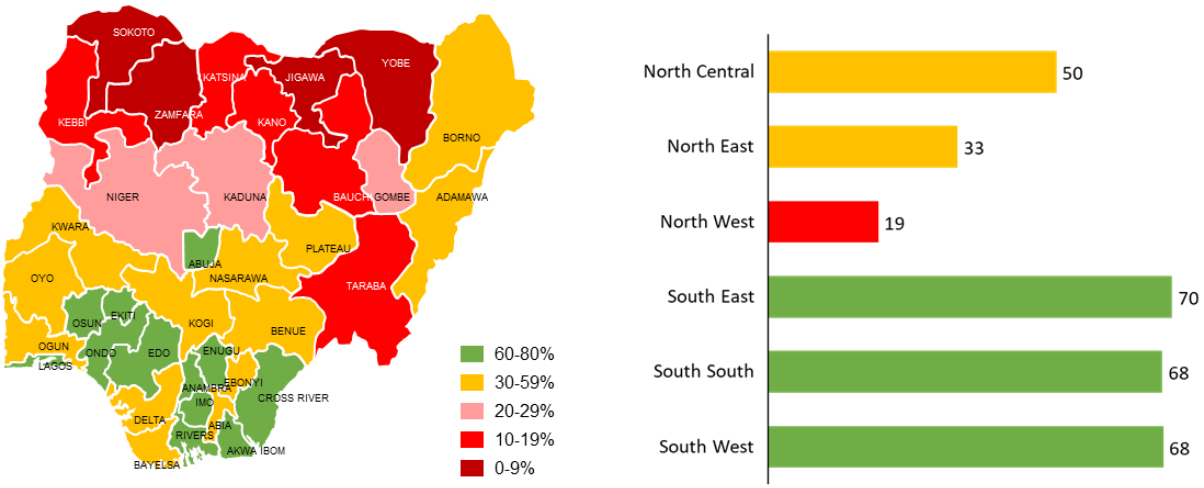

Figure 3*: Penta 3 coverage rates by states and geo-political zones in 2016*[8]

The decline in DPT3/Penta 3 in Nigeria from 52% in 2014 to 33% in 2016 has left more than 3.2 million children below the age of 12 months under immunized in 2016 alone, adding to the already existing huge pool of susceptible under-fives which could lead to outbreaks of vaccine-preventable disease

[8] Nigeria Multiple Indicator Cluster Survey 2016-17. Survey Finding Report

across the country. Implementable and sustainable strategies to vaccinate every eligible child are critical if we are to save the lives of every Nigerian child.

5. The NSIPSS framework

5.1. About the NSIPSS

Over the last decade, Nigeria has developed a number of policy documents, all with the ultimate goal of improving primary health care service delivery and increasing immunisation coverage. Notable amongst such policy documents are the National Strategic Health Development Plan (NSHDP) 2010 - 2015, National Health Policy (NHP) 2016, Country Multi-Year Plan (cMYP) 2016-2020, National Routine Immunisation Strategic Plan (NRISP) 2013 – 2015, and the National Health Act 2014. These documents were developed with inputs and support from key stakeholders, including development partners, within the health sector. The development of the Nigerian Strategy for Immunisation and PHC System Strengthening (NSIPSS) comes at a critical point in Nigeria, when focus on polio is ramping down, and focus on PHC and routine immunisation is gaining momentum across the National and State levels in the country. However, the looming transition of the country from Gavi's support in the coming years and the winding down of funding from the Global Polio Eradication Initiative (GPEI) cast a shadow on the ambitious plans and intensified focus on improving equitable immunisation and PHC services. These developments require adjustments to programmatic and financing approaches to ensure successful transitions.

The NSIPSS places emphasis on leadership and accountability, at national as well as state and Local Government Area (LGA) levels, powered by an overhaul of the data and supply chain systems, with explicit plans to end falsification and reduce wastage to internationally accepted standards. For the first time, survey rather than administrative data has been accepted by government, marking a significant change in position. The strategy identifies and proposes the scale up of proven innovative approaches for demand creation and service delivery as well sustainable financing of the immunisation programme. By taking a critical approach to strengthening these areas, the plan will help to strengthen the Primary Health Care system overall."

The development of this strategic plan was interactive, participatory and consultative in its approach. It began with the set-up of a task-team to coordinate and manage inputs into the different sections of the document, with strategic oversight from the Core Group. The task-team was composed of staff of NPHCDA, Ministry of Health, Ministry of National Budget and Planning, Ministry of Finance and various development partners and donors. The development involved conduct of a 2-day retreat (January 24-25, 2018) with active participation of key government stakeholders, partners and donors and some members of the Gavi board. Several consultative meetings were also held to receive and refine contributions from government, partners and donors at the federal level (during meetings of the ICC, Core Group, NSIPSS Task-team, NERICC) and state level (engagement with state legislators, commissioners of health and executive secretaries of SPHCDAs), professional regulatory agencies, private sector organizations, civil society organizations and individuals.

Rationale

The development of the NSIPSS is premised on the need, as a country, to have a robust and ambitious, yet realistic plan to improve and sustain immunisation coverage and maintain quality PHC service delivery, in light of the multiple transitions faced by the country between 2018 and 2028. The planned transition of Nigeria out of Gavi support in 2021 played a significant role in kick-starting the

development of the NSIPSS in 2017, which originally started out as a Nigeria Gavi Transition Plan. However, due to the economic situation in the country and huge challenges facing the health sector, the country is proposing an extension of Gavi's support to 2028, to enable her to achieve the financial and programmatic targets that will ensure sustainability of gains in the health sector post Gavi support.

The NSIPSS promotes a unified approach to improve all elements of immunisation, while taking into cognizance the critical role of a strong PHC system, as the gateway to sustainable growth in immunisation coverage and service delivery in the country. The principles guiding the NSIPSS development are undergirded by the need to boost immunisation, not as a stand-alone programme, but as a key component of PHC at all levels in Nigeria.

Goals and Objectives

The NSIPSS is expected to contribute significantly to the reduction of mortality by preventing vaccine preventable deaths. Following on this, the goal of the NSIPSS is the attainment of at least 80% equitable, sustained national coverage with all scheduled routine antigens by 2028[9]. This aligns with the NSHDP 2 Strategic Objective "equitably increase coverage with packages of essential health care services". Immunisation is part of the essential health package defined by the Nigerian government. To attain its goal over the period 2018 - 2028, the NSIPSS lays out key strategies for Nigeria's immunisation and broader PHC system, along with accountability and M&E frameworks, while recognizing important challenges and lessons learned from past efforts in Nigeria. Specifically, the major objectives of the NSIPSS are to:

- Outline sustainable and targeted strategies to improve equitable immunisation coverage
- and strengthen the PHC system
- Identify and prioritize the resources needed to achieve the targets
- Provide the framework for guiding investments and promoting mutual accountability between the government, donors and partners in the immunisation and PHC sectors
- Provide a framework for GAVI and other donor transitions towards a country funded immunisation programme
- Provide a framework for monitoring and evaluation of the strategies and their impact on immunisation coverage

The NSIPSS is a dynamic document and is subject to reviews as new information emerges about the baseline coverage, financial situation and costs, and evidence on interventions relevant to achieving the set targets for immunisation and PHC system strengthening.

5.2. Principles guiding NSIPSS implementation

5.2.1 Country Ownership with mutual accountability between Federal Government, States, LGAs, Donors and Partners

Country ownership is central to the NSIPPS. The Federal Government of Nigeria fully commits to the goal and objectives of the NSIPSS and providing stewardship for its implementation at all levels, in collaboration with donors, implementing partners, Civil Society Organisations (CSOs), private sector and all other stakeholders. The states and LGAs will be responsible for stewardship and coordination

[9] This target is valid for all antigens already in the immunisation schedule as at March 2018. New vaccines planned for introduction may not reach the 80% target at 2028

at their different levels. The government has developed a letter of commitment (see Appendix i) that demonstrates its intention and the pathway for financing the NSIPSS and Gavi transition.

An accountability framework has been developed to ensure commitments made by all stakeholders – the Federal, States and Local Governments, donors and partners are kept, in line with Gavi's "Principles of engagement". The Gavi board has laid out key principles to guide its engagement with Nigeria, for mutual financial and programmatic accountability. The principles include:

- Demonstrated commitment from the government in the form of:
  - Full reimbursement of the balance of funds already deemed to have been misused, and a firm reimbursement plan for any additional funds found to be misused.
  - Increased year-on-year health sector and immunisation budgetary commitments and a commitment to sustain the enhanced programme once Gavi support ends.
  - Continued, timely co-financing of any newly introduced and of already introduced vaccines and monitoring the financial sustainability of transitional vaccines.
- A realistic transition plan that will focus on increasing sustainable coverage & equity through:
  - A programmatic focus on the poorest and most inequitable areas, in particular in areas with the lowest coverage.
  - Reaffirming that introduction of new vaccines should only be envisaged if the country is able to successfully introduce and sustain increased coverage; meet co-financing requirements; demonstrate the ability to fully finance the vaccine post transition; and that the coverage rates for other vaccines are satisfactory. This would ensure that budgets for every vaccine that is introduced are built in and sustained.
  - Targeted technical country assistance and health system strengthening support at national and in lower performing states and LGAs.
  - A clear process for building the financial management capacity of relevant national and sub-national institutions.
  - Engagement within broader health sector reforms and consideration of other external financing instruments to the health sector.
  - Ensure adequate monitoring, evaluation and implementation research to allow quick evaluations and course corrections.
  - Considerations of how to effectively transition polio eradication resource, as appropriate, to meet immunisation and broader health needs.
- A commitment to governance and accountability in the form of:
  - Financial milestones related to an annual increase in government expenditure on vaccines and immunisation programmes.
  - Programmatic milestones that give an indication of progress on coverage and equity.
  - Clear accountabilities that recognise that failure to meet financial commitments will render Gavi support to Nigeria's Transition Plan null and void.

The status of steps being taken by Nigeria to improve immunisation coverage in line with Gavi's principles of engagement is provided in Appendix ii.

5.2.2 Engagement of stakeholders for sustainable implementation

The NPHCDA clearly recognizes that actual implementation of the strategies and interventions detailed in the NSIPSS is primarily the responsibility of state governments, LGAs and frontline health workers, with support from partner agencies working at the respective levels. NPHCDA and partners at the National level will provide oversight, targeted financial technical support, based on state needs.

Thus, it is paramount that all stakeholders across all levels are involved in the development, implementation and monitoring and evaluation of the NSIPSS. Achievement of the goals and objectives of the NSIPSS is possible, only when all stakeholders are fully committed to the successful implementation of the strategies and interventions outlined in this document. As such the agency has developed and is assiduously implementing a multi-stakeholder engagement plan.

5.2.3 Intensification of focus on low-performing states and those with high numbers of unimmunized

The NSIPSS recognizes that coverage, number of unimmunized and under immunized children vary across states, as does the causes a context for implementation. Therefore, there is a combined focus on reaching the national targets as well ensuring equity and this is a consideration in deciding strategies, their scale and intensity. Existing investments (especially capital) and needs are also taken into cognizance into allocating additional resources to states. The implementation plan for this strategy will provide details on state differentiation by activities and level of support.

5.2.4 Mechanisms for rapid learning and building on good practices

A core principle underlying the development of NSIPSS is the promotion of evidence-based learning, planning and appropriate course-correction in a timely manner. Even though some interventions and strategies outlined in the NSIPSS have successfully contributed to improvements in immunisation coverage and PHC service delivery, contextual factors may hinder/diminish the effect of such interventions when replicated in a different setting. Based on this, the NSIPSS has clearly articulated measures to ensure reliable evidence is used to determine what works and what does not work through a robust M&E and research system. Proposed measures to improve rapid learning and promotion of good practices include:

- Facilitation of collaborative associations with Universities, research institutes and other institutes of higher education to document good practices and lessons learned from the implementation of strategies and interventions outlined in the NSIPSS
- Identification of healthcare workers and PHCs as entities with best practices and creation of a platform for sharing with peers
- The institution of state-level programme review processes and appraisals (EPI review, annual joint appraisals with key stakeholders, amongst others) with oversight from the national level
- Roll-out of data-driven performance management system at National, state and LGA levels
- Institution of quarterly RI Lot Quality Assurance Sampling Surveys (LQAS) and annual immunisation coverage survey to provide timely insights into programme performance and impact of deployed strategies on immunisation

5.2.5 Identifying and mitigating the impact of potential risks to successful implementation

The health sector in Nigeria is faced with diverse weaknesses and threats that hinder optimal growth in health indices in the country. These weaknesses and threats constitute risks to successful implementation of strategies at the different levels of health care. The NSIPSS proactively identifies key risks and proposes mitigation strategies which even though are not fail-proof in all cases, increase the chances of successful implementation and achievement of the goal and objectives. Table 1 below outlines the key risks that have been identified and mitigation plans.

Table 1: Risks and mitigation plans

S/N	Thematic area	Risk	Mitigation plan	Responsible
1	Funding	Non-fulfillment of financial commitments made by Federal government	• Obtain buy-in of the highest levels of the Federal government and get a formal letter of commitment from government • Provide a TA position within Ministry of Budget and Planning to ensure the commitment is reflected in the budget and allocation and makes the linkage with other initiatives e.g BHCPF, loans and new BMGF catalytic funds • Continuous high-level engagement by Gavi Alliance with government on renewing commitments	NPHCDA
2		Funding gap due to a possible increase in forecasted budget for the immunisation programme (e.g. due to future changes in vaccine requirements, strategies and operational costs, etc.)	• Establish clear understanding and commitment of all stakeholders (government, partners and donors) to the possibility of a justifiable revision of the immunisation budgets, as new (reliable) data becomes available • Conduct a joint routine review (annual or biennial) of progress on NSIPSS implementation that includes all stakeholders • Set-up mechanisms for rapid mobilization of funds to fill identified funding gaps in the immunisation and PHC programme	NPHCDA
3		Inability of states to adequately finance their immunisation programme	• Support States in conducting political economy, fiscal space analysis, wastage analysis, etc. to guide resource mobilization and efficiency improvement plans • Support states to identify potential funding sources (BHCPF, Gavi, SOML, etc.) and develop improved access to funding and implementation modalities • Support engagement of private sector organizations to provide financial and non-financial support (e.g. Private-public-partnerships) • Provide technical support through SERICCs for better coordination of partners support to improve impact	NPHCDA
4	Programme management	Change of leadership of FMOH, NPHCDA and other key government MDAs at national and state levels (e.g. post 2019 general elections)	• Institutionalize relevant processes and systems through development or amendment of relevant policies and laws as necessary • Institutionalize emergency platforms with existing structures (e.g. inclusion of NERICC in the NPHCDA organogram)	NPHCDA, SPHCDAs
5		Lack of programmatic and financial accountability by government, donors & partners	• Implementation of the mutual accountability framework endorsed by government and partners • Roll-out of financial management strengthening interventions at national (KPMG recommendations) and states • Strengthen the capacity of the Grant coordination and Compliance Unit (GCCU) at NPHCDA in financial management; and provide similar support to SPHCDAs	FMoH, MoBNP, NPHCDA, SPHCDAs, partners and donors

S/N	Thematic area	Risk	Mitigation plan	Responsible
6		Lack of buy-in and or commitment by donors, partners, CSOs and other stakeholders to the NSIPSS	• Sustain multi-stakeholder engagement in the development and implementation of the NSIPSS • Quarterly report on both programmatic and financial progress to ICC as the oversight body	NPHCDA
7	Policy/ Regulations /laws	Non-passage/approval of proposed policies such as first-line charge for vaccines	• Sustain engagements with lawmakers and heads of relevant government organizations (FMOH, NPHCDA, MoBNP) and CSOs • Start process immediately and review progress by 2019	HMH; ED, NPHCDA
8		Conflict with extant laws	• Review of the NSIPSS by the FMOH and NPHCDA legal department against extant laws and policies to ensure alignment and non-contradiction	FMOH
9	RI programme	Delay in implementation of proposed strategies at national and sub-national levels	• Support the states in developing, implementing and monitoring RI operational plans • Sustain advocacies to and engagements with the states on proposed strategies • Proactively track implementation of NSIPSS based on the mutual accountability framework	NPHCDA
10		Failure to achieve projected immunisation coverage targets and other programmatic milestones	• Secure firm commitments of all relevant stakeholders to the mutual accountability framework and monitor compliance • Conduct regular assessments (quarterly RI LQAS, annual immunisation surveys) to track progress, identify challenges and support states to address them in a timely manner • Conduct routine (annual/biennial) review of progress on NSIPSS implementation • Incorporate operational research into implementation of the NSIPSS • Develop a comprehensive technical assistance strategy to support implementation of the NSIPSS across the country	NPHCDA
11		Vaccine stock-outs due to inability to close the wastage and efficiency gap at National level due to forecasting based on target projections, rather than 80% across all states	• Conduct wastage study in first year and incorporate wastage reporting into routine M&E system subsequently • Strengthen system for monitoring vaccine availability and accountability to ensure potential stock-outs are identified at least 6 months ahead and available vaccines are utilized optimally • Make provisions for additional (contingency) resources for vaccines procurement, if a potential stock-out situation is identified • Agreement with Gavi on flexible procurement arrangement if there is need for change based on evidence	NPHCDA Gavi
12		Major disease outbreaks with a potential of diverting attention and resources from routine service delivery	• Provide support to the states (especially epidemic prone) in implementation of the integrated disease surveillance and response (IDSR) in collaboration with NCDC	NPHCDA
13	Factors outside the	Decline in socio-economic status	• Implement cost-effective strategies that improve reach of available resources such as waste reduction, task-shifting, community engagement,	NPHCDA

S/N	Thematic area	Risk	Mitigation plan	Responsible
	health sector		with wrap-around initiatives like SOML, NSHIP, BHCPF, etc • Engagement with the private to explore additional funding options	
14		Insecurity	• Implementation of special interventions for security-compromised locations (RES, RIC) • Continue engagement with the armed forces in security-compromised areas	NPHCDA, Nigerian Military

5.3. Target coverage projections and new vaccines introduction

5.3.1 Coverage

Nigeria's immunisation coverage has fluctuated significantly over the years, with wide variations across regions. The 2016 MICS-NICS showed a national weighted average Penta-3 coverage of 33% with a wide range from 3% in Sokoto to 80% in Lagos.

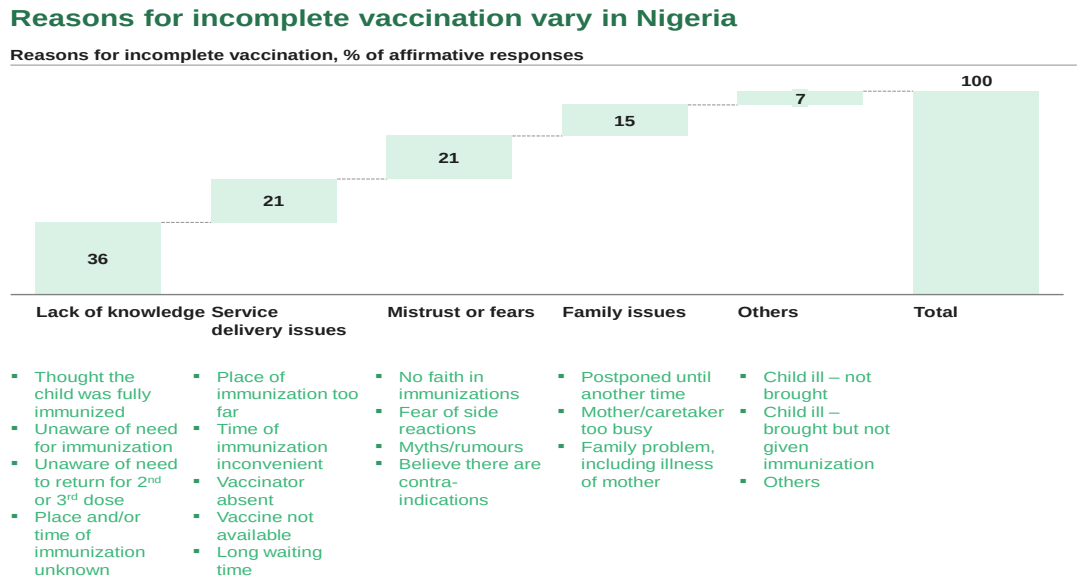

Figure 4: *Reasons for incomplete vaccination*

Using the 2016 MICS-NICS data, all the states in Nigeria have been grouped into categories based on their Penta-3 coverage (figure 5 below) and also ranked by total numbers of under - immunized children (based on Penta 3), for equity considerations.

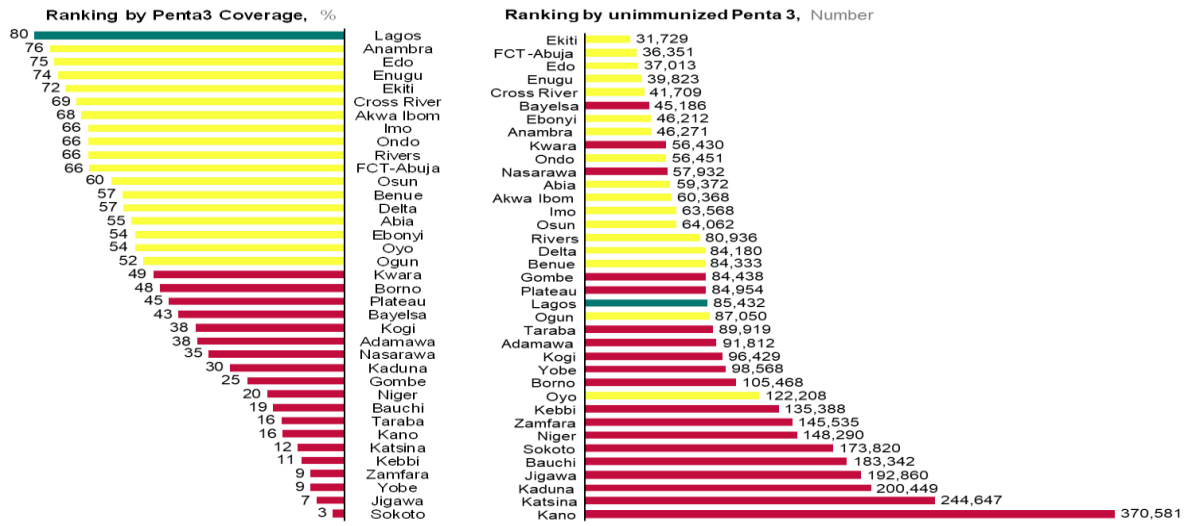

Figure 5: *Comparison of immunisation coverage and number of unimmunized per state*[10]

This shows that even high coverage states like Oyo, Ogun and Lagos, have more unimmunized children than some of the low coverage states, reinforcing the national spread of the low immunisation challenge. Thus, emphasis should be placed more on reaching unimmunized children than achieving target coverage

Using a combination of historical average annual growth rate from surveys from 2007 to 2016 and programme considerations, Nigeria has developed a 10-year coverage target projection that allows us to achieve 84% national average coverage and 69% average coverage for the lowest coverage states by 2028 (figure 7). This will reduce the number of under immunized children from about 3.2 million in 2016 to less than 2 million in 2028 and put the country on a firm track to achieving SDG 3. The country strongly believes that a 10-year transition plan with GAVI will offer a more realistic window to mobilize the level of local resources required, sufficiently strengthen the primary health care system and consolidate on the gains we already been witnessed from the ongoing RI scale-up efforts and innovations planned for the early stages of the transition. The equity considerations are also of utmost importance to ensure that a large proportion of children are not left behind after we have met our national average targets.

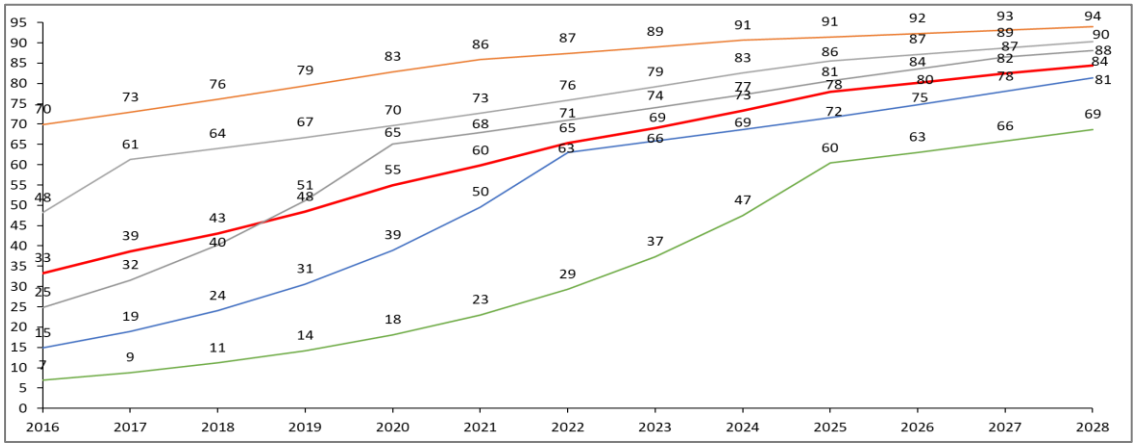

Figure 6: *Target projections, 2018 – 2028*

[10] MIC/NICS 2016

We recognize that these targets are ambitious given our performance in the past and some influencers outside the control of the NPHCDA and FMOH. However, we are convinced that we have the enabling political environment, commitment and drive, to achieve them. Our targets fit well into government's overall Economic Recovery and Growth Plan (ERGP)[11] which has "investing in our people" as one of its 3 pillars, and health as a focus sector.

5.3.2 New vaccines introduction (NVI)

Nigeria has the highest number of unimmunized children in the world, estimated at 4.3 million in 2018, and risks graduating from Gavi support without introducing key life-saving vaccines. In exploring the future of immunisation, the Government considered a range of options, including holding off new vaccine introductions until a time that Nigeria is programmatically ready and can domestically finance introduction of life-saving new vaccines. Given, however, that almost two-thirds of under-five mortality in Nigeria is driven by deaths from vaccine preventable diseases, with a disproportionate number of deaths due to pneumonia and diarrheal disease, it is imperative to introduce new vaccines to save lives of children, especially in the low-performing states.

Using Gavi's standard of 70% DPT3/Penta3 coverage as the metric of readiness suggested that some states, such as Sokoto, would need to wait till 2039 to receive new vaccines. This was considered unacceptable in terms of equity, as the low-performing states have the highest disease burdens.

A phased approach is therefore proposed starting in Q1 2019 as indicated in the table below. This approach will allow for states that have attained programme readiness to commence introduction while allowing states with lower coverage but higher disease burden to balance the need to introduce new life saving vaccines earlier thereby maintaining some degree of equity. This is regarded as the most equitable consideration to make, as delaying introductions was estimated by McKinsey in 2017, to cost some 200,000 lives. Other considerations in arriving at this plan for new vaccines introduction include cold chain adequacy for the new vaccines, National Technical Advisory Group on Immunisation (NGI-TAG) recommendations for vaccine introductions, timelines for availability of new vaccines and ongoing interventions to improve vaccine efficiency.

S/N	Vaccine	Scope	2019				2020				2021
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
1	Men A (RI)	Nation-wide	**Starting Jan**								
2	Men A (Follow-up campaign)	Nation-wide		**Jun**							
3	Meningitis Vaccine (ACWY)	Phased									**Starting Jan**
4	Rota	Phased				**High**		**Mid**		**Low**	
5	Measles second dose	Phased				**Starting Oct**					
6	HPV	Phased							**Starting Sept**		

Figure 7: *New vaccine introduction schedule*

The timelines for the introduction of other new vaccines such as (MMR, typhoid, etc) were yet to be decided as at the time of writing the NSIPSS.

[11] Economic recovery and growth plan

5.3.3 Funding Vaccines for RI

To achieve these targets including the introduction of new vaccines, Nigeria will require about $2.7 billion between 2018 and 2028 for RI vaccine financing. Of this amount, the country will provide $1.95 billion (78%) through budgets and other sources and request $773.2 million (22%) from Gavi. Post transition (from 2029), the country will require at least $295 million to procure vaccines each year.

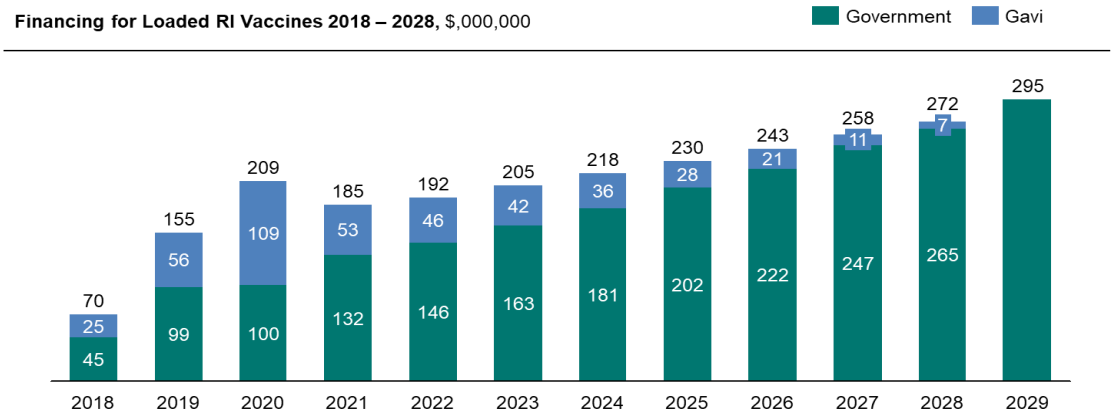

Figure 8: *Financing for loaded routine immunisation vaccines 2018 – 2029*

The costing for vaccines took the following assumptions into consideration:

- The quantification/costing for 2018 was calculated to reflect the actuals for this year.
- A buffer of 50% was applied for states with coverage below 60% while 25% was applied for states with coverage above 60%. A rolling approach was also applied to deduct the previous year's buffer from each current year's estimates.
- bOPV will be removed from the schedule by 2020 and replaced with 2 doses of IPV from 2021.
- Nigeria will graduate from Penta co-financing in 2024 and PCV in 2026. IPV co-financing will commence from 2021 to 2028 and co-financing of all new vaccines will last till 2028.
- For HPV introduction, the first year of introduction will be a catch-up year for children between 9-14 years and subsequent years will target a quarter of this cohort.
- Though Men ACWY is planned for introduction in 2021, it is not factored into the current model as it is not yet in the WHO policy and Gavi has not made a decision, so the supply is not assured.

The list of all RI vaccines included in the NSIPSS is attached as appendix iii.

6. Strategic interventions to improve immunisation coverage

The focus thematic areas and strategic interventions are part of a theory of change that believes in identifying and tackling key causes of low and inequitable coverage, reducing waste, changing health worker behaviour and creating/strengthening enabling leadership, coordination and accountability systems at all levels, as the pathway to overcome existing challenges and lead Nigeria to achieve its immunisation and PHC objectives.

This theory of change provided a framework for selecting and prioritising interventions, across the different thematic areas.

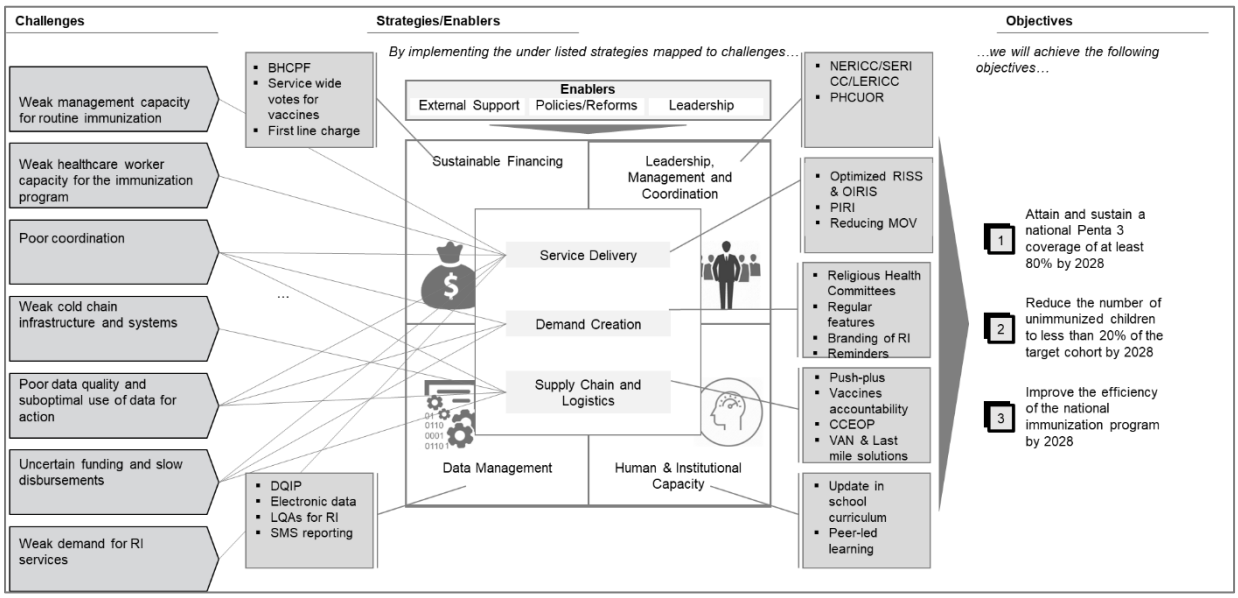

Figure 9: *NSIPSS Theory of Change*

6.1. Leadership, Management and Coordination

Leadership, management and coordination (LMC) are core pillars underpinning the immunisation programme in Nigeria and by extension pose significant challenges in the achievement of its goals. As a nation made up of federating states, leadership is devolved to each of the federating units at State, and LGA levels. Within the immunisation programme, the complexity of this devolution impacts on how the programme is managed and results achieved. While the NPHCDA drives policy and central coordination, the subnational levels are tasked with implementation, with significant levels of autonomy, which leads to varying programme performance. Other factors such as weak accountability and coordination, poor programme and financial management also have negative effects on the immunisation programme. In addition, feedback mechanisms and linkages between the different levels is also a challenge. In most instances, national and state teams have limited visibility to the implementation of activities at the primary health care level and are thus poorly responsive to emerging challenges or course corrections that should be promptly implemented.

Improving the management of the programme both at the national and sub-national levels is at the heart of this strategy. It has been widely recognized that a transformation in coordination and accountability is imperative in Nigeria, and that no part of the programme can succeed without significantly improved transparency on progress and accountability for results.

Strategies to improve leadership, management and coordination are focused on:

i. Strengthening PHC management through Primary Health Care Under One Roof(PHCUOR)
ii. Improving coordination at national and sub-national levels
iii. Instituting an accountability framework for routine immunisation
iv. Improving organizational capacity to manage the immunisation programme

i. Strengthen PHC management through Primary Health Care Under One Roof(PHCUOR)

PHCUOR calls for consolidating all PHC management and implementation under the SPHCDA. This means responsibilities for staffing and PHC operations will be ceded to the agencies. Many states have established their agencies, but the emerging structures have yet to attain full functionality as prescribed by the National Council on Health. Establishment of functional SPHCDAs are the responsibility of each state and under this strategy the national government is responsible for providing technical assistance throughout the process. To further strengthen the functionality of the SPHCDA's, the NPHCDA will engage strategically with States through the Governor's forum and targeted advocacy visits to State Chief Executives. Additionally, knowledge gaps in its implementation will be bridged through the dissemination of Standard guidelines and quarterly interactions with the Heads of the SPHCDA's. HRH assessments are planned at State level that will help designing a comprehensive and tailored modern training package for PHC and EPI managers.

ii. Improve coordination at national and sub-national levels

Coordination platforms are set up by the NPHCDA and / or FMoH to guide the programmatic implementation of immunisation activities. These structures are replicated at subnational levels in line with the expected levels of performance at each level.

- **Inter-Agency Coordination Committee (ICC)**

The ICC, chaired by the Honourable Minister of Health, was established to provide an overarching supervisory architecture to the immunisation programme, with technical support provided by the Core group. The ICC's responsibilities include coordinating decision-making and information across all immunisation activities / programmes undertaken by the FGoN and its partners. Although the ICC is scheduled to convene every quarter, Emergency ICC meetings are called to facilitate the decision making on emergency immunisation activities including the development, structure and content of NSIPSS.

- **The Core Group**

The Core Group, chaired by the ED / CEO of NPHCDA, has the mandate of reviewing the inputs from the NERICC and other immunisation technical working groups, providing supervisory oversight on behalf of the ICC. The responsibilities of the group include review and recommend to the ICC, proposals, budgets or other matters developed by the functional subgroups for approval; and monitor and supervise the planning and implementation of all immunisation activities in Nigeria. The Core Group meets once a month and reports to the Chairman of the ICC. Enhanced Core Group meetings are however requested on a more frequent basis to support emergency activities that should be presented to the ICC.

- **National Emergency Routine Immunisation Coordinating Centre(NERICC)**

NERICC was established as a direct response to the State of Emergency of Public Health Concern declared on Routine Immunisation in June 2017. It provides a more targeted approach to coordination and management of the national routine immunisation programme and has successfully established SERICCs in the 18 prioritised, low performing (coverage) states. Undergirding this strategy is the implementation of a robust coordination framework with clear indicators to measure the routine immunisation performance of the NERICC, SERICCs and LERICCs. NERICC has also adopted a 'business unusual" mode of operations with the appointment of Programme Managers and a complimentary management team to drive the implementation of

'quick-win' intervention plans at respective levels. Central to this approach is the enforcement of accountability as a mechanism to revamp operational work ethic, deliver on agreed targets, reward performance and enforce disciplinary actions.

To further enhance the prompt identification and resolution of bottlenecks, NERICC has deployed a replicated structure through the Emergency Routine Immunisation Coordinating Centres at states and LGAs (SERICCs and LERICCs), ensuring weekly operational reviews, provision of feedbacks and targeted support to lower levels. NERICC is further supporting SERICCs and LERICCs to understand and respond to RI performance gaps through the conduct of quarterly Lots Quality Assurance Sampling (LQAS) for Routine Immunisation and a mechanism for performance reviews and course correction based on the LQAS results.

To increase leadership for immunisation in states, high level coordinating structures for immunisation will be established at state level. These coordination structures which may be state level ICCs or State task forces for immunisation will report directly to the Governor through the Commissioner for Health.

- **National Technical Advisory Group on Immunisation (NITAG)**

NITAG provides technical advice on policies, plans and strategies for introduction of new vaccines and vaccine delivery technologies for the future. They also advice on the operational / implementation frameworks that are most appropriate, following recommendations for introducing any new products and guide and provide evidence-based recommendations for the development of immunisation related national policies and best practices. The new vaccines proposed in this strategy are based on NITAG recommendations amongst other considerations. NITAG also advises on strategies to assess the coverage and effectiveness of the vaccination programmes and any other roles that may become necessary in the future, as directed by the Minister of Health. Beyond the vaccines already planned for introduction, the desirability and feasibility of introducing new vaccines in the country would be based on expert advice from the NITAG and ICC. Early in the transition period as part of efforts to ensure programme sustainability, the NITAG will be strengthened in a bid to increase the functionality of the group and enhance the positioning of the group to advise the programme on policies, plans and strategies in future.

iii. Institute an accountability framework for routine immunisation:

Although Nigeria developed the Accountability Framework for Routine Immunisation Service Providers (AFRIN) in 2012, this was not fully operationalized across the states. The NPHCDA developed an accountability framework for the NSIPSS (section 9.1) for all key stakeholders including government (at national, state and LGA levels), donors, technical partners, civil society and others, to properly define roles and responsibilities, increase transparency, establish a system of monitoring and evaluation, and pre-determine sanctions and rewards for individuals and organizations based on performance. NERICC will further ensuring that this framework is properly understood and complied with at national and subnational levels particularly in the RI engagement with the private sector, partners, donor organizations and other key stakeholders.

iv. Improve organizational capacity to manage the immunisation programme

The National Primary Healthcare Development Agency (NPHCDA) has launched a major organizational change programme, including better defining departments and roles, and shifting staff to more productive posts (from the current 60:40 ratio of administrative to programmatic staff to a healthier 40:60). This initiative goes far beyond traditional capacity building and is a unique effort by government aimed at revolutionizing what has been a poorly performing Agency.

At sub- national levels, the NPHCDA will intensify efforts to entrench EPI programme performance management processes. State level programme review processes and appraisals will also be instituted to increase state level ownership and coordination of immunisation.

Additional technical assistance providers have been recruited for the SERICCs, to ensure that immunisation strategies are implemented. As part of their terms of reference, they will support efforts to enhance capacity of EPI managers to improve delivery of programme results while also providing technical support to states to entrench EPI performance management processes.

v. Strengthen Financial management

The 2014 and 2016 audit of NPHCDA highlighted several financial management challenges which resulted in a temporary suspension of Gavi funds from the country. NPHCDA has been working to transform practices within the Agency, particularly with regards to managing external funds. The key change is the existence of clear accountability mechanisms to enforce proper financial practices at all levels and a revamp of financial structures to meet international best practices. The major areas to be addressed by the agency include:

- **Structure and organization**

  The Agency has outdated policies and processes and lacks adequate financial reporting capacity. There is also a lack of automation, and where computerised systems are in place they have serious flaws. The following initiatives are ongoing to strengthen financial management:

  - Institution of a coordinating unit for GAVI (and other donor) funded activities - the Grant Coordination and Compliance Unit (GCCU)
  - Automation of financial procedures by introducing a Financial Management System and Enterprise Resource Planning (ERP) software at national level and providing proper accounting software at all relevant levels of immunisation governance
  - Codification of financial management processes to ensure compliance with regulatory requirements and best practices

- **Procurement (for non-vaccine products)**

  Auditors found procurement practices and procedures to be inadequate, with weak internal controls. There was widespread non-compliance with the Procurement Act of 2007. Ongoing initiatives to address the challenges include:

  - Creation of an extra layer of approval by transferring oversight roles to the Planning, Research and Statistics department of NPHCDA
  - Introduction of new processes to manage the ongoing issue of delayed release of funds, to ensure this uncertainty does not provide opportunities for mismanagement.

- **Disbursement systems and controls (advance management)**

  Processes and controls were found to be lax, especially regarding management of cash advances to staff and states, with the system being full of misuse and irregularities. The following initiatives are being implemented to strengthen disbursement system at NPHCDA:

  - Strengthening internal controls including measures such as enforcing justification for all advances; definite retirement periods; and recovering outstanding advances

- Making direct payments to third parties as much as possible, so funds do not rest in NPHCDA staff accounts

Funding these LMC interventions will cost $33.8 million between 2018 and 2028. Some of costs will be borne at the national level and the others at the state/LGA level. Figure 10 below shows the breakdown of costs across the different intervention areas and key cost drivers per intervention.

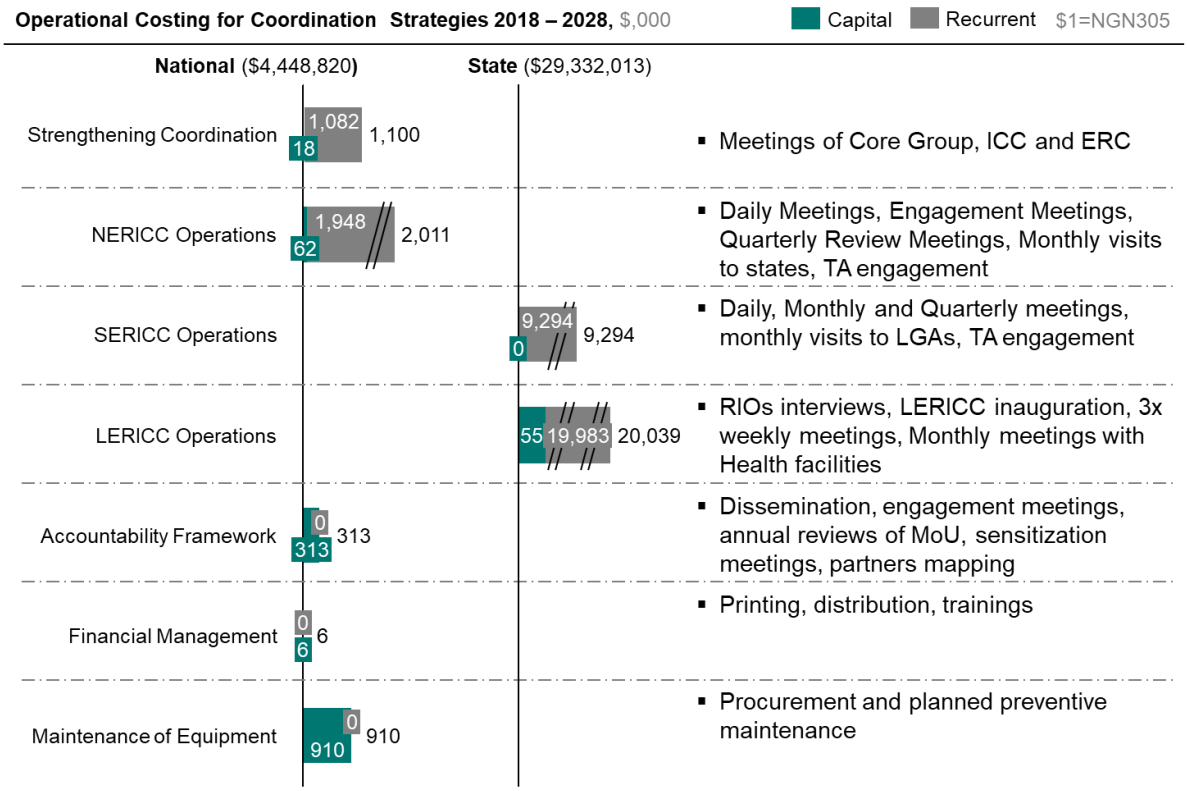

Figure 10: Operational costs for leadership, management and coordination

Cost estimates were derived from the detailed work plan provided by the LMC sub-group and reviewed by the task team and finance team.

6.2. Service delivery

Immunisation coverage is pivotal in measuring the immunisation programme performance. The national immunisation coverage of 33% in 2016 implies that about 4.3 million children are unimmunized in Nigeria. Results of the 2016 MICS/NICS further revealed that more than 50% of the states in Nigeria have less than 50% coverage with only 3 out of 10 children receiving 3rd dose of Pentavalent vaccine.

Service delivery issues account for 25% of reasons why eligible children are not immunized in Nigeria (2016, MICS/NICS). These service delivery issues include weak planning and implementation of the Reach Every Ward (REW) strategy, non-conduct of planned vaccination sessions, inconvenient timing and location of immunisation sessions, amongst other reasons, resulting in low utilization of services. In addition, PHC infrastructure is weak and there are many missed opportunities for vaccination due to poor planning and non-integration of RI services with other maternal, newborn and child health (MNCH) services.

Improvement in immunisation service delivery will require the implementation of multi-faceted approaches that will improve the availability and quality of immunisation and Primary Health Care (PHC). Although strategies to improve immunisation service delivery will be tailored to suit different geographical contexts to ensure the attainment of the programmatic milestones, some cross-cutting strategies apply to all communities due to the need to routinize specific activities. These include optimal micro-planning and high quality supportive supervision, amongst others. Interventions for service delivery below State levels will be prioritized once more data are generated from LGA levels. The ongoing assessment of health facilities will not only guide the PHC revitalization strategy but support the prioritization and balance of the various strategic approaches. At the same time, investments beyond the first two years will be guided by the evidence generated and mechanisms for rapid learning and practices. The implementation of these strategies will leverage the renewed coordination for immunisation through the NERICC, SERICCs and LERICCs. These coordinating groups will engage relevant stakeholders to garner their support for implementing these strategies. The Accountability Framework that is part of the NSIPSS will ensure that all stakeholders responsible for implementing the strategies outlined below are held accountable to appropriate action. Active engagement of states and LGAs in fine-tuning and adapting the proposed strategies is key to their successful implementation, as this will drive ownership and commitment, as well as ensure the peculiarities and contextual factors in each state/LGA are taken into consideration.

The NPHCDA, in collaboration with supporting partners have prioritized the following key focus areas to fast-track improvements in service delivery and integration of PHC services:

i. Optimization of the Reach Every Ward (REW) strategy across all states
   - Implementation of the Optimized Integrated Routine Immunisation sessions (OIRIS)
ii. Reduction of Missed Opportunities for Vaccination (MOV) in urban PHC facilities, secondary and tertiary health facilities
iii. Strengthening RI supportive Supervision (RISS) at national, state and LGA levels
iv. Periodic Intensification of RI in locations with prolonged disruptions in RI services
v. Reach Every Settlement (RES), Reach Inaccessible Children (RIC) strategies in security compromised locations

i. Optimization of the Reaching Every Ward (REW) Strategy

Since its adoption in 2004, the implementation of the REW strategy has been largely sub-optimal rendering the approach ineffective at driving coverage and equity. The problems with the REW strategy in Nigeria revolved around the way in which the programme was designed and executed. The previous approach was a 1-2-3 approach[12] which was applied to all facilities, regardless of the actual makeup of the facility and communities they serve. The approach was often poorly executed, facing challenges such as limited engagement of the community in the planning process, human resource gaps, absence of higher level supervision and inadequate political will to provide resources for the development and implementation of the micro-plans. The microplanning was ineffective, and budgets were not available for a large portion of the outreach and supervisory sessions.[13]

Since the declaration of a state of Public Health Concern in June 2017 and the subsequent set up of the National Emergency Routine Immunisation Coordination Centre (NERICC) there have been significant ongoing efforts to optimize the implementation of the REW strategy.

The changes that have been made to the approach and improvement strategies include:

[12] Refers to session mix policy of 1 fixed session and 2 outreach sessions per facility and 3 supervisory visits per LGA per month

[13] The 2016 Supportive Supervisory Report estimates that 72% of sessions were not supported financially

- Amending the policy to define the various distances that should be considered in determining the nature of sessions to be conducted. This is based on evidence that 80% of all households in Nigeria live within 2km of a health facility[14]
    - Fixed sessions: Targeting settlements < 2km from the health facility
    - Outreach sessions: Targeting settlements within 2-5km from the health facility
    - Mobile sessions: Targeting settlements > 5km from the health facility
- Using GIS and the polio walk-through microplans to understand real population numbers, in conjunction with the community and CHIPS who will help with registration of infants and tracking of new babies.
- Using the new policy and GIS numbers to calculate appropriate mix of sessions while tailoring services to community needs:
    - Minimum of 1 fixed post session is conducted per week and scaling up based on needs as documented in the microplan
    - Minimum of 2 enhanced outreach sessions are conducted per month and scaling up based on needs as documented in the microplan
    - Minimum of 1 integrated mobile session per month in hard to reach and underserved communities
    - Daily sessions conducted in all secondary, tertiary and urban PHCs with high client load
- Implementation of REW strategy with clear accountability framework of sanctions and rewards

This improved micro planning process, combined with an end to the push on 'targets' (and thus data falsification) based on an inaccurate denominator, is expected to drive through a pragmatic and measurable approach to what actually needs to be achieved by facility staff.

- **Optimized Integrated Routine Immunisation Sessions (OIRIS)**

The NERICC is supporting states to implement the Optimized Integrated Routine Immunisation Session (OIRIS). The OIRIS is a multi – pronged, system wide, short term strategy for improving routine immunization in 18 priority states categorized as low coverage by the 2016 MICS/NICS. OIRIS is focused on improving the effectiveness and efficiency of fixed and outreach RI sessions and integrating these sessions with other PHC services thereby providing clients the opportunity to receive a wide range of interventions during their visit to the clinic for routine immunization. OIRIS combines these with targeted demand creation, increased community participation and adequate supportive supervision/mentoring from state and national levels. The integration includes the provision of:

long lasting insecticide treated nets and anti-malaria treatment

- Nutrition- growth monitoring, nutrient dense nutritional supplement
- birth registration
- vitamin A supplement
- deworming tablet
- Postnatal checks for the mother

The NERICC will also support states with high number of under immunised children in medium and high performing states probe further to isolate the LGAs and communities that account for the high

[14] GIS analysis

numbers and increase the conduct of outreaches especially in urban slums to target and immunize all eligible children.

ii. Reduce missed opportunities for Immunisation

Reducing Missed Opportunities for Vaccination (MOV) is critical as 89% of children with age eligible visits experienced at least one missed opportunity for vaccination and of these only 22% of all MOVs were later corrected[15]. Planning to address MOV is weak across states, as this is not a component of the nationally-adopted REW strategy. To address this, the NPHCDA has provided policy guidance mandating the conduct of daily fixed sessions at all secondary and tertiary HFs, and urban PHCs with high client load. Additional efforts which will be undertaken to reduce missed opportunities for Immunisation include:

- Strengthening linkages between service delivery points in high volume health facilities as part of OIRIS
- Advocacy to relevant professional bodies to ensure that every child that visits a facility is screened for vaccination status as part of vital signs assessment and vaccinated appropriately
- Policy guidance to sub-national levels to ensure immunisation clinics run till 4.00 p.m. to allow parents who come later in the day to get their babies immunized
- Increase engagement of Private sector in RI service provision and referrals. Private health facilities will be actively engaged in the provision of immunisation services (sensitization, signing of MoU, collection and analysis of data, etc.) The formal and informal private sector will be engaged to increase referrals for immunisation services

iii. Improve supportive supervision

Supportive supervision of routine immunisation activities is largely ineffective due to weak planning and coordination, poor capacity of supervisors to adequately mentor and provide feedback to frontline healthcare workers, and lack of follow-up. Inadequate number of qualified supervisors and lack of funding for supervisory activities also hamper conduct of the planned supervisory visits.

To improve RI supportive supervision and accountability, the following measures are being taken:

- NPHCDA has revised the guidelines for planning and conduct of RISS at National, state and LGA levels, incorporating on-the-job mentoring, feedback and follow-up.
- Support states to adapt and use the revised optimized RISS Standard Operating Procedure (SOP) for conducting supportive supervision at state and sub-levels. NPHCDA will also support states to develop an optimal RISS plan that puts into consideration the resources, personnel and tools needed to conduct quality supportive supervision. An Optimal RISS plan is a routine supervision plan which considers the supervision need (e.g. need for increased supervision due to poor coverage or poor data quality), available resources (e.g. number of supervisors) to ensure all health facilities receive an ample amount of supervision visits, on site mentoring, documented feedback and follow up action.
- Advocate for state led RISS, demonstrated through allocation and release of funding for RISS in states by states and LGA supervisors.

iv. Periodic intensification of RI in low performing LGAs with high numbers of unimmunized

Leveraging on the success of the Polio Eradication Initiative through periodic intensification of routine immunisation in communities with migrants, nomads, hard to reach populations, or areas affected by

[15] 2016 MICS/NICS

insecurity, periodic intensification efforts will be undertaken to increase RI coverage. As an example, Local Immunisation Days (LIDs) will be conducted in LGAs with low immunisation coverage and underserved communities to reduce missed opportunities and dropouts. These LIDs would be conducted three times in a year, with a minimum of 4 weeks interval between rounds.
In special circumstances following disruptions of RI services, such as those occasioned by HCW strikes, LIDs will also be conducted to mitigate the effect of these service disruptions. During such LIDs, integrated packages of care will be provided in addition to immunisation. The high number of unimmunized children in urban locations found in States with high coverage in the MICS/NICS survey of 2016 indicate the presence of hard -to-reach poor urban slums. This situation will be addressed through targeted and tailored services will also include effective strategies such as outreach and mobile services, task shifting, community involvement, additional supervision to reach urban under-immunized that are designed to meet the specific needs of the identified communities, synchronized with strategies for demand creation that will increase education and awareness about importance of vaccination, working with PPMV in these areas, since they are the major care provide.

v. Reach Every Settlement/Reach Inaccessible Children strategies

To increase the reach of RI services to security compromised areas (Adamawa, Bauchi, Borno, Gombe, Taraba, Yobe, Benue and Nasarawa), special strategies such as Reach Every Settlement with support from security agencies will be scaled up. In addition, outreach sessions will be implemented around IDP camps to reduce missed opportunities. Furthermore, the processes at profiling points will be strengthened to ensure subsequent doses are administered to eligible children. Furthermore, the NERICC will also design innovative vaccine delivery strategies to ensure children in hard to reach areas and riverine areas can be reached with vaccines.

The service delivery interventions are estimated to cost $241.2 million between 2018 and 2028, with some of costs to be borne at the national level and others at the state/LGA level. Figure 11 below shows the breakdown of costs across the different intervention areas and key cost drivers per intervention.

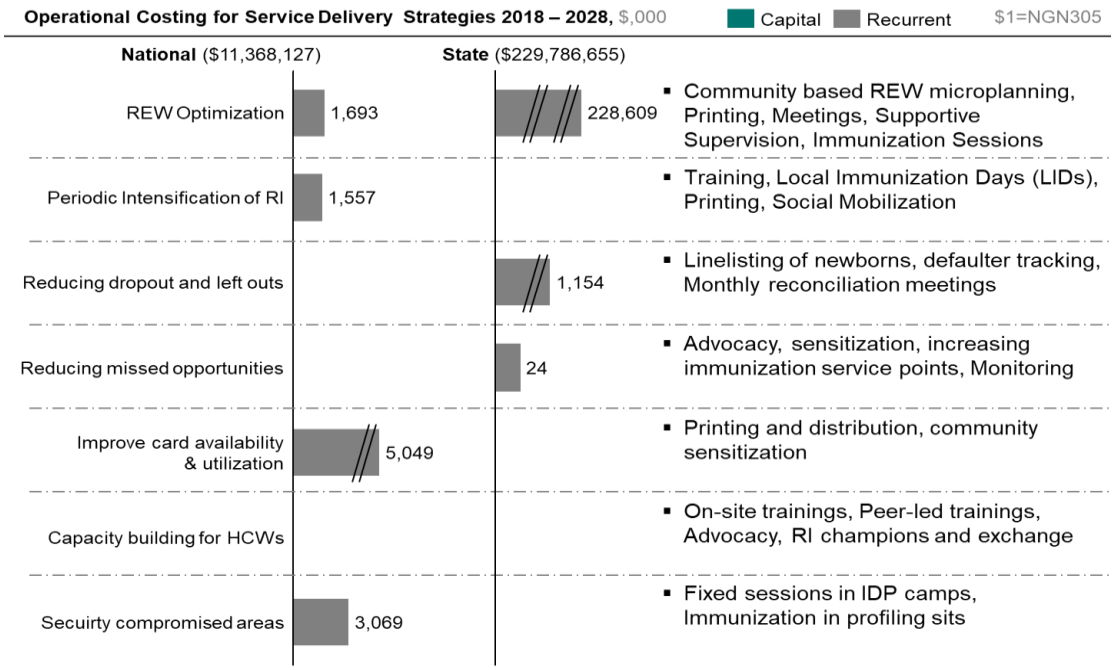

Figure 11: *Operational costs for service delivery*

Cost estimates were derived from the detailed work plan provided by the service delivery sub-group and eventually reviewed by the task team and finance team.

6.3. Demand Creation

The key issues facing demand creation have been identified and strategies selected to tackle them based on lessons and evidence on what works considering the local context. The overarching purpose of these strategies is to build a national movement and raise a deep consciousness for routine immunisation and positive health seeking behaviour that saves lives; promotes successful parenting that is feasible, evidenced based and carefully phased in the context of Nigeria's diversity. The demand creation for RI builds on successful strategies for the polio eradication programme. They include:

- Empowerment of communities through participatory planning and implementation of communication activities to improve knowledge and attitudes of parents and caregivers on the importance of immunisation to their children.
- Strengthening institutional capacity for demand creation by training service providers in communication and mobilization skills to effectively mobilize parents, caregivers and communities for improved and sustained participation in immunisation services.
- Strengthening partnerships through mobilizing key partners and stakeholders within and outside the healthcare sector to harness existing structures to achieve coordinated and wider stakeholder participation in routine immunisation and PHC activities.
- Utilizing social media as a platform for parents to demand for immunisation services for their children.
- Involving political, social and civic leaders as well as civil society, professional organizations and relevant others, to improve routine immunisation leveraging their influence.

Routine Immunisation in Nigeria has suffered a severe setback due to the high concentration on campaigns and Supplemental Immunisation Activities (SIAs) which have overshadowing influence over RI. The breakdown of RI was worsened by poor political commitment and bureaucratic bottle-necks, non-prioritization of RI and PHC services, inadequate funding for demand creation strategies for RI services and human resource challenges such as inadequacy and poor motivation of health care workers. Budgeting for immunisation and PHC and timely release of funds is necessary for states to carry out demand creation activities and it is important that decision makers openly show commitment.

Strategies to address demand challenges include:

i. Multi-level coalition for RI

- Sustained high level advocacy to key political and policy decision makers at the national and state levels, including the national assembly, NGF, Governors and State Houses of Assembly (HoA). Advocacy materials will include state specific coverage and targets, strategies, costs and benefits on health and broader economic development. This level of advocacy will be led by the Minister of Health and the Executive Director of NPHCDA and supported by other senior management staff of NPHCDA, heads of key donor agencies and RI immunisation champions from the National Assembly. Such high-powered delegation will help underscore the seriousness of the issue and spur states to take action on policy development, financing and strengthening systems for immunisations and PHC.

- Advocacy to the LGA level targeting LGA Chairmen and their Councillors, to take ownership and active lead in ensuring the uptake of immunisation and adequate service delivery in PHCs within their domain. Advocacy messages for this level will also be customized to reflect the LGA/community peculiarities and interests and will be led by zonal and state NPHCDA staff, partners, Commissioners of Health and other state level influencers.

ii. Structures and capacities for demand creation

Without adequate capacity in the states to carry out social mobilization activities, awareness about RI will remain stagnant. It is essential for health workers and other frontline workers in health, responsible for mobilization and demand creation activities to have sufficient skills to efficiently carry out these tasks. In addition, with years of immunisation campaigns – polio, measles, meningitis, etc., - RI took a back seat in planning and implementation. It is therefore proposed that to inject action, several structures, especially those that worked for polio eradication, be repurposed for RI. These include:

- Periodic national engagements with State and Assistant Health Education Officers and national communication focal teams for immunisation and PHC to support adequate planning, discussions, documentation of good practices and learning visits from poor performing states to high performing ones.
- Communication for development consultants (nationals who understand the terrain and context of immunisation) should be deployed to all states especially lowest performing states and LGA with low coverage to provide technical expertise in building capacity of health workers and other mobilization teams on demand creation, facilitating periodic surveys including FGDs and rapid assessments, regular supportive supervision and documenting best practices. The proposed engagement of consultants is a borrowed leaf from the successes of polio eradication in the country.

iii. Broader Partnerships and Engagement

Although donors have remained committed to funding and providing technical support to Nigeria's routine immunisation programme, there is limited participation of the Nigerian private sector, despite their numerous resources and potentials. Going forward, there will be more deliberate and intense engagement of the private for-profit sector and leveraging them for RI demand creation. A national communication plan that involves all media and telecommunication partners and other private sector organizations will be developed to ensure all communication efforts are aligned towards a common objective. Specific strategies that will fit into the national communication plan include:

It is important to note that as part of their corporate social responsibility, some private sector organizations can also promote commemorative events like Africa Vaccination Week, World Pneumonia Day, to scale up national conversations on immunisation and PHC in general. Specific strategies include:

- Engaging big children-friendly fast-moving consumer goods (FMCGs) companies like Procter and Gamble, noodle manufacturers, Nestle Foods, amongst others, to promote RI messages and RI schedules using their brand and products and also possibly support some of the promotional activities at community level.
- Engaging private firms to provide non-financial incentives to health workers and children who complete the immunisation schedule (eg diapers, mosquito nets, noodles, etc)

- Partner telecommunication companies for free monthly bulk sms promotions as reminders to caregivers, production and dissemination of caller tunes and ringtones on RI and leveraging their brand ambassadors for the promotion of RI messages. This has the potential to be linked with the targeted individualized reminder system for immunisation
- Strengthen partnerships with media organizations and media talk show hosts for regular feature on audience interactive live programme, advert slots and periodic front page and centre spread stories in the print media.
- Engage prominent and well accepted/respected Nollywood and Kaniwood entertainers including actors, music icons, and comedians
- Engage sports associations (eg National Football Association) to promote RI

iv. Knowledge, Awareness, Cultural Norms and Behaviour

Knowledge of immunisation and the benefits of immunisation by parents and care givers is very critical for uptake of routine immunisation (RI) services in Nigeria. Over the years, awareness of routine immunisation and its benefits have remained low. Results of the 2016/2017 MICS/NICS revealed that 46% of the respondents cited lack of awareness as the reason why children were not fully vaccinated while 22% cited mistrust or fear of vaccines as other reasons. Cultural norm or beliefs and individual behaviours have also characterized reasons why many caregivers are not aware of the importance of immunisation and the need to access health services. These norms and behaviours include resistant husbands who do not grant permission for their wives to take their children for immunisation, because of cultural dependency of women on their husbands for decisions, including accessing health services for themselves and their children. This is most prevalent in the northern part of the country that constitutes the bulk of states with low RI coverage in the country. The MICS/NICS also revealed that lack of time to take children for immunisation because caregivers are too busy and the thought that polio immunisations were completed immunisation were also part of the reasons why children did not complete their vaccination.

The core strategy to increase awareness and changing behaviours toward immunisation is a mixed package targeted at the community level where awareness for RI is low. The sole purpose is to educate the public especially caregivers about the benefits of immunisation and the diseases they protect against to ultimately take the needed action to get their children immunised.

The proposed strategies include:

- Branding of routine immunisation from logo to theme songs for RI and PHC, identifying and engaging immunisation champions and relaying messages through RI ambassadors. These ambassadors who may comprise of prominent and well-respected sports stars, actors, musicians, comedians, young children, etc., will conduct periodic visits to both low and high performing communities and engage them with messages on immunisation. Technical support will be required to effectively implement this intervention.
- To increase the crop of Nigerian citizens who value immunisation in the long term, the NPHCDA will advocate to the Ministry of Education and relevant agencies to introduce an immunisation themed story book into the primary school curriculum. Similar partnerships will be explored to introduce immunisation related content into the secondary school science curriculum. This will build a critical mass of future Nigerian adults who understand and value immunisation and need less mobilisation to get their children immunized.
- Social media engagement through

- Posting of important immunisation messages on Facebook, Twitter, Instagram and other key organizations' websites; and infographics on RI
- Social media surveys and polls to assess public opinions and publishing of same
- Engagement of social media influencers to promote messages on RI

- Targeted messages for different categories of audiences to highlight simple messages on the vaccines, the diseases they protect against, the importance of completion of the immunisation schedule, the age of administration, where to access the vaccines, safety and side effects (which will minimise fears and doubts about vaccines) and that the vaccines are free in government hospitals. The messages will be produced in easy to access, understand and culturally acceptable contexts:
  - Production and dissemination of print materials – key messages for health care workers, caregivers - including mothers and fathers - traditional leaders, religious leaders, health workers and frequently asked questions, etc.
  - Short radio and television spots in various languages with easy messages to recall by listeners.
  - Short radio and television public service announcements (PSAs) that are entertaining
  - Social media as described above
  - Production and broadcast of radio drama series in various languages. These will also be used for listener groups during for community discussions.
  - Production and broadcast of culturally known dramas e.g. Dan Birni by Nollywood entertainers. This can be shared on previewed during community forums and festivals, etc.
- Inter-personal engagements through house-to-house visits, interaction with health workers, town announcements and other community forums. Various surveys for both routine and SIAs have shown that inter-personal engagement is an important source of information for care givers in communities. To maximize these contacts, education outreaches are proposed at state level, monthly for about 10 days for 2 years and gradually phase to quarterly. The outreaches will include:
  - House-to-house visits and mobilization at community level with tracking of new born and referrals by community mobilisers e.g. CHIPS agents (VCMs, VHS, CORPs) and WDCs.
  - Compound meetings targeting both heads of households (to address issues of restriction on mothers by their husbands to access care for their children) and mothers, especially mothers who are restricted to homes on religious/cultural grounds.
  - Community dialogues led by traditional and community leaders and district heads to promote ownership and demand for RI and PHC services.
  - Town announcements by town announcers as reminders.
  - Edutainment events by youths and local entertainers including road shows, rallies and theatre performances, that communicate immunisation messages in entertaining ways.
  - Weekly announcements during religious gatherings.
  - Media field visits to communities to generate human interest stories on immunisation, including testimonials.
  - Reminders through bulk sms messages, ring back tunes, vaccine reminder bands/beads.

- Town hall meetings at LGA level led by key influencers like religious leaders, traditional leaders.
- Peer mother mentoring.
- Periodic stakeholder engagements.

- Leverage Religious Health Committees in churches and mosques by prominent religious leaders in states. This strategy aims to increase the frequency of RI messages to communities through regular announcements on immunisation, benefits and completion, during religious gatherings like Sunday services and Jum'at prayers on Fridays. This will help build trust, improve recall, remove fear, boost confidence and raise the level of awareness. These committees will in addition, take on the responsibilities of helping to track newborns, referrals; and engaging with heads of households to change their behaviour towards immunisation.

v. Health Card Retention

One of the reasons debilitating against tracking access to immunisation services is the gap in immunisation card retention by caregivers. To address this issue, NPHCDA has redesigned the child health card to be in triplicate form, with one copy for the caregiver, one for the health facility for defaulter tracking and one for the community leader.

In addition, the following interventions will be implemented:

- A reminder on card retention will be included in every immunisation message produced, including the key messages by health workers and house-to-house mobilizers to caregivers. The messages will not just mention keeping cards safe but also link them to their use in the future for the child's registration in schools, and social services.
- Reminders on card retention will be shared through bulk sms, ring tones, hand bands/beads. This will be linked to the other services already identified in the OIRIS and monitored through the NERICC/SERICC/LERICC.
- Expanding the scope of the child health card to include records of other treatments for the child

vi. Data for action

Although effective communication for development (C4D) is based on data and evidence, local data for RI demand creation work – including what works and impact – is limited. It is important to build in routine and periodic data generation on behaviour change at the health provider and caregiver levels, message and medium effectiveness and other important information for effective programming.

Strategies will include:

- Quantitative methods through rapid appraisal surveys, rapid audience assessments, tracking use of materials, content analysis (e.g., of media coverage) by national and state-level health personnel
- Qualitative methods through focus group discussions, community group interviews, key informant interviews, in-depth interviews, direct observation (field visits), and mystery client (mostly engaging trained personnel within communities to pose as clients who visit health facilities without the service provider knowing that they are carrying out research and then send reports).

As much as possible, these surveys will be integrated with the proposed annual immunisation coverage surveys and operations research as described in the data section.

vii. State specific approaches to increase community participation

The NERICC has designed an architecture for increasing community participation in routine immunisation in Northern Nigeria.

Key elements of this approach include:

- Volunteer based participation of community volunteers in driving immunisation activities
- Name based line-listing of all newborns in the community
- Registration of infants by settlements on the child immunisation register located at the health facility
- Institute defaulter – tracking mechanism to reduce drop-outs

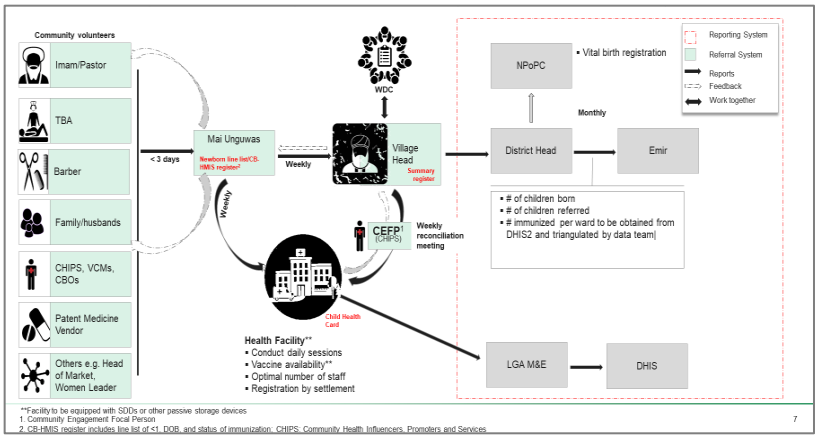

Figure 12: Architecture for registration and tracking of newborns and linkages to RI services – Northern Nigeria

- Weekly reconciliation meetings between HF officials and community leaders to identify and track defaulters and update line list of eligible children in low performing LGAs

Work is underway to support states to domesticate and implement the framework to meet their state specific needs, including technical assistance to states with higher coverage but also high numbers of under immunised children, to design and implement targeted approaches to involve the community and key influencers in reducing inequities in urban slums and other low coverage areas

The advocacy and demand creation interventions are estimated to cost $54.9 million between 2018 and 2028, with some of costs to be borne at the national level and others at the state/LGA level. Figure 13 below shows the breakdown of costs across the different intervention areas and key cost drivers per intervention.

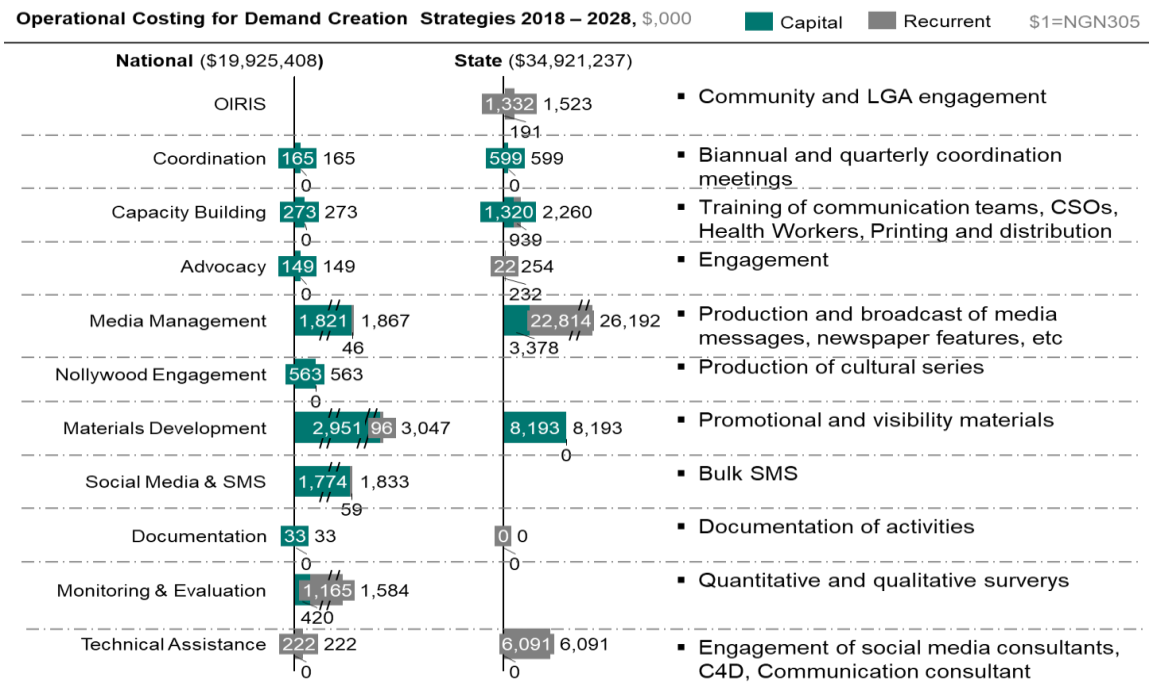

Figure 13: *Operational costs for advocacy and demand creation*

Cost estimates were derived from the detailed work plan provided by the advocacy and demand creation sub-group and eventually reviewed by the task team and finance team.

6.4. Supply chain and logistics

Major improvements have been made in the vaccine supply chain. Stock availability at LGA level was just 30% in 2004 but is now typically ~80%.[16] The 2017 effective vaccine management assessment (EVMA) has shown some improvement in the geometric EVMA mean scores, from 52% in 2010 to 69% in 2017, for all 9 criteria across all levels of the supply chain. Despite the improvement, the score is still below the 80% WHO recommended minimum threshold. The challenges in supply chain and logistics are discussed below under the five key supply chain fundamentals:

i. System redesign

Distribution issues persist due to inadequate and poor access to operational funding. The country still relies on a mixed push-pull system with health care workers often using personal funds to pay for vaccine transportation from stores to health facilities. Furthermore, the country had 185 shipments in 2017 compared to the planned 4 quarterly shipments, due to the inadequate available storage capacity at national level.

These challenges will be addressed through:

- A "three hub" model is proposed at the national level, with stores at Abuja, Lagos, and Kano, to improve capacity, efficiency of the distribution network and reduce overall operational costs[17] - including the energy cost, by using solar energy. Funds have been secured through the third World Bank additional financing for the construction of the Lagos hub and renovation of the Kano hub.

[16] NPHCDA, 2017. Navision Stock Performance Summary Dashboard, August 2017

[17] NPHCDA, 2015. 3 Hub Cold Chain Expansion Project – Inception Report. EVM Report gave just 69% score on capacity

- The NPHCDA, in 2016, introduced long term contracts with third party logistics firms to provide a stable system for vaccine transport from national to state level. To resolve the last mile issues to the facility level, a full scale-up of the "Push Plus" is proposed following lessons learned from 7 States that have introduced the push plus system, which provides direct delivery to cold chain equipped facilities in the state.
- There are ongoing efforts around PHC supply chain harmonization with support from the National Supply Chain Integration Project (NSCIP). Linkage between the immunisation programme, and other public health programmes will be strengthened with the aim of improving the availability of all commodities at the right place, at the right time and at the right cost.

ii. Cold chain equipment

The available storage capacity is inadequate, leading to high frequency of shipments and deliveries. Furthermore, the 2016 Cold Chain Equipment Inventory (CCEI) update indicates that 59% of wards are not equipped with cold chain, 16% and 23% of equipment at the health facility and LGA levels respectively are non-functional, while 23% are non-performance quality and safety (PQS) compliant at both levels. In addition to the insufficient number of CCE, sub-optimal maintenance, due to inadequate funding at the subnational level has remained a significant challenge. The most recent EVM assessment report (which is the global standard) gave a score of just 38% for maintenance.[18] In addition, the temperature monitoring and control system which includes monthly review of data, has not been fully implemented.

Cold chain improvement strategies include:

- Cold Chain Equipment Optimization Platform (CCEOP): The country is leveraging on the Gavi CCEOP to close cold chain gaps at the wards according to the country's aim of "1 functional solar refrigerator per ward[19]. To guarantee equity and coverage the CCEOP will do the following:
    - Procure 7687 CCEs at a total cost of USD$67,902,503
    - Equip all Tertiary and Secondary hospitals offering Routine Immunisation
    - Develop a detailed ODP and deviation protocol following a Health Facility readiness assessment.
    - Contract end-to-end supply, distribution, installation and commissioning of CCEs, to ensure effective project is implementation.
    - Obtain buy-in from state management to close all state level cold chain storage gaps as a prerequisite for being eligible for the CCEOP.
    - Develop a strong maintenance plan and encourage LTAs with vendors for curative maintenance.
    - Decommissioning of obsolete CCEs according to the Public Procurement Disposal Act
- Scaling up implementation of planned preventative maintenance.
- Incorporating financing and commissioning of reactive maintenance in the advocacy to the states.
- Strengthening temperature monitoring.

iii. Continuous improvement planning:

Efforts have been made at the national level to monitor the implementation of the immunisation supply chain related activities. The National Logistics Working Group (NLWG) has grown much stronger and is now a well-attended and substantive forum. However, the challenges persist at

[18] WHO, 2016. Nigeria Effective Vaccine Management (EVM) Report

[19] NPHCDA, 2016. Inventory and Replacement and Planning report (9556 wards total)

the states and below, due to sub-optimal functioning of the State Logistics Working Groups (SLWG) and lack of regular assessment of the supply chain.

Strategies to address these challenges include:

- Support the SLWG across all states to have similar terms of reference as the NLWG and meet more regularly and effectively.
- Continue to provide support to the SLWG and build their capacity in developing and implementing state specific supply chain improvement plans[20].
- Improve the regularity of supervision EVMA to enable rapid detection of constraints and to assess the implementation of the improvement plans.

iv. Improving data for supply chain management

Stock performance monitoring and management is sub-optimal as data quality issues still exist at all levels of the immunisation supply chain (iSC), with poor triangulation of logistics and programme data. This limits data-driven decision-making and impairs proper vaccine accountability. Previous deactivation of the stock management function of NAVISION limited its use as a management tool with reliance on reports from the lower levels to make it a dashboard tool.

Improvement strategies include:

- Implement a vaccine accountability framework which will codify not only requirements per agent/vendor but will also strengthen rewards and sanctions measures.
- Implement Vaccine Accountability Framework and Visibility and Analytics Network (VAN) - linkage of NAVISION with DHIS2 to improve the visibility of actual vaccine consumption and the distribution practices.

v. Effective management of vaccines

- Ongoing retrieval of empty vaccine vials to match used vials with vaccination reports.
- Address the health worker behavioral issues, using a mix of capacity building, rewards and sanctions and other strategies as described under the data management section.
- Use of data to determine where there might be need for smaller dose vials and scale up capacity of health care workers on the multi-dose vial policy.

vi. Human resources for health (HRH)

There is currently a lack of visibility on the profile, quantity and quality of the human resources involved in supply chain below the national and zonal levels. Human resource is a cross-cutting challenge that affects all aspects of the immunisation and primary health care programmes.

Strategies to address these challenges include:

- Determine the profile and quality of agents/vendors involved in immunisation supply chain, via a rapid HRH assessment. This will be done as part of a broader PHC HRH assessment.
- Strengthen the capacity of existing staff at the different levels, through training and new HR reinforcement approaches such as peer learning, mentoring and exchange programmes.

The supply chain and logistics interventions are estimated to cost $211.6 million between 2018 and 2028, with some of costs to be borne at the national level and others at the state/LGA level. Gavi is already committed to $80.8m for CCEOP and the Lagos hub. Figure 14 below shows the breakdown of costs across the different intervention areas and key cost drivers per intervention.

[20] On average 24 states have functional SLWGs, proved by submission of minutes every month

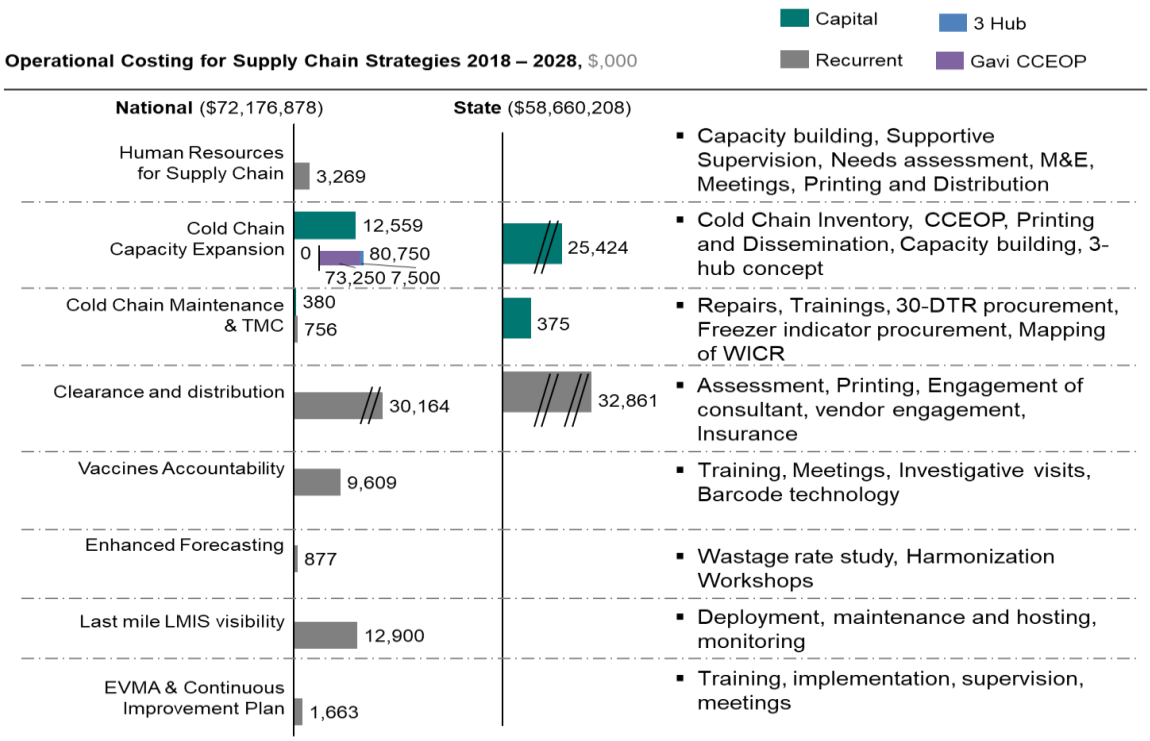

Figure 14: *Operational costs for supply chain and logistics*

Cost estimates were derived from the detailed work plan provided by the supply chain and logistics sub-group and eventually reviewed by the task team and finance team.

6.5. Data Management

Routine immunisation data in the country is currently reported from the health facilities to the LGAs using a paper-based form. The LGA then enters the data into an electronic platform - DVD-MT - and DHIS2 and sends to the state and federal levels. The DVD-MT tool collects and collates monthly immunisation service data from the health facilities up through two levels, the LGA and the state and then sent to the national level (figure 15). Data sharing and accessibility has been a big problem with the DVD-MT as it is an excel-based offline tool, whereas the DHIS2 platform is a cloud-based system that serves as the nation's sole warehouse for all routine health data.

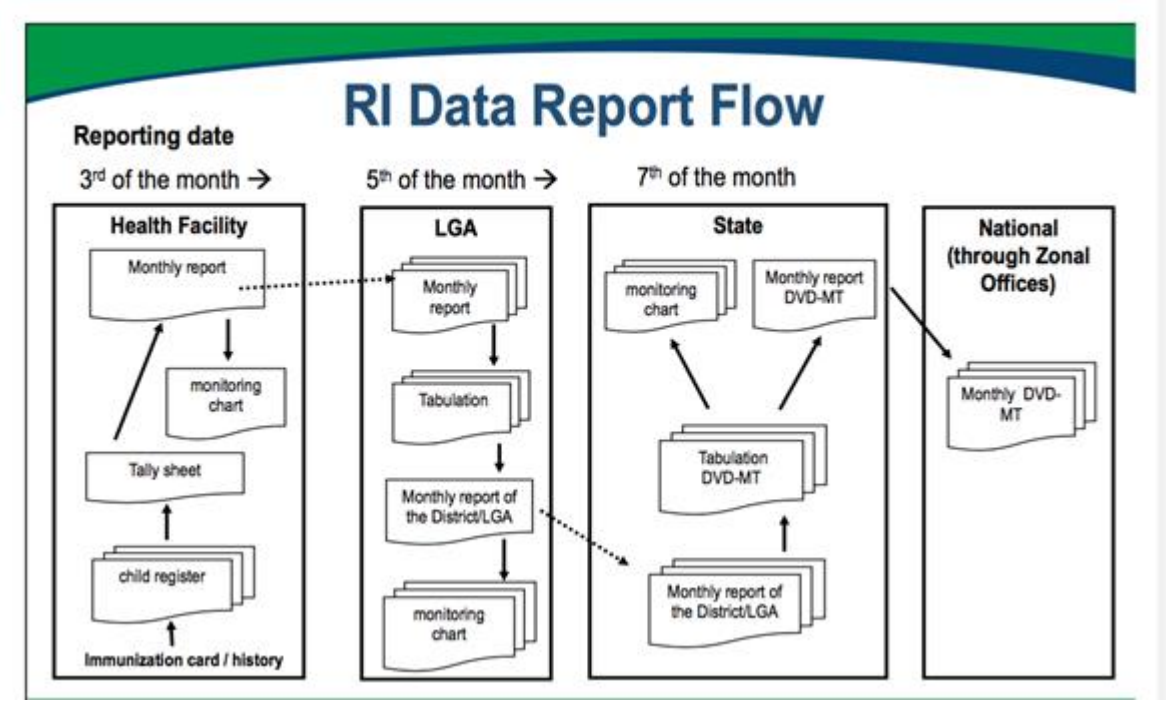

Figure 15: *Routine immunisation data reporting flow in Nigeria*

The honourable minister of health (HMH) during the 56th National Council on health, mandated that all routine health data should be reported on the DHIS2 platform. The DHIS2 RI module was completely rolled-out to all states in the nation by December 2017.

Regular surveys, namely NDHS, NICS, MICS, SMART, LQAS, DQS, are also being conducted in the country to monitor and periodically evaluate routine immunisation performance. Based on the administrative routine immunisation coverage data collected through DVD-MT and DHIS2, the country reported considerable progress in the routine immunisation performance during the period 2011-2015. The DPT3/Penta3 stated target for 2013, 2014 and 2015 was 78%, 80% and 87%. However, actual administrative coverage reported in DHIS2 was 55.7%, 64.8%, 74.2% and 84.3%.

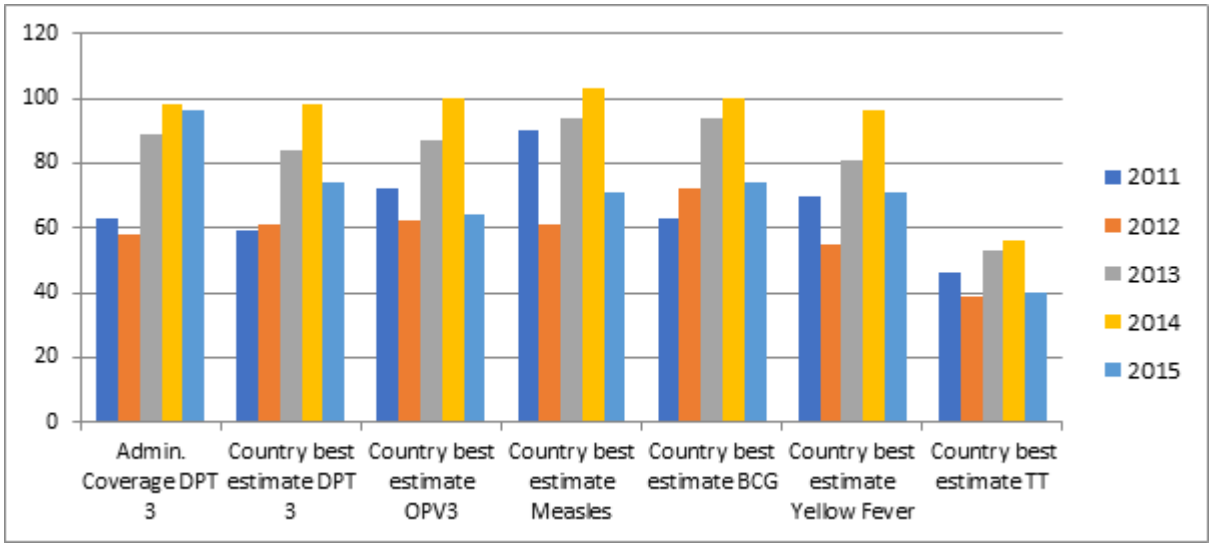

Figure 16: *Routine immunisation coverage trends by antigen in Nigeria, 2011-2015*

The 2016 MICS/NICS national Penta 3 coverage of 33% differs significantly from the 98% administrative coverage rate reported in 2015. The large disparity between the RI administrative and survey coverage estimates has been a long-standing concern of the NPHCDA and RI partners. To address these and several other data related issues, Nigeria developed a data quality improvement plan (DQIP) 2017-2020 with clear strategies to strengthen the completeness, timeliness and precision of immunisation data from all states. NERICC has data quality as one of its major focus areas and has developed various quick-win strategies that include data quality improvement, to strengthen national routine immunisation targeting 18 priority – low coverage – states.

The NSIPSS will provide the platform for implementation of the DQIP, integrated with strategies for the other focus thematic areas. Key strategies for addressing data challenges include:

i. Strengthen coordination structures for data reporting, warehousing and management

There are plans to establish data quality implementation teams/technical working groups and strengthen data review meetings at state and LGA levels. An SOP on conducting data quality review meetings will be developed and disseminated to the states and LGAs. In addition, the NPHCDA and partners will facilitate collaboration between the Ministry of Health and the National Population Commission (NPopC) to improve birth registration and definition of the vaccination coverage rate denominator, by adopting technology for data capture at all levels.

Data management coordination will be strengthened by procuring laptop computers for staff of the State Emergency Routine Immunisation Coordination Centres (SERICC), mobile phones for data reporting from the health facility, DHIS2 storage infrastructures and warehouse at the central level. In addition, support will be strengthened to ensure development, regular revision and distribution of EPI data tools, including those for home and community – based data capture, field visits and supervisions. There will also be support for advocacy to community leaders, religious leaders & WDCs on data ownership and use of data for action and development of memoranda of understanding (MoUs) with private facilities.

This support will help simplify and streamline the multiple reporting tools at all levels.

ii. Availability and use of data capture tools

An assessment in November 2016 found that paper-based data tools were not available in 19 (53%) of the states, and that partners were supporting ad-hoc printing. Current data capture tools are complex – health facility staff fill up to 16 forms for RI activities in a single month often with multiple calculation and transcription errors.

To address these challenges, the NPHCDA is undertaking the following actions:

- Provide states with a seed stock of printed tools and an official template of these tools, with a plan for states to gradually take ownership of the printing. The graduation strategy for each state will include introduction of tools printing in their budgets and using the coordination platforms to leverage donor supported state level projects. Funding for printing and distribution of tools will be included in the RI funding advocacy plans for the states. NERICC will also monitor data tools stock out in each state, every quarter, for timely response and to improve state accountability.
- Simplify the forms through a process that will include healthcare workers and programme staff in the design of easy-to-use forms.

iii. Improve data quality and the use of data for action

Poor data quality, weak data management and non – use of data for action at the operational level, are widely acknowledged problems in the routine immunisation system. A key intervention to address many of the data quality issues at the health facility level is the introduction of electronic data capture and reporting using the DHIS2 platform. The country had commenced the roll out of the electronic data capturing using the SMS and other strategies in Nasarawa, Adamawa, Zamfara and Kebbi States, with a plan to scale up to the remaining thirty-two states and FCT, in coming years. This will provide an additional form of data reporting that can be compared with those reported on the DHIS2 platform.

Other activities proposed to improve data timeliness and completeness are:

- Continuous update of the master list of health facilities on the DHIS2 platform.
- Continuous development and implementation of interactive dashboards and score cards for each level, using DHIS2 data.
- Monthly triangulation of immunisation data with vaccine utilization and disease surveillance data.
- Production and dissemination of quarterly bulletins on RI performance to States and LGAs, using data from the DHIS2.
- MoU on data accountability to be negotiated between the states' ministries of health and partners, since many of the data entry errors happen at the HF level and LGA level.
- Clear communication with HF workers on importance of data accuracy over coverage targets, with emphasis on the accountability measures for data falsification. This may involve some degree of refresher trainings, which can be combined with the OIRIS.
- Additional capacity building of LGA staff on the use of DHIS2 platform for more detailed analysis and data triangulation.
- Supportive supervision focused specifically on data quality, with the incorporation of ODK-enabled community surveys to assess vaccination coverage and identify bottlenecks for the catchment areas.

iv. Strengthen data quality audit, assurance and assessment mechanisms

The quality of routine immunisation administrative data has been a long-standing concern of the government and partners. In Nigeria, errors from coverage rates could arise from numerator factors such as manipulation of figures or data entry; or due to denominator factors such as wrong estimation of target population. The wide variation between administrative and survey data reflects these data quality issues. Nigeria plans to conduct an annual evaluation of status of implementation of the country DQIP to ensure that all the proposed strategies are being resourced and implemented.

Specific data quality improvement initiatives include:

- Quarterly implementation of the RI Lot Quality Assurance Sampling (LQAS) to monitor performance across selected LGAs and states. The first RI-LQAS has been successfully conducted in 18 low performing states. Plans are underway conduct the RI – LQAS in all the states before the end of 2018.
- Providing supervision and data audit support to the lower levels of the healthcare system to improve the accuracy of the data recorded. This process includes leading Data Quality Surveys (DQS) and Data Quality Assessments (DQA) on a regular basis. A recent intervention is the revision of DQS/DQA procedures to include use of child registers at the health facility level, to reduce the discrepancies between the registers and tally sheets.

- Using data quality review meetings to build interest and capacity in the use of the data and supporting NERICC and SERICCs to better structure their discussions and indicator review processes around using RI data.

v. Conduct annual surveys to provide timely and reliable information for decision making

Intervals between surveys is often long drawn and inconsistent and there is the challenge of comparing coverage from studies with different methodologies. Surveys that currently provide immunisation coverage include NDHS, NICS, MICS and the SMART. In the last decade, no single survey type has been conducted more than twice. The last MICS/NICS which provided baseline data for this strategy, was conducted 2 years ago so changes to the programme and coverage since then could only be modelled based on assumptions.

Strategies to resolve this include:

- Annual coverage surveys with methodology that is acceptable to government and partners. The plan is to use either an existing survey such as SMART – which is relatively cheaper than the other surveys – but expand its scope to meet the annual immunisation information needs or create a new survey that can be conducted annually. A joint committee of NPHCDA and partners was set up to review the needs of the immunisation programme, methodologies of existing studies and recommended a preferred option for the annual survey.
- The MICS/NICS will be conducted every three years, to provide much more details.
- Conduct of sero-surveillance to ascertain the true immunisation status of children especially in environments where immunisation coverages are low.

vi. To conduct population estimate studies / assessments to address denominator issues

The target population (denominator) currently used in Nigeria is extrapolated from the 2006 national census figures, using a growth rate for each state and LGA provided by the Nigerian National Statistics Bureau. However, the accuracy of these estimates is in doubt as they do not account for inter and intra-state migration, which have significantly impacted the size of populations in certain communities. Getting an accurate denominator for estimation of immunisation coverage is a global issue but particularly severe in Nigeria going by the high number of states that in the last two to three years have reported over hundred percentage immunisation coverages.

An inter-sectoral committee was set up in 2015, consisting of the NPHCDA, FMOH and the National Population Commission; to use both the national GIS mapping and the walkthrough micro-plans for polio SIAs to arrive at a much more robust understanding of the denominator for immunisation coverage rates. In addition, conducting a well-designed small-scale enumeration in a few LGAs will help provide additional reference point for microplans and GIS estimate data. The country plans to continuously update GIS population estimates in all the states and FCT and conduct the walk-through micro-planning (household enumeration) every 3-5 years to address denominator issues. So far, household enumeration has been conducted in 22 States and the figure is currently used for planning. There is a plan to conduct household enumeration in the remaining 15 states in 2018.

vii. Strengthen Operations research mechanisms

Operational research on RI in Nigeria is weak with paucity of data on childhood diseases and the impact of immunisation on reducing disease burden. Several studies have been conducted to determine factors contributing to poor immunisation performance in Nigeria, however, results have had little impact on the immunisation system.

Operations research interventions will include:

- Strengthening the country's research institutes and departments.
- Regular studies on improving immunisation uptake (demand creation, card retention, etc.) which will be coordinated at all levels to ensure that the result of the studies can be made operational.
- Develop a framework to guide the implementation of operations research and ensure that studies have an impact on the immunisation system.

viii. To introduce electronic vaccine registry to capture individual immunisation record

Many deliveries are not recorded in the birth registries especially in areas with high rate of home deliveries, which is where low immunisation coverages are predominant. Furthermore, the current paper-based child immunisation registration and tally, contributes to the data quality problems.

Electronic immunisation recording is a strategy that can help in tracking children from birth till point of immunisation completion and more. Since the country has adopted the DHIS2, the electronic vaccine registry can be deployed on the tracker module to assign a unique ID to each child delivered, register he/she immediately, and track to ensure that the vaccination schedule is completed. The system with its unique ID, will also allow for updating a child's record irrespective of the service delivery point in the country where the child is vaccinated. Nigeria plans to introduce electronic immunisation registry. It has been implemented in many countries Nigeria will commence introduction after a team of experts have reviewed the existing Electronic Immunisation Records (EIR) module in various settings and recommend suitable solutions for Nigeria. The EIR technology will be piloted in 2-3 states before it is scaled up to other states.

ix. Pass enabling law and develop guidelines

Manipulation of data by health workers and lack of enforcement of accountability measures at all levels is a big challenge. The NPHCDA will work to review the National Immunisation Policy to incorporate regulations on data falsification. There will also be the establishment of an accountability mechanism with clear reward and sanction measures from national to health facility levels, to help to address data quality issues in the country.

x. Strengthen human resource capacity, management and organization

Human resource factors such as weak capacity in the use of data tools and the DHIS2, poor attitude of health workers and EPI managers towards data collection and the use data for action, impact data quality. Staff are poorly motivated to record data accurately. Findings from the Pentavalent Vaccine Post-Introduction Evaluation (PIE) showed that only 36% of HFs recorded any prior doses of DPT in their new registers, and only 56% reported updating registers with information from a child's immunisation card.[21]

Strategies to address these include:

- Training and retraining of frontline health workers on use of EPI tools for data entry, analysis and decision making.

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

- Capacity building for EPI managers on the use of the DHIS2 platform, electronic data reporting using SMS or other strategies, use of EPI data tools, data monitoring techniques for RI, use of data for action and monthly supportive supervision.
- Reward HFs with the most complete and timely RI reporting through bonuses, certificates and recognition of high performing healthcare staff.

These approaches to deal decisively with both the numerator and denominator issues, will significantly improve the estimation and use of immunisation data. In addition, it will provide information to monitor the programme's progress over time and improve its effectiveness in reaching every child. In the long term, our vision is interoperability between DHIS2, logistics and other relevant data platforms, allowing comprehensive view and advanced analytics of what is really driving immunisation coverage in the states of Nigeria.

The data management interventions are estimated to cost $63.2 million between 2018 and 2028, with some of costs to be borne at the national level and others at the state/LGA level. Figure 17 below shows the breakdown of costs across the different intervention areas and key cost drivers per intervention.

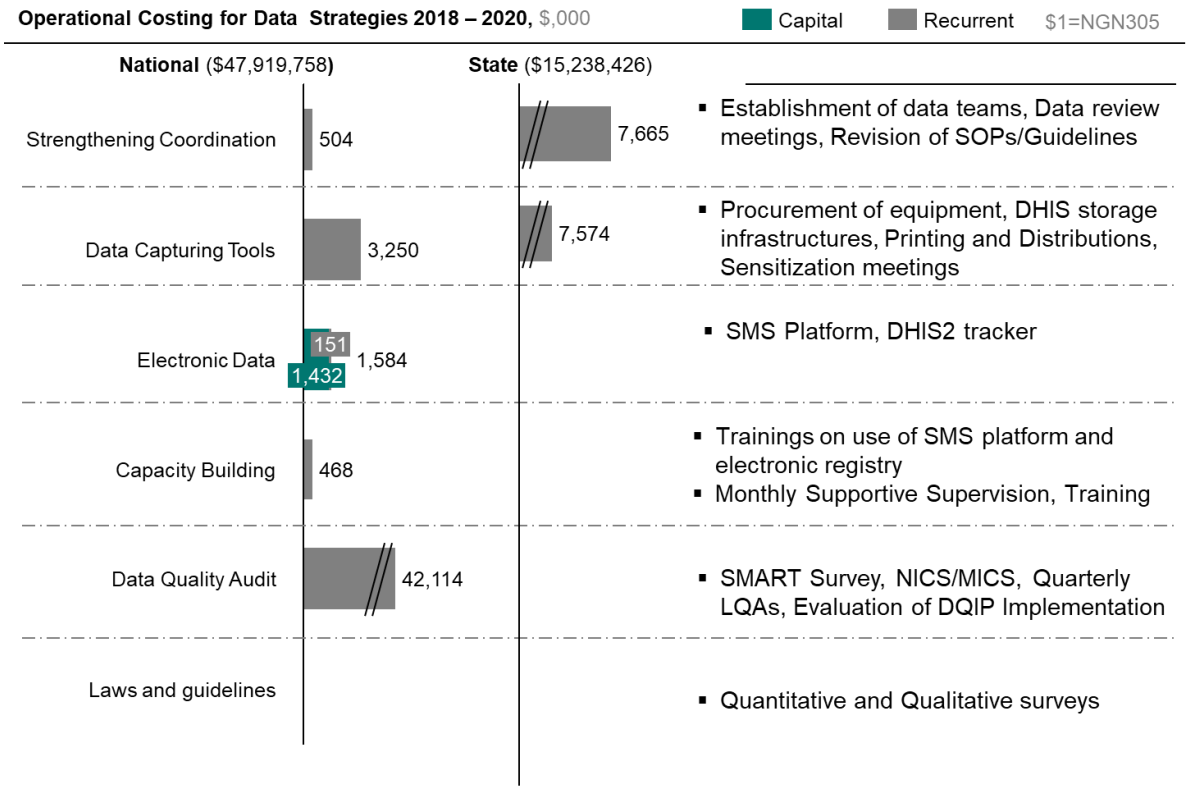

Figure 17: *Operational costs for data management*

Cost estimates were derived from the detailed work plan provided by the data management sub-group and eventually reviewed by the task team and finance team.

6.6. Human Resources for Health

Nigeria is experiencing a critical shortage of health workers (doctors, nurses, midwives, community health workers, laboratory technicians) as is demonstrated by the low health workforce density of

1.95 per 1000 population compared to the WHO recommended 2.28 per 1000 population.[22] In addition to the inadequate pool of healthcare workers, health workforce distribution across the country does not reflect the needs. This is further worsened by the migration of health workers in favour of urban, private facilities in southern states or outside the country.

The Nigerian health sector has recognized that planning for a robust health workforce is a critical component of a comprehensive health strategy. As a result, the National Human Resources for Health Strategic Plan (NHRHSP) 2016-2020 was developed with the overall objective of ensuring adequate and equitable distribution of appropriately skilled, trained, and motivated health workers, to provide quality health services. The strategies and interventions laid out in the NSIPSS build on NHRHSP, with a focus on strengthening HRH for immunisation and PHC service delivery across six thematic areas within the HRH:

i. Planning and policy for HRH
ii. Production of health workers
iii. Recruitment and retention
iv. Capacity building
v. Improving attitude of health care workers
vi. Performance management

i. Planning and policy for HRH

Adequate planning based on evidence and needs of the health sector is critical to improving the recruitment and retention of qualified HRH in the country. The production of health workers in Nigerian health training institutions are currently not determined by any evidence-based HRH needs. Furthermore, policies to guide HRH strengthening are often not based on data and are usually poorly implemented due to lack of adoption at sub-national levels. The last nationwide HRH assessment was conducted in 2008 and most states in Nigeria have not conducted an HRH audit in over 10 years. Regulatory bodies and the HRH planning divisions of all levels of government as well as the private sector need to perform their functions according to evidence-based needs, which should be reviewed periodically in response to rationally-determined staffing gaps in both private and public institutions.

The shortage of qualified health workers informs the need to modify existing policies to include multi-tasking and task-shifting of available health care workers, especially at the PHC level. Additionally, curriculum of health worker training institutions has not evolved sufficiently to meet the current needs of the PHC service delivery.

Strategies to address issues with planning and policy include:

- Institution of a routine HRH assessment at national and subnational levels: An HRH assessment is critical in identifying the gaps in healthcare workers. This assessment will be done with the participation of and support to the human resource departments of the FMOH and NPHCDA at the national level and the SMOH and SPHCDAs at state level. States will be supported to conduct HRH assessments/audit at least once a year and nationally once every 3 years. States and LGAs will also be supported to conduct workload analysis using the

[22] WHO-AFRO: 2007-2017 Africa Health Workforce Observatory. *Retrieved September 2017*

Workload Indicator of Staffing Needs (WISN) approach, to help in quantifying the HRH implications of quality service provision and more efficient deployments and redeployments of staff.

- Planning to meet the requirements of the health sector: Results of the HRH assessments will be used in identifying the HRH needs at various levels and will guide health worker training institutions in determining the number of different health workforce cadres to be trained. Technical support will be provided to the FMOH/NPHCDA in operationalizing the National Health Workforce Registry (NHWFR) established in 2011, in collaboration with health care workers' regulatory bodies. The NHWFR will guide the number of trainees to be enrolled in the different types of health worker training institutions each year, based on the identified HRH needs.
- Revision of policies to expand scope of work of health workers: NPHCDA, FMOH, development partners, professional and regulatory bodies will jointly review the existing HRH policies in the country to expand the scope of work of health workers along international best practice, to make the most use of available health workforce. In parts of the country where there is a dearth in qualified health workers, the scope of work of available health workers will be improved through in-service short-term trainings to temporarily bridge the gap in HR shortage, until the adequate number of health workers become available for the identified need. The work burden, available time, skills and qualification of health workers amongst other factors will be taken into consideration in the selection of health workers for the proposed multi-tasking training. The workload analysis using WISN will further provide critical inputs for this.

ii. Production of health workers

In 2012, there were 27 accredited Medical schools in Nigeria, with only 28% of them located in the northern part of the country. Every year, about 2,300 students graduate from the 27 accredited schools of medicine. Furthermore, in 2012, there were 56 accredited Colleges/Schools of Health Technology offering training programmes for Community Health Extension Workers (CHEWs) and Junior Community Health Extension Worker (JCHEWs) training programmes and 14 Community Health Officer (CHO) training institutions. Of the 89 nursing schools recorded in Nigeria in 2009, only 76 were accredited in 2012 as up to 10 schools of nursing and midwifery lost accreditation between 2009 and 2012. The lack of appropriate infrastructure and under-qualified tutors resulted in a decline in the country's ability to produce qualified health workers in the medium to long term.

Furthermore, pre-service health worker trainings are mostly didactic and disconnected from the current practical knowledge requirements of a functioning health system. This results in the production of health workers that are ill-prepared to join the health workforce.

To improve the pool of quality of healthcare workers, the NPHCDA and key immunisation and PHC stakeholders will engage with relevant ministries, agencies and institutions to work on interventions that:

- Improve the number and distribution of accredited health worker training institutions:
    - To ensure optimal functionality of all available health worker training institutions, technical support will be provided to regulatory bodies to conduct a diagnostic to understand the issues around non-accreditation of health worker training institutions, with a focus on those located in northern Nigeria.

- Findings from the diagnostic will be used to advocate to for improved resourcing, management and other interventions needed to maintain quality and accreditation of health worker training institutions.

- Improve the curriculum of health worker training institutions: NPHCDA and FMOH will collaborate with the Community Health Practitioner Registration Board of Nigeria (CHPRBN), SMOH and SMOE to tailor pre-service classroom curriculum and field training to meet PHC needs. For example, courses on PHC data management and quality service delivery, health worker attitude and behaviours as well demand creation for PHC will be reviewed and updated to reflect current ongoing and proven interventions in optimizing healthcare worker performance.

iii. Recruitment and retention of health workers

The mechanisms for recruitment of health workers in the country largely follow the general civil service procedures and processes. However, the lingering moratorium on recruitment in many states despite severe health worker shortages, have placed serious limitations on the capacity of the health sector to absorb the load of fresh health workers produced via the numerous health training institutions in the country. These embargos are mostly due to economic constrictions and point to the fact that much of the factors that have limited the effective take-off of the HRH reforms in the health sector are symptoms of broader socio-economic and political malaise. When recruitments happen, they are often not adequately responsive to the HRH dynamics in the sector.

Furthermore, there is a high rate of staff transfer across health facilities, resulting in the poor retention of trained skilled personnel. To address this, national and states will develop and enforce policies that prevent transfer of health workers within one year of receiving a training on immunisation and or PHC service delivery.
Strategies to address recruitment of health workers include:

- Recruitment based on needs of the health sector: In collaboration with donors and partners, NPHCDA and FMOH will advocate for recruitment and deployment of health workers based on objectively identified needs (programmatic and geographical) at national and sub-national levels. Needs identification will be based on proposed routine HRH assessments and workload analysis.
- Development of a costed HRH recruitment plan: Insufficient funding for HRH is one of the reasons for shortage of healthcare workers in most states in Nigeria. This implies that most states will be unable to fill all identified HRH gaps within a short period of time, hence the need for medium to long term projection and costing of HRH needs. Technical support will be provided to states in the development and costing of the plan. Financial sustainability of HRH plans will be boosted through advocacies for inclusion of the costs in the states' medium-term plans (MTSS) and budgets.
- Task-shifting: Over the last one year at NPHCDA, staff have been task-shifted to fill gaps in the immunisation and PHC programmes, through targeted capacity building. NPHCDA will provide technical support to states to effectively roll-out task-shifting initiatives to ensure optimal and equitable utilisation of available health workers.
- Create incentive Packages: The working conditions and salaries of healthcare workers remains a challenge for their retention. Incentives that will be explored to improve retention include tax breaks for PHC workers, subsidizing some living expenses for those in rural/hard to reach areas, recognition and awards, amongst others.

iv. Capacity building of health workers

The health worker shortage is further compounded by the fact that health worker skills, competencies and clinical experience are often not suited to the populations they serve. Compared to frontline worker cadres in other countries, CHEWs and JCHEWs in Nigeria have lengthy training, with two to three years of formal health education. However, this training is uneven in quality, and there is a missed opportunity for a more holistic training as JCHEWs do not receive training on immunisation.

Continuous capacity building of health care workers will involve the following approaches:

- NPHCDA and SPHCDAs will revise/update training packages to be more hands-on and incorporate modern, innovative adult learning and mentoring techniques such as on-the-job mentoring, peer to peer learning, amongst others.
- Conduct on-site on-the-job trainings at the primary work locations of health workers, where possible.
- Advocate for continuous in-service training as a requirement for license renewal for CHEWs and JCHEWs.

v. Improving attitude of health care workers

Evidence has shown that frontline health workers are a major source of information to caregivers for routine immunisation and other health services. Conversely, many parents and caregivers are also not accessing health services due to negative attitudes of health workers and poor interpersonal engagement with them.
It is imperative that IPC skills and attitude of health workers be improved to d make them trusted allies of caregivers and in the communities. Many strategies are ongoing and will be strengthened/improved. These include:

- Training and re-training of health service providers on IPC skills, developing key messages and guides on how to deliver the routine immunisation messages, with emphasis on positive attitude towards caregivers.
- Production of job aids for facility and other frontline health workers such as flip charts and informative posters.
- Recognizing and rewarding outstanding health workers to motivate others to change their behaviour. It is important to note that while positive attitude is being encouraged on the part of health workers, factors that motivate health workers such as prompt payment of salaries, security and availability of health commodities for the delivery of services have to be in place to guarantee positive attitude.

vi. Performance management

Consistency in monitoring staff productivity and utilization will be key to the success of outlined interventions. NPHCDA, donors and partners will support SPHCDAs to ensure that job descriptions are available, and staff and their supervisors fully understand their roles and responsibilities. The dissemination sensitization and enforcement of health workers' codes for specific cadres and the Ministry of Health's "Code of Ethics and Conduct, and "Terms and Conditions of Service" will be undertaken to improve productivity and work performance at all levels. The performance of the health care workforce will be monitored through the implementation of the performance management system at various levels as well as performance appraisals, joint annual, reviews and

TWGs. In addition, measures for regular coaching, mentorship, and in-service training will be put in place. Performance-based incentives, will be encouraged at all levels.

Under-remuneration of health workers at all levels remains a big challenge that would require strong political will and significant reforms in policies, financing and broader civil service structures

6.7. Supplementary Immunisation Activities (SIAs)

The goal of accelerated disease control is to develop and implement strategies (campaigns/outbreak response and surveillance) geared towards control and elimination of Measles, Cerebrospinal Meningitis, Yellow Fever and Maternal and Neonatal Tetanus. These diseases contribute significantly to the under-five morbidity and mortality rates.

The disease specific targets include the following:

i. To improve measles control in country by using follow-up targeted campaigns.
ii. To eliminate Yellow Fever in the African region by 2020.
iii. To eliminate epidemics of Meningococcal Meningitis irrespective of the serotype.
iv. To eliminate Maternal and Neonatal Tetanus (MNT) by achieving less than one case of neonatal tetanus per 1000 live births, per year, in every Local Government Area in Nigeria, by 2020.

Supplementary immunisation activities provide opportunities for additional doses of vaccines to be administered to susceptible populations within a period, to achieve herd immunity that was not achieved through routine immunisation and protect the population from outbreak of VPDs.

Major challenges facing effective implementation of non-polio SIAs in Nigeria include:

- Inadequate and late contribution of counterpart funds/by States and LGAs for pre-implementation, implementation and post implementation activities (AEFI kits, waste management, supervision and funds for additional vaccination activities)
- Weak demand for SIAs, as vaccines are not administered house to house

These challenges are being addressed through continuous advocacy to states and LGAs (for timely release of funds), and deployment of innovative demand generation activities (community engagement strategy)

Measles

Persistently low routine measles immunisation coverage (41.7% -NIC 2016) and relatively low measles SIA coverage in 2013 (74%) and 2015 (84.5%) have resulted in a population immunity profile that has allowed increased transmission of measles virus among children < 5 years old with resulting morbidity and mortality. The incidence of measles in the Northern States continues to be quite high, compared to the Southern States. Movement of internally displaced people from recently liberated security-threatened areas in the North-East is also likely to have increased susceptibility and exposure among local populations because they did not receive routine immunisation.

Nigeria has embarked on implementing high quality measles SIAs targeting children aged 9 – 59 months from October 2017 to March 2018 starting with the northern high-risk states. This campaign is aimed at minimizing measles outbreaks by ensuring the high coverage of 95% in targeted populations through implementation of innovations to reach the unreached populations. To sustain

the gains from the campaigns and ensure progress towards achieving the regional goal of measles elimination, the programme shall:

- Strengthen measles case-based detection and investigation, laboratory expansion, data reporting, analysis and integration with YF and other VPDs to guide targeted responses. The 'CHIPS' will be incorporated for early detection and notification of the VPDs **(Short Term).**
- Periodically provide MCV through campaigns to targeted populations based on epidemiology and risk analysis. This will also be used as an opportunity to revitalize PHC services in those high-risk populations by providing essential resources for delivering health services **(Medium Term).**
- Introduce a second dose of MCV for children in their 2nd year of life through routine immunisation by December 2019. Adding a routine MCV2 will serve to establish a well-child visit in the second year of life, provide a timely opportunity for catch-up in children who missed MCV1 or any other vaccine **(Medium Term).**

Yellow Fever

In 2012, a single dose of yellow fever vaccine at nine months was introduced into the routine infant immunisation schedule. However, yellow fever vaccine coverage in routine immunisation is still very low (38.8% - NICS 2016). Nigeria has 20 States that are high risk for yellow fever based on an assessment that was carried out in 2008. A work plan was developed for implementation of wide age group preventive campaigns in 5 phases, in the high-risk states, from 2013 to 2017. Due to vaccine supply issues, only one phase of the YF campaign targeting persons aged 9 months to < 45 years was conducted in 2013 in three states, Akwa Ibom, Cross River & Nasarawa; with post campaign survey coverage of 76.75%. The delay in implementation of campaigns coupled with the recent outbreaks of yellow fever in some African countries like Angola, Ghana, Liberia, and Cote d'Ivoire and Central African Republic (CAR) poses a risk to Nigeria. Consequently, the country has amended the plan for the phased preventive mass vaccination for the 20 high risk States starting in 2018 and ending in 2021.

The second phase yellow fever campaign will be implemented in April 2018 in Taraba, Benue and Plateau states using 13.6 million doses. To reduce the risk of yellow fever transmission the country shall:

- Strengthen the laboratory network for early confirmation of suspected yellow fever cases. (Short Term).
- Strengthen collaboration with port health services to improve screening and prevent international spread of yellow fever (Short Term).
- To periodically review the risk assessment including entomological surveys (Medium Term).
- Ensure implementation of the remaining phases of yellow fever mass preventive vaccination campaign by mobilizing additional resources particularly vaccines. An example is through Gavi support for implementation of Eliminating Yellow Fever Epidemics (EYE) strategy that may avail 20 million vaccine doses (Long Term).

Cerebrospinal Meningitis (CSM)

Nigeria lies in the meningitis belt that stretches from Senegal in West Africa to Ethiopia in the East. The 'meningitis belt' sweeps through northern Nigeria with expansion downwards towards the southern part of the country. The country experienced a devastating MenA epidemic in 2009 with over 56,135 cases and 2,489 deaths (CFR 4.4%). Mass vaccination with meningitis A vaccine targeting all individuals between 1-29yrs of age in the meningitis belt was carried out from 2011 to 2014 with

validated coverage of about 85%. WHO recommends introduction of meningococcal A conjugate vaccine into the RI programme within 1-5 years following completion of the mass campaigns, along with a one-time catch-up campaign for birth cohorts born since the initial mass vaccination, who would not be within the age range targeted by the RI programme. Nigeria plans to introduce MenA into routine immunisation in the 1st quarter of 2019 and implement the catch-up campaign in the 3rd quarter of 2019.

Nigeria experienced another CSM outbreak between December 2016 and June 2017. A total of 14,518 suspected cases and 1,166 deaths (CFR= 8%) of CSM were reported from 25 States with Zamfara, Sokoto, Katsina and Kebbi States – which share borders with Niger Republic – mostly affected. Neisseria meningitidis serogroup C was the predominant (80.6%) cause of meningitis amongst those who tested positive. There was delay in responding to the outbreaks using the appropriate vaccine due to the rigorous process of accessing the vaccines from International Coordinating Group on Vaccine Provision (ICG) and lack of in-country stock. Using lessons learnt from this outbreak, the Nigeria Centre for Disease Control has already commenced the reactivation of the Emergency Preparedness and Response Committees (EPR) at all levels for effective and prompt response. National and State Emergency Operations Centres have been established for coordinating and managing outbreak operations. In addition, mobile laboratories will be setup and relevant health workers (medical officers, nurses, laboratory scientists) redeployed to the affected states. This outbreak has necessitated the programme to seek NGI-TAG guidance on the vaccine type for introduction into routine immunisation, even though there was already approval from Gavi to introduce MenA.

Nigeria is planning to pre-position Men ACWY vaccines in anticipation of the next meningitis outbreak in November – March 2018. However, the cost of the vaccine is very high ($6.5-25 per dose) for a country with a high susceptible population and currently going through economic recession. Gavi has had a role in shaping the market price for new vaccines and can assist in shaping the market price for the Men ACWY vaccines. This would enable the country to have some vaccines available for immediate response prior to accessing the ICG stock.

To ensure timely response to future CSM outbreaks, in the short-term Nigeria shall:

- Strengthen meningitis case-based surveillance through improved detection and provision of logistics for investigation (lumbar puncture) and laboratory confirmation. This will include the establishment of a highly sensitive community-based surveillance system through the introduction of real time surveillance data management system that feeds into the IDSR network. The existing polio structure will be utilized to support the activity. **(Short Term).**
- Timely response to outbreaks by prepositioning antibiotics for case management and Men ACWY vaccines for reactive vaccination campaigns **(Short Term).**

Maternal neonatal tetanus elimination (MNTE)

Nigeria remains one of the 19 countries globally that is yet to achieve MNTE. The 2013 NDHS revealed that, NNT is responsible for 4% of all neonatal deaths. The proportion of deliveries at home has remained very high and could be partly responsible for the high prevalence of NNT in the country. Nevertheless, Nigeria has implemented MNT elimination activities. The country had secured the policy of including TT in its routine immunization schedule for pregnant women who can still proceed to complete the schedule even after delivery.

In 2010 Nigeria conducted the phase 1 campaign activities with 3 rounds of TT campaign in 60 LGAs in three states (Abia, Rivers and Ogun) (State wide) with 63% coverage. In 2011, phase 2 activities commenced in 29 HR LGAs in 5 states (Cross River, Akwa Ibom, Borno, Yobe and Imo) as against 56 High Risk LGAs in 19 states initially planned for Phase 2. Funding and security challenges have impacted the scope and mode of campaigns in some states. In 2012 Nigeria identified 61 high risk LGAs for SIA in South East and South West zones. The first, second and third rounds of campaigns were in round was held in October 2014, March 2016 and September 2016 respectively. A post campaign coverage survey was done in October 2016 with a result of 58.2%. Pre-validation mission for MNTE was conducted in Nigeria in December 2016, but it was not possible to undertake a complete risk analysis of LGA performance due to data completion errors and incompleteness of data. Progress is very slow on all the strategies of MNTE. Recent statistics indicate a significant drop in the number of reported cases of NNT, from 468 in 2013 to 104 cases in 2014 and 53 cases in 2015.

Some lessons learnt from previous campaigns

- The use of ambulances as a mobile vaccination post created more awareness for the campaign.
- Evening immunization in high risk settlements improved the coverage.
- Confirmation of TT status of clients by vaccinators before vaccination improved data quality.
- Printing of exercise books with TT schedule distributed to all the eligible clients increased awareness (WCBA).

Pre-validation mission for MNTE was conducted in Nigeria in South East and South West zones in March 2017 and May 2017 respectively. The South-east zone has been validated. The need to fast track MNTE activities is also acknowledged by NPHCDA and partners are encouraged to support the government in achieving Maternal and Neonatal Tetanus Elimination in Nigeria. The NPHCDA is working with partners to conclude the risk analysis in the South-South zone and the three northern zones.

The schedule of SIAs is attached as annex iv.

Nigeria will require $482.7 million between 2018 and 2028 for SIA vaccines. Of this amount, the country will provide $143.7 million (30%) through budgets and other sources (see financing section) and request $339 million (70%) from Gavi.

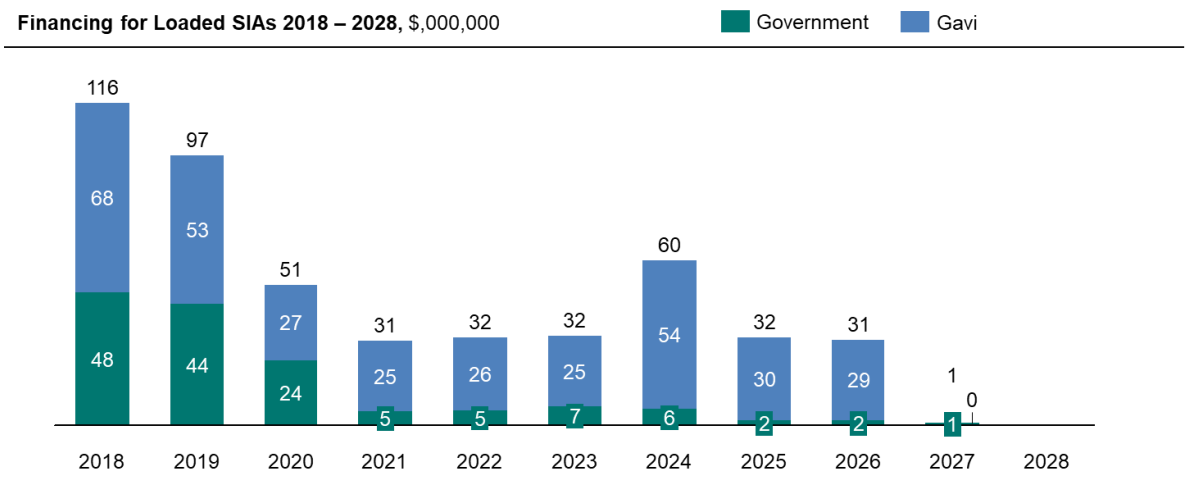

Figure 18: *Loaded vaccine financing for SIAs*

Nigeria will require $246 million for SIA operations, between 2018 and 2028. Of this amount, the country will provide $68.7 million (22%) and request $177.3 million (78%) from Gavi.

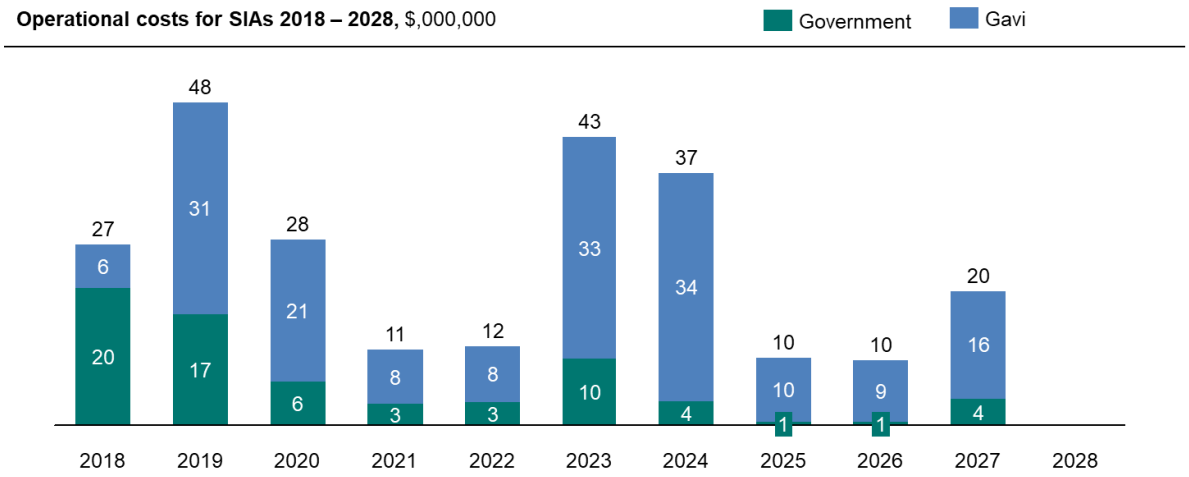

Figure 19: *Operational costs for SIAs*

The cost estimates for SIA operations is premised on the assumptions that Nigeria will fully fund the operational cost for MNTE, Gavi will fund Men A and Yellow Fever preventive campaigns and measles campaign will be co-funded by Gavi and the government.

7. Enabling environment and interventions

7.1. PHC strengthening

Health service delivery has been affected negatively by the fragmentation of primary health care programmes leading to poor coordination, duplication and inefficient use of scare available resources, weak management, poor integration and lack of accountability. Roles and responsibilities are not clearly defined resulting in ineffective service delivery. Across the country, dilapidated health infrastructure, inadequate and poorly maintained medical equipment, and shortage of health workers, abound. Basic life-saving commodities and drugs are commonly out of stock in primary health centres, and not affordable for the poorest when they are available from other sources. Qualified health work force distribution is uneven, with most located in urban centres and in private facilities. These challenges along with poor remuneration of health workers, and poor funding of operational costs for facilities and community-level outreach services, also contribute significantly to poor functionality of health facilities, ineffective mobilization and delivery of community-based interventions.

Out of 9,556 wards across the country, about 800 are without a single primary Health Care facility. Of the 30,000 primary health care facilities in Nigeria, only about 6,000 health facilities (20%) are functional. The poor functionality of primary health care facilities has resulted in a dependence on private and secondary health facilities for basic care, for those that can afford them. Hence, the

private sector plays a significant role in delivering and financing healthcare in Nigeria – provides care to over 60% of Nigerians and accounts for 40% of healthcare facilities.

To improve governance of the PHC system, the primary health care under one roof (PHCUOR) approach became a national policy agenda following its endorsement by the 56th National Council on Health (NCH) in May 2011. The policy outlines specific steps and approaches involved in establishing a functional State Primary Health Care Development Agency or Board (SPHCDA/B). To monitor progress and assist states identify, in a systematic manner, areas within PHCUOR framework in which they need support, PHCUOR Score Card was developed in 2012 and is comprised of 9 specific Domains. The domains include Governance, Legislation, Minimum Service Package, Repositioning, System Development, Operational Guidelines, Human Resources, Funding Sources and Office Setup. However, the expected impact of the PHC under one roof (PHCUOR) policy that was formulated to reduce fragmentation for better integration of PHC services under one authority is yet to be felt. The NCH in its 58th Session in 2013 further approved the national guidelines and policy document for implementation through its Resolution 29.

On December 9, 2014, the National Health Act was signed into law and it is intended to provide a framework for the regulation, development, and management of the national health system in Nigeria. The National Health Act creates a Basic Health Care Provision Fund (including 1% of the consolidated revenue of the federation) to provide Nigerians with access to basic health care services. By the end of 2017, implementation of the BHCPF had not commenced.

On 10th January 2017, the President inaugurated a committee to fast-track implementation of the National Health Act at the symbolic flag off of PHC revitalization at the PHC Kuchingoro, Abuja. The National assembly demonstrated support for the achievement of PHC by establishing a PHC revitalization support group within the 8th National Assembly. This led to the House resolution to conduct a public hearing on the motion on funding and revitalization of PHC system in Nigeria in November 2016.

The CHIPS programme was designed to improve on the Village Health Worker (VHW) concept established by the NPHCDA and endorsed by the Federal Government of Nigeria. It aims to introduce about The Introduce a large cadre of Community Health Influencers and Promoters 15 to 20 CHIPS per ward (over 100,00 CHIPS nationwide) to build community demand for all primary healthcare services. They will lead community mobilisation and efforts to link communities with services. The CHIPS was officially launched by the president on the 6th of February 2018.

In addition to the ongoing reforms mentioned above, focus will continue to revamp Primary Health Care in Nigeria in the following areas:

7.1.1. Strengthen Governance and Leadership

Governance and leadership impediments to the achievement of immunisation and primary health care objectives will be addressed by identifying and intervening on gaps in PHCUOR implementation in States and Local Governments. Currently, states in Nigeria are at various stages of implementation. Starting with states that perform poorly with regards to PHC indicators, the following critical steps will be implemented to address governance issues:

i. Examine the multiple PHC programmes that promote disintegrated service delivery at the health facilities and community levels (such as EPI, IMCI, RMNCH, Nutrition, Campaigns, etc.) with the view to recommending unambiguous nationally appropriate integrated service content and delivery process.

ii. Ensure that states have agreed on new roles of SMOH, Local Government Service Commission (LGSC), as distinct from the SPHCDA; and that leadership and management structures, PHC Programmes, PHC facilities, PHC human and financial resources are repositioned to the SPHCDA.
iii. Ensure that the SPHCDA has a strategic health plan, and a costed operational plan in line with the approach of one management system, one plan and one monitoring and evaluation system.
iv. Support states to establish effective management systems (financial, HRH, HMIS, drugs and commodities) and implement quality assurance and integrated supportive supervision systems.
v. Define the gaps and the cost of providing the minimum number of HRH, and support states to redeploy or recruit as may be necessary.
vi. Support states to establish clear mechanisms for receiving and tracking funds from various sources (state budget, BHCPF, development partners, CSOs, Private Sector, philanthropists, amongst others).
vii. Conduct annual score card assessment exercises to inform advocacy efforts with State governors and legislators for leveraging domestic resources.

7.1.2. Establish state level stakeholder coordination mechanism for PHCs

In addition to the sub-national level coordination mechanisms proposed in section 6.1, the NPHCDA intends to advocate and adopt the MoU approach already being used by the Bill and Melinda Gates Foundation (BMGF) and some other partners. With guidance from the NPHCDA, all stakeholders implementing or supporting Primary Health Care mandates in the states at the PHC facilities or through community and outreach-based health services will be required to sign a State PHC compact (or MOU) to support the achievement of PHC objectives of the state.

7.1.3. Strengthen national level oversight of and support to states

Institutionalize the newly introduced quarterly meetings between the leadership of NPHCDA and the SPHCDAs, for results-based performance management, peer learning, strategy development, and rapid interventions on identified bottlenecks in states.

7.1.4. Implement a comprehensive PHC revitalization plan including infrastructure, tools, and equipment upgrade

The PHC revitalization strategy is aimed at achieving at least one functional PHC facility per ward in the country, to support service delivery. Improving PHC functionality includes upgrading PHC facility infrastructure to meet minimum standards[23], provision of needed equipment and making medical consumables available.

Through a phased approach, 1,000 out of 6,000 poorly functional PHCs will be identified and selected for improvement over an initial one-year period, with corresponding investments in other facilities in the subsequent period. Important considerations for prioritization of PHC infrastructural improvement include disease burden/coverage of essential MCH services, and inequities in service delivery distribution.

Specifically, the following steps will be implemented to accelerate implementation:

[23] Minimum Standards for Primary Health Care. NPHCDA

- Revise and publish standards for assessing PHC functionality
- Assess and categorize existing facilities to ensure clear alignment of stakeholder focus to provide at least one functional PHC facility per ward
- Work with SPHCDAs to develop and maintain a database of all PHC facilities and document existing and planned interventions to improve functionality
- Identify 800+ Wards without health facilities and prioritize interventions based on access of wards to nearby facilities, population, and data on coverage of critical maternal and child health indicators
- Provide a clear, costed plan for PHC facility improvement including cost of new PHCs, cost of upgrade (for facilities with substandard physical infrastructure) and rehabilitation (for those with adequate infrastructure)
- Carry out a detailed analysis of all previously awarded PHC facilities to establish their status, and the appropriate actions for each facility
- Assess the completed facilities and identify those that health workers can be redeployed to, or that can be used to replace dilapidated facilities in the same wards
- Identify and reassess abandoned facilities and engage the contractors, and communities to determine status of payment and the requirement to complete those that can be completed
- Identify and sanction contractors and their accomplices that violate their terms of engagement
- Engage community members to use more local and cost-efficient approaches for revitalization
- Engage with the Ministry of Finance to ring fence funds for construction and equipping of PHC facilities so that they are not mopped up at the close of the year, when capital budgets are released late

7.1.5. Implement strategies for production, management and use of PHC data for action

The availability of comprehensive well-reported data for Primary health care requires that data is collected from the facilities, from outreaches and from the households in communities on a regular basis. Specific steps that will be taken are: Digitalize and create interface between other HMIS platforms with DHIS 2 within health facilities; digitalize (rapid SMS) and integrate community level data with DHIS 2; Harmonize and integrate supportive supervision; harmonize M&E structures especially at the facility and community levels; and document best practices for PHC services improvement. The integration of immunisation data into DHIS 2 has already happened.

7.1.6. Harmonize, strengthen and scale up community Health Services through the community health influencers, Promoters and services programme

The critical improvement steps to the VHW concept that characterize the CHIPS programme are as follows:

- Harmonize existing community level service structures that have similar scope with the village health worker concept into an improved, better focused, and coordinated approach.
- Based on the improved approach, promote efficiency by sharing the harmonized database of community-level human resource for health across the Federal, State, Local Government, development organizations and stakeholders partnering with the NPHCDA as well as the SPHCDAs to deliver on PHC mandates.
- Link CHIPS in a very explicit way to existing and new interventions and programmes that are being implemented to achieve rapid improvements in health outcomes in Nigeria.
- Based on the concept of primary health care under one roof, integrate CHIPS into the overall PHC system and with community and traditional accountability mechanisms.

- Ensure sustainability of the CHIPS strategy at scale by integration into the national and state strategic health plans.

7.1.7. Strengthen involvement, voice and accountability at the ward level

In line with the Ward Health System approach for PHC implementation in Nigeria, focused steps will be taken to strengthen community involvement, and voice and accountability. This will include review the terms of reference of the Ward Development Committees, Facility Health Committees and traditional structures to reflect their roles in recent innovations for delivery of immunisation and broader PHC interventions.

7.2. Disease surveillance

Communicable diseases and especially Vaccine Preventable Diseases (VPDs) remain among the leading causes of death, illness and disability in developing countries, Nigeria inclusive. Disease surveillance is a very important component of disease control programmes and is essential for monitoring the status of vaccine preventable diseases, vaccine safety and effectiveness of the new vaccines. In order to derive optimal benefits from surveillance, information generated must be accurate, complete and timely. The adoption of the revised International Health Regulations (IHR) by the World Health Assembly in May 2005 is a strong justification for all countries to have a robust disease surveillance system. In addition, an effective surveillance system ensures early detection of outbreaks for timely intervention. Nigeria has over the years made appreciable progress towards improving national capacity for effective surveillance and response for communicable diseases and especially VPDs such as Poliomyelitis, Measles, Yellow Fever, Tetanus and Cerebrospinal Meningitis.

Nigeria along with other WHO member nations adopted the IDSR at the regional committee meeting in Harare in 1998. IDSR promotes rational use of resources by integrating and streamlining common surveillance activities, encouraging laboratory confirmation of detected diseases and linking surveillance with response activities. IDSR implementation in Nigeria started in 2000 with building of capacities at all levels to detect, confirm and respond to public health threats. The first edition of IDSR Technical Guidelines in the country was produced and adopted in 2002. This was followed by the second and third editions in 2010 and 2015 respectively. Currently, IDSR lists 41 priority diseases under epidemic prone diseases, IHR diseases, diseases targeted for eradication/elimination and other diseases of public health importance.

The IDSR reporting system in the country is both health facility and community-based. In 2017, there was a total of 54,528 community informants in the country comprising among others traditional/spiritual healers, patent medicine vendors and religious leaders. Also, there was a total of 32,354 health facilities in the country comprising of 25,570 public and 6,784 private health facilities; but only 5,808 prioritized reporting sites. Only 8% (489) of the reporting sites were private health facilities. The key surveillance personnel at community, health facility, LGA, state and national levels are the community informants, health facility focal persons, LGA Disease Surveillance and Notification Officers (DSNOs), states epidemiologist/DSNO, and Chief Consultant epidemiologist respectively. There is significant partner personnel support for surveillance in the country especially from WHO and CDC. The same surveillance personnel reporting cases of VPDs also report other diseases and health events.

The VPDs that are part of the national surveillance system include Acute Flaccid Paralysis (AFP), Measles, Yellow Fever, Meningitis and Neonatal Tetanus (NNT). New vaccines that are part of the surveillance system are Paediatric Bacterial Meningitis (PBM) and Rotavirus.

The commencement of the ***MenAfriVac™*** campaign against Meningococcal Meningitis A in December 2011 helped to re-establish the AEFI surveillance in the country and a new body, the *National Expert Committee (NEC) for AEFI Case Review and Causality Assessment*, was inaugurated on 26th March, 2012 by the country's Honorable Minister of State for Health. In February 2018, this National Expert Committee was reinvigorated with appointment of new members. Immunisation safety /AEFI surveillance is a collaborative venture between the NPHCDA, National Agency for Food and Drug Administration and Control (NAFDAC) and the National Regulatory Authority (NRA) which is is the technical point of contact for vaccine testing, vaccine licensing and regulation. The NPHCDA is the National focal point for AEFI surveillance. It receives AEFI case reports from sub-national levels, leads investigations and ensures regular analysis and feeds results back down the system. It provides support to the states and share all reports and communications with NAFDAC, the NRA.

Table 2: *Major surveillance challenges and efforts being implemented at resolving them*

S/N	Challenges	Efforts being implemented
1	Inaccessibility to some areas especially the north east of the country due to insecurity	• Partnership with security agents including the military and civilian joint task forces. • Engagement of community informants in security challenged areas.
2	Inadequate laboratory capacity including logistics support (equipment, reagents and other consumables)	• Advocacy to leadership for additional laboratories and adequate supply of human and material resources. • Increased partner engagement to support the existing laboratories with logistics and other supplies.
3	Knowledge gap among key surveillance players such as the LGA DSNOs, clinicians and community informants	• Regular (at least yearly) conduct of trainings and sensitization sessions • On the job training during supervision
4	High turnover of trained surveillance personnel	• Regular (at least yearly) conduct of trainings and sensitization sessions. • On the job training during supervision.
5	Frequent health worker strike	• Increased involvement of private clinics. • Expansion of reporting network of community informants.
6	Inadequate active surveillance	• Regular monitoring of active surveillance in all states.
7	Weak ownership of surveillance especially at sub-national levels	• Advocacy to state and LGA leadership for surveillance budget allocation and timely release.
8	Inadequate AEFI reporting	• Reconstitution of national AEFI committee. • Review of AEFI surveillance guideline.
9	Poor data quality	• Training of key surveillance personnel. • Introduction of electronic reporting (AVADAR). • Introduction of electronic active surveillance/supervision • Regular (quarterly) data harmonization meetings

S/N	Challenges	Efforts being implemented
10	Delayed outbreak detection and response	• Regular monitoring of active surveillance. • Involvement of community informants. • Training and sensitization of key surveillance players
11	Inadequate feedback to stakeholders	• Weekly and monthly feedback is being shared with stakeholders.
12	Accountability issues	• Electronic monitoring of active surveillance/e-surveillance • Accountability framework is now in place for personnel working with partners (WHO, CDC). This ensures reward and sanction based on performance.

Proposed (new) strategies/interventions to improve disease surveillance over the next 10 years

The following interventions are deemed appropriate over the next ten years to improve surveillance performance in the country. The strategies try to address fundamental problems identified through external surveillance reviews, supervisory missions, stakeholder consultations and other internal assessments:

- One of the key challenges of public health surveillance in the country is shortage of human resources. For optimal performance, the surveillance system requires adequate numbers of key personnel such as Epidemiologists, Microbiologists, Entomologists and Veterinarians, amongst others. Addressing the health workforce needs and equitable distribution is critical and a key priority.
- Key surveillance players at different levels including the community will be regularly trained and sensitized to ensure a surveillance system that can be relied upon to provide timely information on prevailing diseases and other health related events.
- Surveillance tools will be updated and made available at all relevant levels.
- There will be expansion of reporting network of health facilities and community informants to ensure that all areas of the country are covered. All health facilities in the country including private health facilities and laboratories will be engaged and capacity built to become part of the reporting network with 'zero' reports obtained from facilities where appropriate.
- Electronic surveillance has already been introduced in 16 states of the federation and the remaining states are expected to come on board in 2018. In addition, Auto-Visual AFP Detection and Reporting (AVADAR) is being implemented in Adamawa, Borno, Sokoto and Yobe states. There will be dedicated phone numbers which are toll free for reporting of diseases and other health events to the surveillance system. The country will invest in scaling these up.
- Data quality is key to making the right decisions. Electronic surveillance, regular data harmonization meetings, training of surveillance workforce and reviewing data collection tools to make them more user friendly will be implemented to improve the quality of surveillance data.
- Functional laboratory system is critical for disease surveillance and control programmes for confirming outbreaks and supporting management and response. The laboratories also monitor disease trends, impact of interventions as well as progress towards control objectives. Investments will target making public health laboratories functional at all states and establishing referral laboratories in all the six geopolitical zones.

- In order to improve on outbreak response in terms of timeliness, quality and coordination, a functional coordination centre (epidemic preparedness and response), must be functional at all levels. These coordinating structures must be well trained and provided with need resources to deliver optimally. The operational arms of these structures, the rapid response teams must also be functional. Relevant drugs, reagents and other consumables must be prepositioned at all times to ensure timely response.
- Special efforts to strengthen surveillance among high risk populations (e.g. migrants, nomads, minorities) and areas (hard to reach, borders) must be devised including having border and nomadic informants.
- Surveillance in security challenged areas should be further strengthened. Partnership with key stakeholders working in the security compromised areas such as the military and civilian jioint task forces and community informants is paramount. Such stakeholders require intensive sensitization and provided with the necessary tools to deliver.
- Public health surveillance is resource intensive and must be properly funded at all levels. Adequate funding requires among others proper budget and timely release of budgeted funds. Adequate plans must be made on the sources of funding (internal and external). adequate funding ensures implementation of surveillance work plans including outbreak response activities.
- Improved accountability is required in public health surveillance especially in terms of reducing abuse, assuring compliance with procedures and standards, and improving performance. Financial and performance accountability are key to optimal performance. Accountability frameworks to be developed/adapted to ensure that necessary checks and restraints as well as motivation measures are put in place.
- Regular performance monitoring and intervention systems to be in place to fine tune the system as at and when required. Regular reviews (internal and external) and supervisory missions will be conducted to identify key gaps and best practices that need to be scaled up.
- Partnership and coordination are essential in public health surveillance. The government should drive and coordinate surveillance efforts in the country while partners should support the government to achieve all desired objectives. Partners have a special role in providing the needed funding and technical expertise among others to ensure the smooth running of surveillance systems. Quality advocacy sessions to donors and other stakeholders are among the top activities in this regard.

The cost implications for this surveillance section is yet to be determined.

7.3. Leveraging the Polio Transition

Nigeria is on the verge of interrupting Wild Polio Virus (WPV) and obtaining Regional Certification for Polio eradication. Certification, in this context means the absence of **WPV transmission** for at least three consecutive years in the presence of certification standard surveillance.

Once Nigeria interrupts WPV, the anticipated certification will bring along the inevitable dissolution of the GPEI partnership, and the skills, knowledge, and resources of three decades of Polio eradication efforts. The GPEI-funded programme comprises the single largest source of external

technical assistance, personnel and infrastructure, and provides support for other health interventions, including immunisation and surveillance in Nigeria.

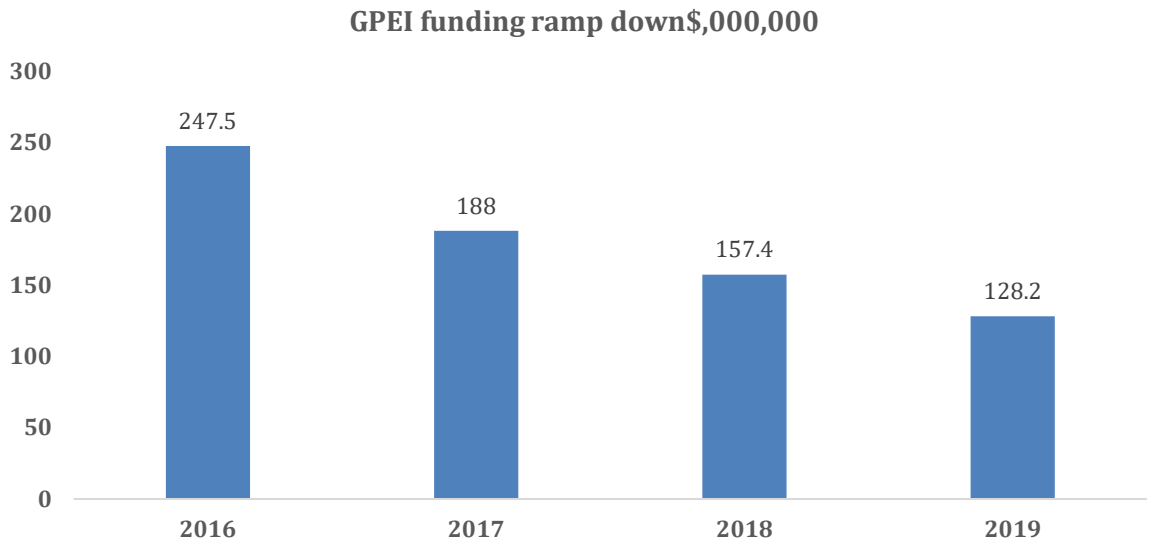

Figure 20: *GPEI funding ramp down*

The GPEI budget curve for polio eradication efforts in Nigeria dropped from $18,326,000 to $8,097,000 between 2016-2019, a56% decrease. This decrease will have a huge effect on the Polio persons supporting the country's programme. An asset mapping concluded in 2017 shows a total of over 23,000 polio funded personnel across various programmatic areas.

Table 3: *Polio funded personnel*

	NPHCDA	WHO	UNICEF	CDC	NSTOP	CORE	TOTAL
Implementation and service delivery		2,558	563		184	36	3,341
Capacity Building		1	1		1		3
Monitoring and data management	220	25	4	1	19	2	271
Surveillance		65			1		66
Communication and community engagement		1	17,274		16	1,884	19,175
Resource Mobilization		1	2				3
Partnership and coordination		15	1	1	3	1	21
Planning		20	3	1		2	26

Management and operations		221	78	1	17	41	358
Policy and strategy		1	1	2		1	5
Total Personnel		**2908**	**17927**	**6**	**241**	**1967**	**23,269**

The dissolution of the GPEI partnership carries high risks which, if left unaddressed will result in the loss of the gains made by the Polio programme. A risk of post certification VDPV emergence associated with bOPV withdrawal in the context of sub optimal population immunity, and community circulation from containment breach of polioviruses cannot be ruled out. It therefore remains crucial, after certification, to ensure that by eliminating these primary risks, Nigeria will be able to remain Polio-free by maintaining the essential functions of the Polio programme.

To ensure sustenance of polio free status post certification, global standards for addressing incidents after certification have been documented in the Post Certification strategy guidelines.

Towards this objective, the goals of the GPEI's Polio Post-Certification strategy (PCS) include:

(1) Containing polio viruses;
(2) Protecting populations from Vaccine Associated Paralytic Polio virus (VAPP) and VDPVs; and providing access to safe, effective polio vaccines for long-term protection by coordinated withdrawal of bOPV over a 12-month period and introduction of IPV over the next decade
(3) Prompt detection and sensitive surveillance with adequate capacity and resources for response.

The PCS will start at certification, and extend for 10 years after certification, subject to risks from organizational, environmental, and programmatic factors and may be updated by the country and partners.

The goals of the PCS are in line with the national health priorities identified by Nigeria's ongoing Polio Transition Planning process, which comprises strengthening PHC systems; Routine Immunisation and Disease Surveillance/Outbreak Response. Nigeria has initiated intensified efforts to strengthen routine immunisation, a key strategy for polio eradication.

Mainstreaming Polio assets to support Routine Immunisation

The Polio transition sees the declaration of a state of emergency on RI and establishment of NERRIC as an opportunity to make available technical support across the selected high and medium risk states to ensure achievement of the RI goals. The polio programme has built extensive capacity at federal and state level across key technical aspects of strategic planning, programme management, capacity building, routine immunisation, communication, social mobilization, surveillance, outbreak response, data management, monitoring and evaluation. The programme plans to tap into the human resources available to support routine immunisation strengthening at all levels, with a focus on priority states.

a) Technical Assistance

Technical assistance is proposed over a 5-year period at State and LGA levels with a view to support and mentor teams during this period with clear capacity building plans to ensure maintenance of these functions by government after a five-year period.

These personnel will include State Coordinators, RI Focal Persons (who serve as Deputy Programme Managers of the SERICCs) as well as LGA Facilitators in high risk (18) and medium risk (10) states. LGA

Facilitators will be expected to provide onsite support in three LGAs per Facilitator, working closely with the LGA teams.

b) Mobilization and Health Promotion at Community level

Voluntary Community Mobilizers (VCMs) will be expected to transition to the CHIPs programme for promotion of health practices and mobilization. A total of 17542 VCMs documented in the Asset mapping process at an average annual standard cost of $648 and $972 for VCMs and VWSs are a potential pool that will be transitioned across the states.

Mainstreaming Polio Eradication under an Integrated Health System

The transition proposes an integrated process, whereby Polio functions required for maintaining a Polio-free world are mainstreamed, deliberately and holistically strengthening the health system and promoting equity in reaching the last child; with Polio immunisation as a component of the strengthened Routine Immunisation initiative. High routine immunisation coverage will establish a strong base for population immunity and prevent polio outbreaks, providing a sustainable platform for withdrawal of bivalent oral polio vaccine (bOPV), and introduction of inactivated polio vaccine (IPV), towards eventual withdrawal of all oral polio vaccines. Strengthening routine immunisation through strategies for reaching the doorstep of every child requires emphasis and leveraging on PEI 'Intangible Assets' and best practices such as supervision, community engagement including NGOs, data triangulation, mapping, microplanning, etc.

It is critical to ensure the transfer of these intangible capacities and capabilities as well as tangible assets like the polio laboratories, Emergency Operation Centres (EOCs) and critical personnel from GPEI to government and other Agencies. The cost of these essential functions will remain after the GPEI ramp-down and must be built-in and funded by Government and other Agencies. Identification of alternative health initiatives and partners willing to support Polio activities in a post-certification era is, therefore, crucial.

Costing

The financial cost estimates required to maintain these essential polio functions are subject to the completion of the Polio Transition Business Case which will articulate assumptions and key decisions for the country plan. This document will form the basis for stakeholders to determine the organization and management of the transition activities, and high- level cost estimate.

Total costing for technical assistant per year for 443 technical personnel across the 18 states and Federal level is $12,131,139 with a 5-year cumulative cost of $60,655,695.

Table 4: *Cost of Polio technical assistance*

Technical Assistance	No of States/LGAs	No of Personnel	Annual Total Cost	5 Year Cumulative Cost
National Level Coordination	**NA**	**3**	$111,039	$555,195
State level Coordinators	18	18	$2,896,506	$14,482,530
State RI Focal Persons	18	18	$2,413,200	$12,066,000
LGA RI TA	18	382	$5,602,794	$28,013,970
State Operational support	18	4	$373,200	$1,866,000

Fleet support for State Coordinators (Drivers)	18	18	$734,400	$3,672,000
		443	**$12,131,139**	**$60,655,695**

8. Towards a domestically funded immunisation programme

8.1. Summary of vaccine and system costs

Vaccines

Nigeria will require $2.7 billion to fund procurement and first tier logistics of vaccines for routine immunisation and SIAs between 2018 and 2028. Nigeria intends to provide $1.95 billion (78%) and requests from Gavi $773.2 million (22%), to meet the need. Figure 22 below shows the year on year funding requirement and proposed government/Gavi split.

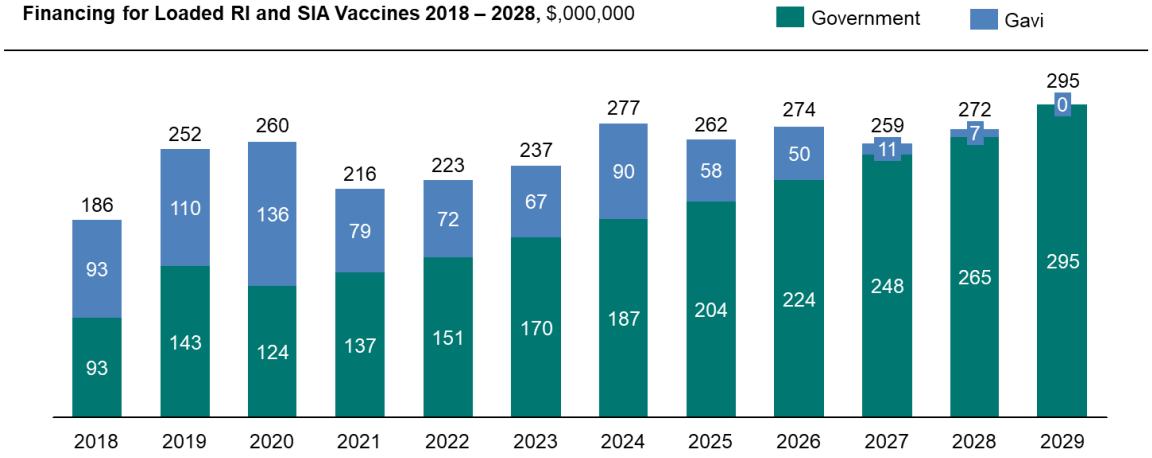

Figure 21: *Financing for loaded RI and SIA Vaccines 2018 - 2028*

Operations and systems strengthening

Nigeria will require $604.5 million to fund the operations and systems strengthening for routine immunisation proposed in this strategy, between 2018 and 2028. Of this, $121.9 million is for capital expenditure[24] while $ 482.6 is for operational expenditure. These RI operations and systems strengthening costs does not include the costs for the CHIPS, PHC strengthening, HRH and surveillance, which is estimated at around $200 million a year. Detailed costing for these areas and determination of costs at different levels and those already provided by other donors will be concluded when all the information is available.

For SIA operations, Nigeria will require $246 million for the 2018 – 2028. Nigeria will provide $68.7 and request $177.3 from Gavi.

The breakdown of RI operations and systems cost, and SIA operations is shown below.

[24] Defined by NPHCDA finance team as expenditure on fixed assets.

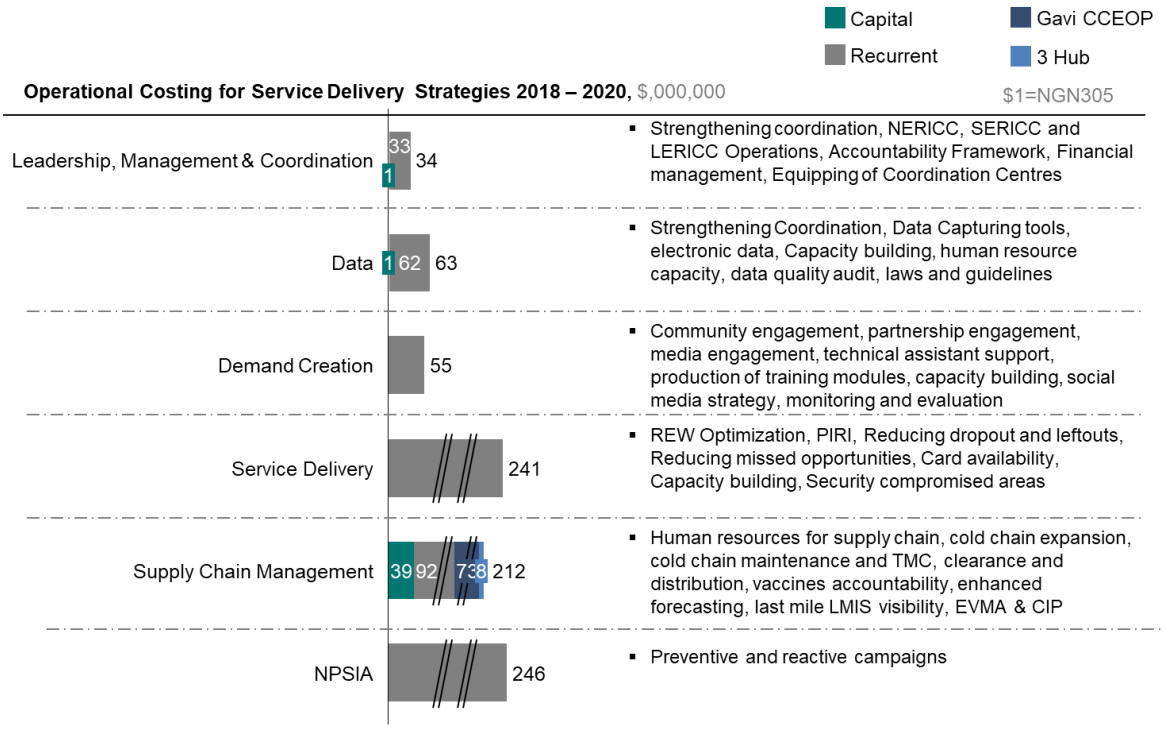

Figure 22: *Capital and operational costs for Routine Immunisation and SIAs*

8.2. Financing strategy for vaccines

Financing for procurement and first tier logistics traditional routine vaccines in Nigeria comes from the Federal Government through a mix of budget and loans. Gavi has funded new vaccines for routine immunisation and SIAs. State and LGA financing is usually for operations (mostly integrated with other service areas) at their different levels. The World Bank Vaccine Financing assessment shows that vaccine financing has grown about threefold over the last decade, mostly due to Gavi catalytic funding, with a 40:60 government Gavi split between 2014 and 2016.

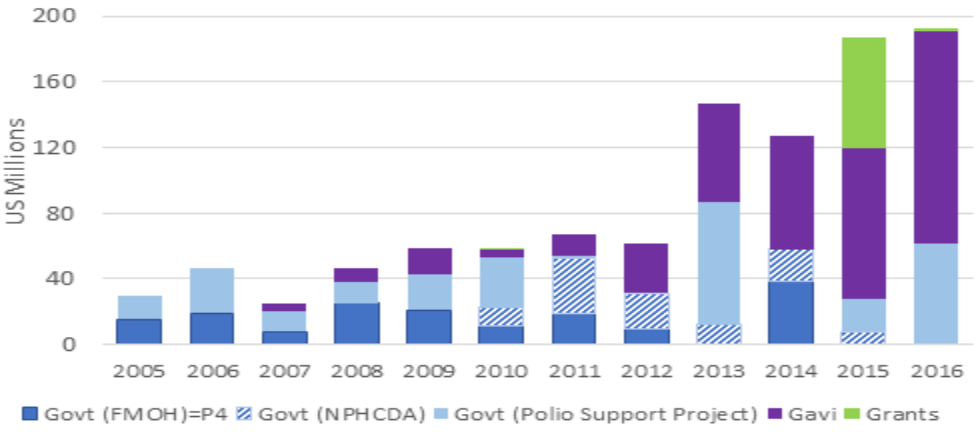

Figure 23*: Vaccine financing for routine immunisation and supplementary immunisation activities (including polio), 2005-2016, by source, Nominal $US*

Going forward, Nigeria is considering several short, medium and long-term options for sustainable vaccine financing. These recognize the constricted fiscal space for health, revenue realities in the short term and imperative to target additional innovative options. At this point, several engagements with the Ministries of Budget and National Planning and Finance has been positive and government has committed to the transition and meeting its co-financing obligations through the period. A letter of commitment from the Nigerian government to Gavi has been developed. The letter documents the FGoN's commitment and confirms the funding approaches. Through letter, the FGoN commits to annually increasing vaccine co-financing by approximately 10% each year until 2028. This will amount to a total of $1,945,949,675.58 by 2028, and over $295 million yearly subsequently.

Below are existing and other potential financing options being considered by government.

Short term approach (2018-2022)

i. FMOH and NPHCDA Budgets:

Government expenditure on health has been very low as a percentage of GDP. Since the Abuja declaration in 2001 which pledged to allocate at least 15% of the annual budget to improve the health sector the highest federal level budget allocation to health as a percentage of the total budget, was 5.95% in 2012. This dropped to 4.15% in 2017 and 3.95% in 2018.

Despite the low allocation to health, government has continued to show commitment to immunisation financing. Nigeria has never defaulted on Gavi vaccine co-financing; and the Government has provided about $29[25] million for RI vaccines and devices in the 2018 budget of the NPHCDA, a 116% increase on the 2017 budget for RI vaccines.

ii. Service Wide Votes:

The service wide votes are managed under the Ministry of Budget and National Planning and are used for contingencies and critical areas of national interest. The 2018 budget has $11.5 million under Service Wide Votes, for "counterpart funding for Global Fund and Gavi refund. The FGoN has commenced the process of setting up a budget line item specifically for immunization which will be assigned to the NPHCDA under the Service Wide Vote. The fund will increase annually to match co-financing obligations for vaccine procurement. This new measure will ensure reliable funding for immunization and provide Nigeria with the ability to front load funds to ensure appropriate and timely procurement.

iii. Loans and support from partners:

As shown in figure 24, government financing for vaccines has been drawn mostly from loans. The economic challenges with low oil prices and consequent constrained fiscal space, makes loans in the short term a pragmatic option. Nigeria is exploring a World Bank a loan of $50m for Polio and $69 for routine immunisation in 2018-2019. Government is engaging with the World Bank for an additional loan that will be spread across the years to bridge funding gaps, while government continues to expand her fiscal space.

Government is also engaging with the Bill and Melinda Gates Foundation and other donors, for additional grant financing to be tied to specific performance indicators. This would supplement Gavi support and domestic resources towards immunization financing from 2018 to 2028.

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25 2018 Budget, FMOBNP, Nigeria

iv. Basic Health Care Provision Fund (BHCPF):

The National Health Act of 2014 provides for at least 1% of Federal Government's consolidated revenue funds (CRF) and contribution from partners, to be put into the BHCPF, to make available a pre-defined basic minimum package of health services package (BMPHS) for all Nigerians. 50% of the BHCPF goes to the NHIS gateway to provide health insurance for the poor and vulnerable while 45% goes through the NPHCDA gateway to states, who meet certain conditions including counterpart funding, for strengthening the provision of the BMPHS. 20% of the BHCPF is allocated through the NPHCDA gateway (part of the 45%) to procurement of drugs, vaccines and commodities. There are ongoing discussions around allocating a specific component of the 20% to vaccines. With the projected CRF, the BHCPF will receive $178.69 million in 2018, if appropriated by the national assembly and approved by the president. If half of the 20% for drugs, vaccine and commodities component is set aside for vaccines, it would provide an additional $17.87 million for vaccines in 2018 – about 19% of the government co-financing requirement for 2018.

Medium to long term approach (2023 and beyond)

First line charge:

The FMOH and NPHCDA are engaging with the Presidency and National Assembly to list immunisation as first line charge that becomes a statutory transfer from the CRF. As noted by the letter of commitment, a first line budget charge is the most dependable and sustainable option for funding and would ensure steady, consistent annual allocation and release of immunization funds, which can be front-loaded to make vaccine procurements timely and sustainable.

8.3. Financing strategy for operations and systems

While historically the national level has been responsible for vaccine financing and the FGoN has committed to co-financing through the transition and takeover of vaccine financing post-transition, operations and systems costs are borne at different levels. At the national and sub-national levels, funding comes from government and its partners either directly as support for the immunisation programme or through projects and programmes that support the immunisation programme. In costing the operational requirements to implement the NSIPSS, the team tried to separate the sources of funding between the national and sub-national levels as shown in figure 24 below, based on historical funding. The specific components of each thematic area to be funded by the national and sub-national levels was shown in earlier sections describing the respective thematic areas.

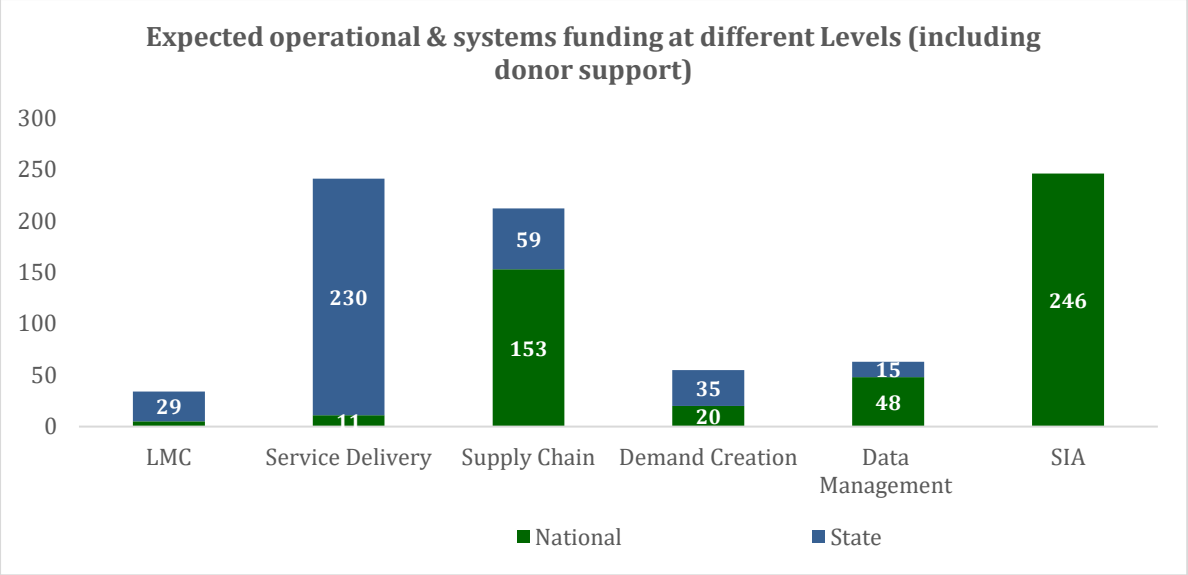

Figure 24: *expected contribution of different levels to immunisation operations and systems funding*

Sources of funding

i. Budgets

The federal and state governments include aspects of immunisation operations and systems funding in their annual budgets. However, there are many challenges which include absence of specific line budgets for immunisation, adequacy of the proposed budgets, timely and complete release and effective utilisation to deliver on plans. The FGoN has committed to increase immunisation and NPHCDA on an annual basis. There are ongoing engagement and advocacy to states to improve immunisation funding at those levels.

ii. Special government projects and interventions

In addition to direct funding for immunisation operations and systems, there are several government PHC strengthening initiatives that can also be **leveraged**.

- **Nigeria Programme for Results to Support the Saving One Million Lives (SOML) Initiative:** The SOML is using a $500 million World Bank loan to improve service delivery and governance at the PHC level, across all states, through a results based-approach that has immunization as one of the disbursement linked indicators (DLI).

- **Nigeria State Health Improvement Project (NSHIP):** This is another World Bank supported results-based financing project – managed by the NPHCDA and currently expanding from 3 pilot states (Adamawa, Nassarawa and Ondo) to more states in the North East. The NSHIP just like the SOML, also has immunization as a focus intervention but is not state wide, so it will be important to think through how to map and support the LGAs that part of the project.

- **BHCPF:** While the BHCPF might not offer much in contribution to vaccine financing, it is an important source for systems funding. With the PHCUOR and integrated approach at the service delivery points, the 25% of the fund for infrastructure and human resources strengthening will support immunization services under broader PHC strengthening. Beyond the 1% CRF, states have to provide counterpart funding and partners are beginning to show interest in contributing to the fund, which will further increase the funds available for PHC

strengthening. The BMGF and GFF in Support of Every Woman Every Child[i] are providing initial grants for BHCPF pilot in 3 states – Abia, Osun and Niger.

iii. Donors and partners

Gavi has also been providing support for operations and systems strengthening and to date has contributed $214.1 million. The Bill and Melinda Gates Foundation, Dangote Foundation and in some cases the UK DFID, have adopted the use of MoUs with states, to support immunisation operations and systems strengthening in their focus states. Through the MoUs, states and the donors put money into a basket for immunisation and PHC operations and systems and have a framework for mutual planning and accountability. Other donors such as the EU, USG (through USAID and CDC) and Canada, amongst others, have provided broad and targeted support for operations and systems strengthening at the state level, through different projects. More detailed mapping of donor support for the immunisation programme between 2018 – 2028 is ongoing, even though it is not likely that most donors will have information beyond 2020. Mckinsey overview current donor and partner support for immunisation operations and systems financing at the state level, is attached as appendix v.

Strategies to ensure operations and systems funding

i. Increasing and ring-fencing immunisation budgets:

The engagement with states aim to get states to also commit to measurable year on year increase in immunisation financing and ringfencing immunisation funds so they are not diverted to other priorities. State advocacies will use individual state coverages and costs. Engagements have already commenced with the Nigerian Governors' Forum and will extend to the National Economic Council which has all the state governors as members.

ii. Leveraging the special projects and interventions:

NPHCDA will lead engagement with the special interventions that already have immunisation as a focus area, especially those that link immunisation indicators to incentives. The objective will be review their support to the states alongside the state immunisation plans and budgets, to identify operations and systems costs that are or can be taken up by these projects and track them as part of the overall immunisation financing.

iii. Improve coordination and alignment of government, donor and partner support to improve effective use of available and planned resources to deliver on the proposed strategies:

The MoU approach already being used in some states will be explored for all states. The plan is to have NPHCDA, the state government and all the partners supporting immunisation and PHC in that state, to be part of the MoU. The MoU will be results based and have clear expectations from government (such as paying health worker salaries) and donors/partners, as well as a mutual accountability framework.

iv. Development and implementation of an engagement and advocacy strategy:

This will be a multi-year plan to ensure that engagements and advocacy are not one-off, tied to results and are dynamic to reflect progress and lessons learnt through the transition.

v. Conclusion and annual update of the donor mapping exercise:

This exercise will be updated annually, especially as most donors don't have a long-term view of their support. This will help to review and revise resource mapping for operations and systems strengthening, as donor plans evolve.

vi. **Continued NPHCDA focus on strong leadership and management:**
NPHCDA's new focus on management is very much around ensuring more value for money already spent. The effectiveness of monies spent is a perennial concern, and ensuring that programmatic interventions are chosen wisely, and executed consistently, means more activity for the same set of funds. The strong multi-partner governance structures at all levels also provides strong platforms for improved coordination and leveraging all available resources.

9. Monitoring and evaluation of NSIPSS

An important component of this strategic plan will be monitoring and evaluation of identified activities, outputs, and outcomes. The proposed M&E process will ensure that data is available in a timely fashion to guide evidence-based decision making, providing a regular reporting structure such that all relevant stakeholders are well informed on all indicators. This will also form the basis of the accountability framework. The M&E structure will be based on the following core principles:

- Provide data that meets the reporting requirements of the NPHCDA and other relevant stakeholders
- Identify appropriate tools and methods for data collection to ensure timeliness of reporting
- Allow for third-party independent assessments of the M&E process, to reduce bias and provide an impartial appraisal
- Have clearly defined roles and responsibilities for data collection, analysis, and usage to ensure accountability
- Outline a data dissemination process that allows all stakeholders to easily access data and make decisions based on the data

The Monitoring and Evaluation process flow:

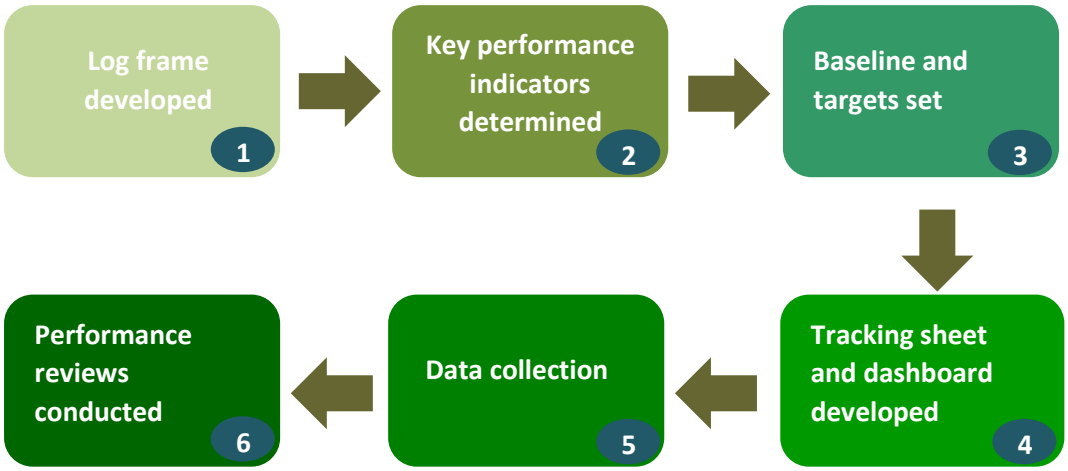

Figure 25: *Monitoring process*

i. **Develop a log frame that outlines key objectives, outcomes, outputs, and activities for the year:**
Log frame development is the first step in the performance management process; it will outline key outcomes, objectives, outputs, and activities. This requires input from all stakeholders, but

the process will be kick-started by the head of RI at the NPHCDA. Each working group will be responsible for finalizing their respective portions of the log frame. The log frame will be used to create work plans for each team and also to set performance indicators.

ii. **Determine KPIs:**
Once the log frame has been completed, key performance indicators will be set for all outcomes, outputs, and activities. Metrics should be measurable, specific, and relevant to what is being measured; the head of M&E at the NPHCDA supported by the head of RI at the NPHCDA will be responsible for this process.

iii. **Set baselines and targets for all indicators:**
Once metrics have been determined, baselines and targets are to be set. Baselines should equate to values from the last month of the previous calendar year, while targets should be ambitious but take into account baseline values. This process will be kick-started by the head of M&E at the NPHCDA supported by the head of RI at the NPHCDA.

iv. **Develop a tracking sheet and dashboard:**
Once baselines and targets have been determined, the M&E group will create data tracking sheets and dashboards that will contain information such as definition of data, who is responsible for collecting data, etc.

v. **Implement data collection:**
The head of M&E should work with the M&E group to check that data is being collected on a fortnightly basis at the very least.

vi. **Conduct performance reviews:**
Monthly reviews: Discussions on performance based on tracked metrics should be institutionalised. These present an opportunity to discuss indicators that have seen improvements and those that have not; clear action items should be identified during these meetings and deadlines should be set for completion.

The M&E process for the NSIPSS will commence once the ICC approves the strategy document for implementation. Periodic comprehensive performance reviews will be conducted on an annual/biennial frequency.

Approach to data collection

Routine and already institutionalized methods of data collection will be used in addition to new innovative methods of data collection. The major instruments for data collection will be immunization surveys (MICS/NICS, annual/SMART surveys), Lot Quality Assurance Surveys (LQAS), DHIS2, post-training surveys, and internal tracking tools for output metrics.

Details of the M&E framework, indicators and key responsible persons are provided in appendix vi.

9.1. Accountability framework

A significant investment in the Immunisation Programme is planned over the next ten years, 2019-2028, estimated at $3.6 billion for vaccines and operations. It is imperative that the investments yield the desired results and that a mechanism be in place to track progress periodically towards the achievement of deliverables by all stakeholders for appropriate timely action.

The Gavi principles of engagement require a commitment to governance and accountability in the form of:

- Financial milestones related to an annual increase in government expenditure on vaccines
- Programmatic milestones that give an indication of progress on coverage and equity
- Clear accountabilities that recognize that failure to meet financial commitments will render Gavi support to Nigeria's Transition Plan null and void.

A clear accountability system linking the financial and programmatic inputs with outputs and ultimately outcomes will therefore be in place. The outcomes will be tracked using relevant indicators that will measure the progress for each milestone. Each milestone will be linked to relevant stakeholders responsible for implementation and tracking at different levels. The system will also identify the source of information and means of verification of information provided on the framework. It is envisaged that the accountability mechanism will enhance ownership among the different stakeholders and promote transparency across the system.

NPHCDA and partners signed a Memorandum of Understanding (MOU) on routine immunisation in July 2017. The MOU highlights the roles and responsibilities at different levels with strong emphasis on accountability for quality data management. The MOU provides a good platform to strengthen accountability programmatically and the accountability framework which will be developed will build on this effort

Key Performance Milestones

The following key programmatic and financial milestones will be tracked:

i. Achieve at least 80% national penta 3 coverage by 2028

All States and FCT have been categorized into five groups based on their baseline penta 3 coverage performance in 2016 (according to the MICS/NICS coverage), as described earlier. The annual coverage milestones have been determined based on baseline performance by category over 2018-2028.

Table 5: *Penta 3 coverage milestones according to performance category 2018 - 2028*

Category	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
National	**33**	**39**	**43**	**48**	**55**	**60**	**65**	**69**	**73**	**78**	**80**	**82**	**84**
High	70	73	76	79	83	86	87	89	91	91	92	93	94
Medium	48	61	64	67	70	73	76	79	83	86	87	89	90
Low 3	25	32	40	51	65	68	71	74	77	81	84	87	88
Low 2	15	19	24	31	39	50	63	66	69	72	75	78	81
Low 1	7	9	11	14	18	23	29	37	47	60	63	66	69

ii. Introduction of new vaccines into the routine immunisation schedule

Nigeria plans to introduce new vaccines during 2019-2021, as outlined below. Introduction will be phased for rotavirus, Men ACWY and measles 2nd dose based on coverage and feasibility, while Men A introduction will be nationwide. The introduction will be tracked by state to determine progress towards achieving the set milestones for each new vaccine [figure 7 in section 5.3.2]

iii. Increment in financial commitment for vaccine costs from government resources annually

Nigeria will require $2.7 billion to procure routine immunisation and SIA vaccines and devices between 2018 – 2028. The federal government has committed to an annual increase as Gavi

contribution decreases, while exploring other sources such as loans and donor grants to bridge gaps (figure 21 in section 8.1).

iv. Increment in financial commitment for operational costs at federal level annually

The total estimated operational costs for the programme (RI and SIAs) over 2018-2028 is $850 million. The financing will be sourced from the Government, Gavi, other donors and partners. Figure 24 under section 8.3 shows the proposed split between the national and sub-national levels.

v. Donor and partner commitments for funding and technical support

A mapping of donor and partner projected contributions over the 2018 – 2028 transition time frame has begun and would be concluded to determine who is where and doing what. Technical support will be mapped annually based on the identified needs from the government and available resources and capacity of different partners. Key deliverables of the technical support will be jointly agreed with the government and tracked quarterly to ensure accountability.

Monitoring Log Frame

The M&E team at NPHCDA will be tasked with tracking the deliverables at Federal and State level, and partner commitments. The engagement process at Federal and State level will strive to ensure that there is transparency in budget allocations and that information will be availed to track budget releases.

Table 6: *Sample monitoring log frame*

Milestones	Indicators	Means of Verification	Assumptions
Programmatic milestones			
Goal: Achieve 80% coverage by 2028	• Penta3 coverage by state by year • Annual Penta3 coverage	• Annual surveys • NICS/ MICS every 3-5 years • DHIS as gap between admin and survey data closes	• Resources will be available • State plans will be implemented as scheduled
Goal: Introduce new vaccines	• Men A introduction by 2019 • Rotavirus introduction 2019-2020 • Measles 2nd dose by 2019 • HPV by 2021	• Post introduction evaluation	• Coverage in low performing states will increase to required level for introduction for rotavirus vaccine
Financial milestones			
Goal: Achieve annual increase in financial contributions at Federal and State level	• Annual contribution for vaccines and operational costs by Federal level • Annual contribution for vaccines and	• Annual approved budget at Federal level • State-specific approved budget for EPI • NHA and expenditure reviews and audits	• Realistic costed budgets • Federal and state level will release the budgets • Budget transparency

	operational costs by states		
Donor and partner financial and technical commitments			
Financial support for implementation of priority activities at Federal and State level	• Annual allocation of finances based on commitments • Deliverables of technical assistance, as per agreed priorities	• Annual financial reviews • Performance appraisals	• Donor commitments fulfilled

Tracking Selected Milestones

A database will be developed for monitoring the selected deliverables over time. Data analysis will be done biannually on the selected deliverables based on feasibility of available data. A dashboard will be devised to provide a snap shot of the performance against the deliverables at each level. A biannual update on the deliverables will be provided to stakeholders at all levels.

Feedback Mechanism

A scorecard will be developed for feedback on federal and state level deliverables. The score card will feature key elements on financial releases versus commitments by Federal and State level, and immunisation coverage performance indicators.

The scorecard will be disseminated through publication, the Presidential Task Force/ Nigeria Governors Forum, and annual programme reviews with states.

Management Actions

Based on progress towards achievement of programmatic and financial milestones, transparency will be ensured through 'faming and naming'. As per co-financing arrangements, funding from donors will be halted where commitments at federal and state level are not fulfilled. In the instance that partners do not meet their obligations, formal communication will be provided from the government.

Recognition will be given where due, while management actions including sanctions will be taken where deliverables are not met.

Remedial plans will be devised to address bottlenecks hindering achievement of milestones.

10. Appendices

10.1. Draft Letter of Commitment

To Members of the Gavi Board

I. Background

Since 2001, the Federal Government of Nigeria (FGoN) has partnered with the Global Alliance for Vaccine and Immunization (Gavi) to strengthen immunization coverage across the country. Over the past seventeen years, Gavi has financed vaccine procurement and distribution ($518,008,692.00) as well as non-vaccine operations, including health system strengthening ($214,121,634.00) to a total contribution of $732,130,326.00. With rebasing of the economy, Nigeria has entered a phase of accelerated transition in which the FGoN is required to annually increase co-financing of vaccines until graduation from support in 2021, after which the FGoN will be responsible for fully financing immunization.

The FGoN places great importance on health and immunization and has continuously met her co-financing requirements. From 2015, the FGoN has increased funding to routine immunization from NGN5.2 billion to NGN13.3 billion, representing a CAGR of 26% CAGR. This covers the costs of vaccines/devices procurement for RI, non-Polio SIA, Polio, Hajj vaccines, as well as vaccines for disease outbreaks. Funding for National Primary Health Care Development Agency (NPHCDA) also increased from NGN2.1 to NGN23.9 billion over the same period for operational and other Primary Healthcare Center (PHC) related activities.

This letter further demonstrates the FGoN's commitment to funding immunization until and beyond graduation from Gavi support, and complements the Nigeria Country Strategy Proposal to be submitted to the Gavi Board by NPHCDA by March 2018. On behalf of Nigeria, the signatories to this letter commit to ensuring that financial and programmatic commitments outlined in the proposal are adhered to and fully implemented.

II. Request

In line with the Nigeria Country Strategy Proposal, the FGoN wishes to request of the Gavi Board an extension of the co-financing of its Routine Immunization programme, from 2021 until 2028. Specifically, the FGoN would like to request a commitment of total of $773,218,646.87 from the Gavi Board for procurement of vaccines for routine immunization and non-polio supplemental immunization activities. On its part and in accordance with the agreement, the FGoN commits to providing funding to a total of $1,945,949,675.58 until 2028, with contributions increasing by approximately 10% annually.

III. Financial Commitment

Co-Financing Commitments

The FGoN commits to annually increasing vaccine co-financing by approximately 10% each year until 2028. This will amount to a total of $1,945,949,675.58 by 2028, and over $295 million yearly subsequently.

Key Assumptions of Co-Financing Commitments

Costings were developed in cognizance of coverage targets. These targets were identified by analyzing past data from surveys including Multi-Indicator Cluster Survey (MICS) for 2007, 2011, and 2016; National Demographic Household Survey (NDHS) for 2008 and 2013; National Immunization Coverage Survey (NICS) for 2010; and SMART survey for 2014 and 2015. From the analysis, the FGoN projects that the 3rd dose of DPT containing antigen immunization coverage will increase from 33% in 2016 to 84% by 2028. These coverage estimates will be reviewed annually in order to ensure up to date cost projections.

The government has done painstaking consideration of the advantages and disadvantages of new vaccine introductions and found that introducing new vaccines will save over 200,000 lives, additionally. However, the financing ramp-up required may not meet resource availability in the short-term. Thus, government decided to delay introduction of Rotavirus and Meningitis A vaccines till 2019, and HPV till 2020. The introduction of Rotavirus vaccine will be in Phases, to build up coverage in low performing states and reduce vaccine wastage. These activities have been integrated into the co-financing commitments and will be revisited each year to ensure up to date projections.

I. Financing Approach

In order to sustain increases in vaccine co-financing, and ultimately sustainability, the FGoN proposes short term (2018 – 2022), and medium to long term (2023 and beyond) approaches for the provision of adequate and sustainable funding.

Short Term Approach (2018-2022):

Create a line item in the FGoN budget under the Service Wide Vote for Immunization

The FGoN has commenced the process of setting up a budget line item specifically for immunization which will be assigned to the NPHCDA under the Service Wide Vote. The fund will increase annually to match co-financing obligations for vaccine procurement. This new measure will ensure reliable funding for immunization and provide Nigeria with the ability to front load funds to ensure appropriate and timely procurement.

World Bank Loans and support from partners

In the short term, the FGoN has engaged the World Bank to explore options for an additional loan to meet this commitment. This loan will be spread across the years to bridge funding gaps, as government continues to expand her fiscal space. Government is also exploring funding opportunities with Bill and Melinda Gates Foundation and other partners, for additional grant financing to be tied to specific performance indicators. This would supplement Gavi support and domestic resources towards immunization financing from 2018 to 2028.

Government views financing vaccines through loans as a stop-gap measure, and in the long term plans financing through budgetary allocations. Following the recent economic recession however, the short term measure is the most effective and practical approach to co-financing, to avoid disastrous vaccine stock-outs that would harm children and the poorest in Nigeria. The medium and long term approaches outlined below, show how the FGoN will sustainably increase federal financing for immunization.

Basic Health Care Provision Fund (BHCPF)

The FGoN established the Basic Health Care Provision Fund (BHCPF) in the National Health Act, which allocates at least 1% of annual Consolidated Revenue Fund (CRF) to the health sector and ensures it is provided and operational. Twenty percent (20%) of BHCPF is allocated through the NPHCDA gateway for procuring essential drugs, vaccines and consumables.

Medium to long term(2023-beyond):

First Line Charge

To ensure sustained increment in immunization funding to meet co-financing obligations, the Federal Ministry of Health (FMoH) is working with NPHCDA and National Assembly to list immunization funding as "first line charge". A first line budget charge is the most dependable and sustainable option for funding and would ensure steady, consistent annual allocation and release of immunization funds, which can be front-loaded to make vaccine procurements timely and sustainable.

I. Next Steps

The Ministry of Budget and National Planning (MoBNP) is working with FMoH and NPHCDA to incorporate the Gavi Transition Plan into the Aid Transition Framework, which will provide an additional layer of coordination and accountability, to ensure that financial and programmatic milestones outlined in this document are met.

Upon submission of the Gavi Transition Proposal, the FGoN shall ensure that all components of the immunization strategy outlined in the document are met. On approval of the proposal, the FGoN will work with Gavi to ensure that full financial and co-financing commitments are met. International partners will also provide technical assistance and additional monitoring to ensure that each step of the process is met effectively.

The FGoN is committed to meeting the terms set out in this letter, in order to assure the health of our children and our nation.

Signature

Vice President, Federal Republic of Nigeria

10.2. Gavi Principles of Engagement and Status of Implementation by Nigeria

Area	Principle	Status	Next steps
Government commitment	Reimbursement of Gavi funds balance	Partial refund done. Outstanding refunds in process	Complete outstanding refunds
	Year-on-year budgetary increase for health sector, ensure sustainability	Commitment of Vice President, National Assembly, speakers of State Houses of Assembly, Ministries of Budget and National planning, and Finance secured. CSOs engaged to continue advocacy at state levels	Continue engagements at all levels
	Timely co-financing of vaccines	Ongoing	Sustain funding timeliness
Commitment to governance and accountability	Financial and programmatic milestones	High-level milestones have been identified	High-level milestones have been identified
	Clear accountability mechanisms	A clear accountability framework developed for mutual accountability between government, states, donors and partners at all levels	Adopt and commence implementation of the accountability framework
Realistic plan to improve coverage and equity	Programmatic focus on poor and inequitable areas	Tailored strategies identified for states with low coverage and high number of unimmunized	Engage states and LGAs to adapt and refine strategies
	Introduction of new vaccines based on programmatic and financial readiness	NVI timeliness determined based on disease burden and equity	Secure fin. Commitment and commence preparations
	Targeted technical assistance and HSS	Recruitment of technical assistants to support poor performing states ongoing. Set-up of a dedicated technical support unit (TSU) at NPHCDA in process	Engage TAs and monitor performance. Operationalize the TSU
	Build financial management capacity at national and state levels	A Grant Coordination and Compliance Office established. Financial reforms ongoing at NPHCDA	Reform state fin mgt system, learning from MoU states
	Engagement with broader health sector	Improved collaboration with the FMoH, NCDC, NHIS	Reform state fin mgt system, learning from MoU states
	Engagement with broader health sector	Improved collaboration with the FMoH, NCDC, NHIS	Sustain engagements
	Effective transition of polio resources	Clear plans for transition is being developed by the Polio transition technical task team (PT4)	Finalize and cost plans, and commence implementation

10.3. RI vaccines included in NSIPSS

Vaccine	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Gavi co-financed vaccines											
Penta	xx	xx	xx	xx	xx	x	x	x	x	x	x
IPV	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx
PCV	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx
MenA		xx	xx	xx	xx	xx	xx	xx	xx	xx	xx
Rota			xx	xx	xx	xx	xx	xx	xx	xx	xx
HPV			xx	xx	xx	xx	xx	xx	xx	xx	xx
Measles 2nd dose		xx	xx	xx	xx	xx	xx	xx	xx	xx	xx
Traditional vaccines (not co-financed)											
BCG											
Measles											
Yellow fever											
HBV											
OPV											
Td											

10.4. List of SIAs

SIA	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Yellow fever	P, R	P, R	P, R	P, R	P, R	P, R	P, R	P, R			
Measles		R	R, F	R	R	R, C	R			F	
CSM (MenA)		C					C				
MNTE (Td)	C	C									

P: Preventive campaign; R: Reactive campaign; F: Follow-up campaign, C: Catch-up campaign

10.5. Overview of current spend on immunisation operations and systems at the state level

- **For all states**
    - Through the WHO,[1] at a cost of approximately $15m in annual personnel costs currently, an infrastructure of officers at Local Government level performs important tasks including
        - Monthly assistance in collating data (includes a $0.5m budget for travel by LIOs)
        - Regular supervision (with per diems at approximately $1.5m, 10% of personnel costs)
    - Through UNICEF, approximately $5m in various projects associated with service delivery in selected states

- **For selected states:**
    - The Bill and Melinda Gates Foundation (BMGF), in the MOU states of Sokoto, Kaduna, Kano, Bauchi, Borno and Yobe, a spend of approximately $10m over five years in technical assistance and towards direct operational costs (2017-2021)
    - The UK's Department for International Development (DFID) in Jigawa, Kaduna, Zamfara, Katsina, Kano and Yobe a spend of approximately $169m from 2013 to 2018 in technical assistance
    - The Canadian government is funding work related to MNCH in Bauchi and Cross River (via WHO) at a cost of $15m from 2014 to 2019, and polio and PHC work (via UNICEF) in Jigawa, Niger, Zamfara and Taraba at a cost of $18m from 2015 to 2018
    - EU is funding from 2016-2020, $60m through UNICEF for MNCH, nutrition and resilience in Kebbi, Adamawa, and Bauchi and $6m is for HSS in Anambra and Sokoto
    - Other private institution donors are typically smaller in scale, and include GSK with capacity building in Kaduna, Lagos and Gombe around REW microplanning, New Vaccine administration, AEFI and Injection safety, and DHIS RI module

Source: Mckinsey analysis

10.6. Monitoring and Evaluation Framework

SN	Strategy/intervention	Scope	Activity	Task	Expected outcome/Target	Performance indicator	Responsible
1	Strengthen Coordination	National	Strengthen coordination for routine immunization	Conduct meetings with Core Group	Improved coordination for immunization programs	Proportion of Core Group Meetings conducted (meeting notes shared timely, action items tracked and implemented)	Director DCI
2		National		Conduct of ICC Meetings	Improved coordination for immunization programs	Proportion of ICC Meetings conducted (meeting notes shared timely, action items tracked and implemented)	PM NERICC
3		National		Conduct of ERC	Improved coordination for immunization programs	Proportion of planned ERC meetings conducted	IM NEOC
4		National		Inter-ministerial briefing on immunization	Improved coordination for immunization programs	Proportion of planned inter-ministerial briefing on immunization conducted	ED SPHCDA
5	Strengthening NERICC operations	National	Support for NERICC operations	Conduct of NERICC daily meetings	Improved coordination for routine immunization	Proportion of NERICC Meetings conducted Meeting notes shared timely Action items tracked and implemented)	PM NERICC
6		National		Conduct high level meetings with Executive Secretary's of SPHCDAs (36 states + FCT) quarterly	Improved commitments to drive immunization performance at States/LGAs	Proportion of Meetings with ES conducted Meeting Notes shared timely Implementation of action points	PM NERICC
7		National		Conduct quarterly review meetings with PMs and DPM's in 36 states and the FCT	Improved program performance in SERICCs	Proportion of Meetings with ES conducted Meeting Notes shared timely Implementation of action points	PM NERICC
8		National		Support the state to conduct interviews and inauguration of SERICC PM's and management team in the remaining 13 medium and high performing states (non - priority)	Improved program performance in SERICCs	Proportion of SERICCs Inaugurated in the 13 medium and high performing states (non priority)	PM NERICC
9		National		Engage TA for NERICC	Improved support for implementation of NERICC activities	Proportion of timely deliverables executed in NERICC Proportion of achieved NERICC indicators	ED/CEO NPHCDA
10	Strengthening SERICC operations	State	Establishment of SERICC in the 18 medium and high performing States and FCT	Establish SERICC in the remaining 21 medium and high performing states	Functional SERICCs in the remaining 21 states	Proportion of functional SERICC established in the 21 states Proportion of achieved SERICC indicators	PM NERICC
11				Equiping of SERICC operational centres (recurrent)	Availability of functional and adequate equipment at SERICC	Proportion of SERICC with adequate equipment	ES SPHCDA
12		State		Equiping of SERICC operational centres	Availability of functional and adequate equipment at SERICC	Proportion of SERICC with adequate equipment	PM NERICC
13		State	Strengthening SERICC operations in all the 36 states and the FCT	Conduct of SERICC daily meetings	Improved coordination for routine immunization at State level	Proportion of SERICC Meetings conducted Meeting notes shared timely Action items tracked and implemented)	PM SERICC
14		State		Conduct meetings with LGA PHC coordinators every quarter	Improved coordination for routine immunization at LGA level	Proportion of SERICC Meetings conducted Meeting notes shared timely Action items tracked and implemented)	PM SERICC
15		State		Conduct monthly review meetings with RIO's of LERICC, LIO's and M&E officers in the LGA	Improved coordination for routine immunization at LGA level	Proportion of SERICC Meetings conducted Meeting notes shared timely Action items tracked and implemented)	PM SERICC

SN	Strategy/intervention	Scope	Activity	Task	Expected outcome/Target	Performance indicator	Responsible
16		State		Conduct monthly high level visits to low performing LGAs (priority intervention)	Improved program performance in LGAs Implementation of LERICC programs in line with National guidelines	Proportion of monthly visits conducted Proportion of LERICC meetings conducted Proportion of daily fixed sessions implemented in tertiary, secondary and urban PHCs Proportion of weekly outreaches conducted in rural health facilities	PM SERICC
17		State		Engage TA for SERICC	Improved support for implementation of SERICC activities	Proportion of timely deliverables executed in SERICC Proportion of achieved SERICC indicators	ED/CEO NPHCDA
18	Strengthening LERICC operations	LGA	- Establishment of LERICC in all/targeted LGAs	Conduct interviews for RIO's in remaining states	RIO's selected and appointed for the LGAs	Proportion of LERICCs with appointed RIO's	ES SPHCDA
19		LGA		Conduct inauguration of LERICC in 18 medium and high performing states	LERICC's inaugurated in 18 medium and high performing states	Proportion of LERICCs inaugurated in the remaining states	ES SPHCDA
20		LGA		Participation of 2 NERICC team members in inauguration of LERICC in outstanding states	Improved quality of inauguration for LERICC	Proportion of LERICCs inaugurated in the remaining states in line with national guidelines	PM SERICC
21		LGA	Strengthening and maintaining LERICC operations in all the 774 LGAs	Conduct of LERICC meetings (thrice weekly)	Improved coordination for routine immunization at LGA level	Proportion of LERICC Meetings conducted Meeting notes shared timely Action items tracked and implemented	PHC Coordinator
22		LGA		Conduct monthly meetings with health facility routine immunization focal persons	Improved coordination for routine immunization at LGA level	Proportion of Monthly Meetings conducted Meeting notes shared timely Action items tracked and implemented	PHC Coordinator
23		LGA		Conduct monthly supportive supervisory visits to all health facilities in 774 LGAs	Improved quality of implementation of RI activities at health facility level	Proportion of planned supportive supervisory visits conducted at health facility level Report of follow up actions taken and implemented	PHC Coordinator
24	Performance assessments and use of data for decision making	State	Implement performance assessment and use of data for decision making	Conduct LQAS in 36 states and the FCT quarterly	Improved RI performance at states and LGAs	Proportion of LQAS conducted Proportion of LQAS lots >80% Proportion of repeated failed lots (>2)	PM NERICC
25							
26	Implementation of accountability framework	National	Strengthen implementation of accountability framework at all levels to improve RI performance	Dissemination of accountability framework to 36 states and the FCT	Availability of signed accountability framework at all levels/online	Proportion of states that have received/implemented accountability framework Proportion of states with revised MOU for private sector health facilities	PM NERICC
27	Implementation of accountability framework	National		Conduct engagement meetings for the review and adoption of the accountability framework in 36 states and the FCT	Adoption of revised accountability framework	Proportion of states that have adopted the revised accountability framework	PM NERICC
28	Implementation of accountability framework	National		Conduct annual reviews of MOUs for accountability	Reviewed MOU's for accountability	Proportion of annual reviews of MOUs for accountability conducted	PM NERICC
29	Implementation of accountability framework	National		Monitor implementation and enforcement of accountability framework (rewards and sanctions) in 36 states and the FCT	Implemented accountability framework at all levels	Proportion of states with reports of positive recognition/recommendations Proportion of states with reports of sanctions	PM NERICC
30		National		Sensitization meetings with the private sector practitioners of health	Private sector practitioners appropriately sensitized	Proportion of planned sensitization meetings with private sector practitioners conducted	PM NERICC
31		National	Defining/redefining of roles for immunization stakeholders in the county for purposes of accountability	Partners mapping /defining/redefining of roles for immunization stakeholders in the country	Availability of immunization partners mapping	Proportion of planned partners mapping for routine immunization conducted Proportion of partner activities on track	PM NERICC

SN	Strategy/intervention	Scope	Activity	Task	Expected outcome/Target	Performance indicator	Responsible
32		National	Collaborate with CSO's to ensure all financial and technical support received are implemented	Track implementation of partner/donor supported CSO's activities for routine immunization	Improved implementation of CSO activities	Proportion of CSO's activities tracked and implemented	PM NERICC
33	Support the SPHCDA's to ensure financial standards, improve financial processes and resource flows for immunization	State	Production and dissemination of revised financial SOP for SPHCDA	Print SOP for SPHCDA's	Printed SOPs for SPHCDAs	Proportion of planned SOPs printed	PM NERICC
34		State		Distribute SOP to SPHCDAs	SOPs distributed to SPHCDAs	Proportion of SPHCDA's with SOPs	PM NERICC
35		State	Training of relevant financial SPHCDA staff on the developed financial SOP for SPHCDA's	Competency based Training on the developed SOPs	Relevant SPHCDA staff trained on the developed SOP	Proportion of states with trained SPHCDA staff	PM NERICC
36	Facilitation of NERICC/SERICC/LERICC operational activities	National	Equiping of NERICC/SERICC/LERICC	Procurement and planned preventive maintenance for NERICC/SERICC/LERICC equipment and vehicles	Functional equipment/vehicles at National/State/LGA	Proportion of functional equipment/vehicle at National/State/LGA	PM NERICC

Service delivery

SN	Strategy/intervention	Scope	Activity	Task	Expected outcome/Target	Performance indicator	Responsible
1	REW Optimization	National level with some state support	Updating the REW guide based on the 2017 RED guide that indicates new strategies	Updating the REW guide based on the 2017 RED guide	updated REW guide	Availability of REW guide by Q3 2018	NERICC
2	REW Optimization	National level with some state support					NERICC
3	REW Optimization	National level with some state support					NERICC
4	REW Optimization	National level with some state support					NERICC
5	REW Optimization	National level with some state support					NERICC
6	REW Optimization	National level with some state support					NERICC
7	REW Optimization	National level with some state support		Printing and distribution the revised REW guide for all HFs for Nigeria	34174 copies of REW guide printed for all PHCs and hospitals	% of HFs with updated REW guide	NERICC
8	REW Optimization	National level with some state support					
9	REW Optimization	All states	Development of the REW microplan	Printing of GIS maps and list of settlements	GIS maps and updated master list of settlement available at the ward level	% of wards with GIS maps and updated list of settlement	SERICC
10	REW Optimization	All states		Printing and distribution of the REW template and SOP (flowcharts)	REW template and REW SOPs (flowcharts) available in all HFs	% of HFs with updated REW microplan and SOPs (flowcharts)	SERICC
11	REW Optimization	All states		Planning meeting at the national involving state team	Standard information disseminated to all states on REW microplan development	% of states that participated at the national planning meeting	NERICC
12	REW Optimization	All states					NERICC
13	REW Optimization	All states					NERICC
14	REW Optimization	All states					NERICC
15	REW Optimization	All states					NERICC
16	REW Optimization	All states		Planning meetings at state involving the LGA team		% of LGA that participated in the planning meeting	SERICC

SN	Strategy/intervention	Scope	Activity	Task	Expected outcome/Target	Performance indicator	Responsible
17					Standard information disseminated to all LGA on REW microplan development		SERICC
18							SERICC
19	REW Optimization	Health facilities		Planning meetings at LGA involving the HFs and WFPs	Standard information disseminated to all HF on REW microplan development	% of HF that participated in the planning meeting	SERICC
20	REW Optimization	Health facilities					SERICC
21	REW Optimization	Health facilities		settlement harmonization (microplanning) meetings at HFs with community leaders	Quality Microplan updated/developed endorsed by community leader	% of HFs with updated REW microplans	SERICC
22	REW Optimization	Health facilities					SERICC
23	REW Optimization	Health facilities	Registration of newborns by settlements	Availability of booklets for registration of newborns in communities			SERICC
24	REW Optimization	Health facilities		Supervision of REW microplan development at HFs	Quality REW microplan developed	% of HFs that received supervision during the REW microplan development	LERICC
25	REW Optimization	Health facilities		Validation of the REW microplan development at HFs	Quality REW microplan developed	% of HF REW microplans verified by state team	SERICC
28	REW Optimization	Health facilities		Conduct of weekly outreaches in HFs	80% of Planned weekly outreach sessions conducted	% of planned outreach sessions conducted on a monthly basis	SERICC
29	REW Optimization	Health facilities		Conduct of mobile sessions by HFs	80% of Planned mobile session conducted	% of planed mobile sessions conducted on a monthly basis	SERICC
30	REW Optimization	Health facilities	Monitoring of the REW implementation (5 components)	Conduct of RI supportive supervision/ on-the-job mentoring at HF by LGAs	80% of Planned HF supportive supervisory visit conducted	% of HFs that received at least 1 Supportive Supervision per quarter	LERICC
31	REW Optimization	Health facilities	Monitoring of the REW implementation	conduct of RI supportive supervision/ on-the-job mentoring at LGA level by the state	80% of Planned LGA supportive supervisory visit conducted	% of LGAs that received at least 1 Supportive Supervision per quarter	SERICC
32	REW Optimization	Health facilities	Monitoring of the REW implementation	conduct of RI supportive supervision/ on-the-job mentoring at state by the National	80% of Planned state supportive supervisory visit conducted	% of states that received at least 1 Supportive Supervision per quarter	NERICC
33							
34			Scale up engagement with private health facilities in the provision of immunization services (sensitization, signing of MoU, collection and analysis of data, etc.) and informal private sector for referrals and provision of information on RI	Scale up engagement with private health facilities in the provision of immunization services (sensitization, signing of MoU, collection and analysis of data, etc.) and informal private sector for referrals and provision of information on RI			
35			Partner with religious bodies to integrate immunization services in their outreach activities.				
36	**Conduct Periodic intensification of RI in low performing LGAs**	State, LGAs and health facilities	**Conduct of LIDs in low performing LGAs/wards (proposed assumption that 25% of LGAs are low performing)**	Training of health workers			SERICC
41	**Conduct Periodic intensification of RI in low performing LGAs**	State, LGAs and health facilities		Development of micro plan for LIDs			SERICC
42	**Conduct Periodic intensification of RI in low performing LGAs**	State, LGAs and health facilities		Printing and distribution of materials			SERICC
43	**Conduct Periodic intensification of RI in low performing LGAs**	State, LGAs and health facilities		Social mobilization activities			SERICC
44	**Conduct Periodic intensification of RI in low performing LGAs**	State, LGAs and health facilities		Deployment of teams			SERICC
45			Quarterly LQAs in all 36 states and FCT to address program qualitative issues	Quarterly LQAs in all 36 states and FCT to address program qualitative issues			SERICC

SN	Strategy/intervention	Scope	Activity	Task	Expected outcome/Target	Performance indicator	Responsible
46	Reducing dropout and left outs	Health facilities	Defaulter tracking	line-listing of newborns and eligible children in every settlement	All new borns and under 1year old children linelisted in every settlement	% of settlements with updated linelist of under I year old	SERICC/LERICC
47	Reducing dropout and left outs	Health facilities	Defaulter tracking	Tracking of defaulters (tickler boxes, phone calls, SMS, use of child registers)	50% of defaulters tracked ands referred to health facilities	% of defaulters tracked and immunized	SERICC/LERICC
48	Reducing dropout and left outs	Health facilities	Defaulter tracking	Monthly reconciliation meeting by the community and the HF	50% of monthly reconciliation meetings held and left outs identified	% of monthly meetings held with at least 8 community leaders/village heads in the catchment area in attendance	SERICC/LERICC
49			Institutionalization of data tool distribution list at state and LGA Level	Development/ update of a monitoring tool for the status of data tools availability			
50				yearly printing and distribution of RI data tools			
51				Monitoring of data tools availability			
52		National	Revision of child health card	Revision of the child health card for mothers to be able to use it to access other child health services(medium to long term)			NERICC
53		State and LGA	printing and distribution of child health card	Yearly printing of child health cards for the targeted birth cohort by national bundled with vaccine procurement cost(medium to long term)			NERICC
54		State and LGA		Distribution of child health card in line with the distribution plan			NERICC
56		State and LGA	Sensitization of community on importance of child health card	Sensitization of community on importance of child health card			
57		State and LGA		linking child health cards to school benefit for both islamic and formal education			
	Reducing missed opportunities	National and State	Sensitization of Hospital management board on missed opportunity vaccination	Advocacy and sensitization of HMB, CMDs, CMACs and on missed opportunity vaccination in secondary and tertiary HFs respectively			NERICC/SERICC
58	Reducing missed opportunities	State, LGA and health facilities	Strengthening linkages between service delivery points in high volume(secondary and tertiary hospitals) health facilities to reduce missed opportunities for vaccination (MOV),	Sensitize professional bodies(AGPMPN, PAN, NMA etc) advocate for immunization status to be part of patient clinical assessment			NERICC
59		State, LGA and health facilities		Sensitize all HCWs in hospitals including clinicians on Routine Immunization strategies to minimize MOVs	Sensitization meetings held in secondary and tertiary HFs	% of secondary and tretiary HFs that have condcuted sensitization of clinicians	SERICC
60		State, LGA and health facilities		Increase immunization service points in hospitals and ensure data is collated and reported	Increased service delivery points in secondary and tertiary health facilities	% of secondary and tertiary HFs with an extra immunization service delivery point	SERICC
				Monitoring of the increased immunization sessions and service delivery points	increase in immunization coverage trend		
61	HRH optimization	State, LGA and health facilities	Conduct an HRH assessment across states	Provide technical support the states to conduct a HR assessment (HCW mapping, staff audit) to address health personnel inadequacy (quantity, cadre and spatial distriution)			NERICC/SERICC
62	HRH optimization	State, LGA and health facilities	Provision of technical support to states to regularly map and optimally distribute health workers	Advocate to the states on the need for HCW redistribution and provide technical support to the states on HCW redistribution	80% Advocacy visits conducted to states on staff redistribution, recruitment and task shifting	% of planned advocacy visits conducted	NERICC/SERICC
63	HRH optimization	State, LGA and health facilities		Advocate to states on staff recruitment and task shifting			NERICC/SERICC
65	Capacity building for frontline HCWs	State, LGA and health facilities	Training of HCW across all HFs	Conduct onsite training at health facilities as opposed to classroom training using the Basic guide	Improved capacity of frontline HCWs to conduct RI	% of HFs with at least 1 HCW trained on RI	NERICC/SERICC
66	Capacity building for frontline HCWs	Health facilities		Implement intra-facility peer-led learning among HCWs using RI flipchart and other RI resource materials	Improved capacity of frontline HCWs to deliver quality RI services		NERICC/SERICC
67	Capacity building for frontline HCWs	Health facilities	Identify HCWs as champions and help them to mentor others e.g peer led exchange program	Identification of at least 5 HCWs per LGA as RI champions. Chaimpions to mentor at least 5 low performing HF 2 times a year	Increased HCW motivation to deliver quality RI services	Number of champions identified across all LGAs(target is 5 per LGA)	SERICC/LERICC
68	Capacity building for frontline HCWs	Health facilities		Implement inter-facility exchange peer-led learning program (Immunization champions going on exchange program)	Improved capacity of frontline HCWs to conduct RI	Number of facilities that have gone through the peer -led learning exchange program	SERICC/LERICC

SN	Strategy/intervention	Scope	Activity	Task	Expected outcome/Target	Performance indicator	Responsible
69	Capacity building for frontline HCWs	National and state	Collaborate with Community Health Practitioner Registration Board of Nigeria (CHPRBN), SMOH and SMOE to tailor pre-service classroom curriculum and field training of CHEWs and JCHEWs to meet PHC needs; particularly for data entry & management and the introduction of new vaccine	Advocacy to Ministry of Education to tailor pre-service classroom training of CHEWs and JCHEWs to meet PHC needs			
70	Increasing HCW motivation	National and state	Advocacy to governors to ensure salaries are paid	Conduct an advocacy visit to governors to prioritize health and also pay HCW salary on time	HCW salary paid every month	proportion of states that pay HCW salary every month	NERICC
71	Introduce performance evaluation systems	National and state	Incentivizing healthcare workers / reward system for high performance	Introduce award /promotion and sanctions	Accountability framework implemented in all states	Number of states that implement accountability measures every month	NERICC/SERICC
72		National and state	Incentivizing healthcare workers / reward system for high performance	Introduce annual presidential awards for the 3 best performing states based on set criteria	Increased state motivation to deliver quality RI services	Number of states identified and rewarded	NERICC
73	Institute vaccine reminder systems to improve timeliness of vaccination	State and health facilities	Institute vaccine reminder systems to improve timeliness of vaccination	Introduce vaccine reminder system via sms	Increased utilization of immunization services	Number of states that have implemented the sms reminder system in RI	SERICC
74	Institute vaccine reminder systems to improve timeliness of vaccination	State and health facilities		Monitor the implementation of vaccine reminder system			SERICC
75	Implementation of community engagement strategy	State and health facilities	Intensify demand creation efforts and ensure full implementation of community engagement framework with line list of newborns. Sensitize/Train relevant community stakeholders on RI	Advocate to state on community engagement strategy			NERICC/SERICC
76	Implementation of community engagement strategy	State and health facilities		Identification of community influencers	Communityinfluencers		SERICC
77	Implementation of community engagement strategy	State and health facilities		Implementation of community engagement strategy (line-listing of newborns, referrals)			SERICC
78	Implementation of community engagement strategy	State and health facilities		Monitoring of community engagment strategy			SERICC
79	Deliver Immunization in security compromised areas (adamawa, Bauchi, Borno, Gombe, taraba, Yobe, Benue and Nasarawa)	State and health facilities	Implement special service strategies in IDP camps	Conduct immunization fixed sessions in IDP camps integrated with other child health services (approximately 500)	Improve access to immunization to internally displaced persons	Proportion of IDP camps providing immunization sessions every week	SERICC
80		State and health facilities		Conduct Immunization in profiling sites(market, transit points, host communities etc) for Yobe and Borno	Improve access to immunization to internally displaced persons	Proportion of profiling sites providing immunization sessions every week	SERICC

Demand creation

SN	Strategy/intervention	Scope	Activity	Task	Expected outcome/Target	Performance indicator	Responsible
1	DEMAND CREATION FOR INTENSIFIED INTEGRATED OUTREACH AND DAILY FIXED SESSIONS	18 low performing states 19 non-priority performing states	Household engagement	Weekly preparatory meetings with house-to-house mobilizers	• Number of town hall meetings held • Number participants that attended the meetings	• LGA teams and Communities have more trust in immunization	Health Facility
2				Monthly preparatory meetings with house-to-house mobilizers	• Number of town hall meetings held • Number participants that attended the meetings	• LGA teams and Communities have more trust in immunization	Health Facility
3				House-to-house visits and mobilization			H2H mobilizers (e.g. CHIPS, VCMs, etc.)
4			Community engagement	1-day bi-weekly preparatory meetings with community leaders by ward teams in 18 priority states			VWS / WDCs / WFP

SN	Strategy/intervention	Scope	Activity	Task	Expected outcome/Target	Performance indicator	Responsible
5				1-day monthly preparatory meetings with community leaders by ward teams in 19 non-priority states			VWS / WDCs / WFP
6				1-day bi-weekly community dialogue with heads of households			Community leaders
7				Weekly messages on disease prevention and RI in religious sermons in Churches and Mosques in all states	• Availability of trained house-to-house mobilizers • Availability of house-to-house mobilization plans • Number house-to-house visits conducted and with referals/tracking	• Caregivers are aware about immunization • Caregivers are accessing RI and PHC services	Religious leaders
8				Daily reminder town announcements in priority states	• Number of community dialogues held	• Percentage of participation in the forums. • Number of issues around immunization that are solved	Ward level
9				Weekly town announcements in non-priority states	• Number of community dialogues held	• Percentage of participation in the forums. • Number of issues around immunization that are solved	Ward level
10				Weekly tracking of mosques and church announcements and sermons by WDCs	• Number of compound meetings held • Number of participants	• Proportion of males allowing and actively involved in the immunization of their children • Female caregivers are accessing services for their children	Ward level
11			LGA engagement	LGA level bi-monthly town hall meetings by traditional leaders in priority states			Traditional leaders
12				LGA level annual town hall meetings by traditional leaders in non-priority states			Traditional leaders
13	COORDINATION	National and State	Bi-annual Coordination Meetings at National Level	2-day bi-annual national coordination meeting with 37 State Health Education Officers and national communication teams			NERICC Communication team
14			Annual Coordination Meetings at State Level	Annual meeting with LGA Health Education Officers	• Number of edutainment event held	•	State Health Education Officers
15	CAPACITY BUILDING	National and State	Annual national training of communication teams and CSOs	Annual national 3-days training of various communication teams and CSOs on C4D strategies, crisis management and outbreak response, facilitating trainings at lower levels.			NERICC Communication team
16			Annual state level training of communication teams, CSOs, FBOs etc.	Annual 2-day state level training of communication teams, CSOs and FBOs on C4D strategies, crisis management and outbreak response, facilitating trainings at lower levels.			State Health Education Officers / SERICC Communication Teams
17			Annual LGA level training of communication teams, CSOs, FBOs etc.	Annual 2-day LGA level training of communication teams, CSOs and FBOs on C4D strategies, crisis management and outbreak response, facilitating trainings at lower levels.			LGA Health Education Officers / LERICC Communication Teams
18			Quarterly LGA level training of Health Workers	Quarterly 1-day refresher training of service providers on IPC skills LGA level			LGA Health Education Officers / LERICCS
19			Quarterly LGA level training of Religious Health Committees	Quarterly 1-day training and refresher training of religious health committees on message delivery and IPC skills at LGA level			LGA Health Education Officers / LERICCS
20		National	Developmentof Traininig Modules	5-day national workshop on development and pretest of training modules.	Modules developed	proportion of training modueles developed	NERICC Communication team
21			Printing of Modules	Printing of training modules			NERICC Communication team
22			Distribution	Distribution of modules	Modules developed	proportion of training modueles developed	NERICC Communication team
23	ADVOCAY / PARTNERSHIP ENGAGEMENT	Low and high states	Engagement of key infleuntial people / structures at national level	Annual high level national forums with Islamic religious leadership - Da'wah Coordination Council of Nigeria (DCCN) - 1 participants x 37 states			ED / NERICC Communication team
24				Annual high level national forums with Christian Religious Groups leadership (1 participant x 37 states)			ED / NERICC Communication team
25				Annual high level national engagement with medical groups and associations	• Number forums held • Number participants	• Percentage medical groups involved in the capacity strengthening of health workers.	ED / NERICC Communication team

SN	Strategy/intervention	Scope	Activity	Task	Expected outcome/Target	Performance indicator	Responsible
26				Annual high level national engagement with private sector organizations	Number of high level visits conducted	• Percentage of governors prioritising RI in their planning and public statements	National level
27				Advocacy to governors	Number of high level visits conducted	• Percentage of governors prioritising RI in their planning and public statements	ED, NPHCDA
28				Advocacy to wives of governors	Number of high level visits conducted	• Percentage of governors prioritising RI in their planning and public statements	ED, NPHCDA
29			Engagement of key infleuntial people/structures at state level	1-day annual state level meeting with 1 LGA representatives of Da'wah Coordination Council of Nigeria (DCCN)			State Health Education Officers
30				1-day annual state level meeting with 1 LGA representatives of Christian Religious Groups			State Health Education Officers
31				1-day quarterly state level meeting with 1 LGA paramount traditional leaders			Deputy Governor / Chair of the Task Force on Immunization
32				1-day bi-annual state level meeting with LGA Chairmen from 18 low performing states (382 LGAs)			Deputy Governor / Chair of the Task Force on Immunization
33	MEDIA ENGAGEMENT	National	Production of media messages	Annual production of 10 radio messages in 51 languages	Number of town announcements made		NERICC Communication team
34				Annual production of 10 video PSAs/spots messages in 5 languages (for broadcast, bluetooth sharing and social media placements)			NERICC Communication team
35				Production of 52 episodes of a radio drama series in 5 languages (English, Pidgin English, Hausa, Igbo and Yoruba)			NERICC Communication team
36			Broadcast of media messages	Monthly broadcast of radio spots (10 slots daily on minimum 2 radio stations per state for 30 days) in 18 priority states	• Number of trainings conducted • Number of health service providers trained	• Proportion of health workers delivering accurate key messages • Proportion of caregivers confirming positive attitudes of health workers.	NERICC Communication team
37				Quarterly broadcast of radio spots (10 slots daily on minimum 2 radio stations per state for 30 days per quarter) in 19 non-priority states	• Number of trainings conducted • Number of health service providers trained	• Proportion of health workers delivering accurate key messages • Proportion of caregivers confirming positive attitudes of health workers.	NERICC Communication team
38				Bi-monthly broadcast of TV messages (5 slots daily on 1 TV stations per state for 15 days) in 18 priority states			NERICC Communication team
39				Quarterly broadcast of TV messages (10 slots daily on 1 TV stations per state for 15 days) in 19 non-priority states			NERICC Communication team
40				Biweekly broadcast of radio drama series on minimum 2 radio stations per state in 18 priority states			NERICC Communication team
41				Biweekly broadcast of radio drama series on minimum 1 radio stations per state in 19 non-priority states			NERICC Communication team
42		National	National Quarterly Newspaper Features for	Features on Guardian newspaper			NERICC Communication Team
43				Features on Punch newspaper			
44				Features on Daily Trust newspape			
45				Features on ThisDay newspaper			
46				Features on Vanguard newspaper			
47				Features on the Sun newspaper			
48				Leadership newspaper			
49		National	Special media appearances	National level quarterly special media appearances on national media (television and radio)			NERICC Communication Team
50		State		State level monthly special media appearances on state media (television and radio)			SERICC Communication plan
51		National	Media field visits	National level Quarterly media field visits to 18 priority states for generation and broadcast of			NERICC Communication Team

SN	Strategy/intervention	Scope	Activity	Task	Expected outcome/Target	Performance indicator	Responsible
				human interest stories on PHC and immunization (television, radio, print and wire services)			
52		National	Media orientation and refresher orientation workshops	National level annual 2-day media orientation workshop			NERICC Communication Team
53		State		State level bi-annual 1-day media orientation workshops			SERICC Communication plan
54	NOLLYWOOD ENGAGEMENT	National		Annual 1-day national level workshop with Nollywood and Kaniwood entertainers on profiling PHC and immunization messages			NERICC Communication Team
55			Production of cultural series by Nollywood and Kaniwood	Annual production and national launch of a 4-episode series of "Dan birni" on PHC and immunization			NERICC Communication Team
56		State		Annual production of a 6-episode series of community theatre video shows e.g. "Majigi" on PHC and immunization			SERICC Communication plan
57	MATERIALS DEVELOPMENT	National	Promotional and Visibilty Materials	Annual 3-days Materials development workshop with national communication / NERICC teams and selected State Health Education Officers			NERICC Communication
58				Printing of key messages for 10 different audiences (caregiver, immunization service providers, heads of households, traditional leaders, community leaders, religious leaders, media, policy makers, educational institutions andtown announcers.			NERICC Communication
59				Printing of frequently asked questions (FAQs) for 10 different audiences (caregiver, immunization service providers, heads of households, traditional leaders, community leaders, religious leaders, media, policy makers, educational institutions and town announcers.			NERICC Communication
60				Printing of basic facts for key stakeholders			NERICC Communication
61				Printing of flyers for health facilities, religious places of worship and schools			NERICC Communication
62				Printing of wall posters for health facilities, religious places of worship and schools			NERICC Communication
63				Printing of car stickers at ward levels			NERICC Communication
64				Printing of wall paper banners for health facilities, religious placces of worship and schools			NERICC Communication
65							
66				Production of billboards for LGAs			NERICC Communication
67			Infographics	Production of infographics and postcards, photos to increase interactions and engagement on social media platforms			NERICC Communication
68			Advocacy materials	Production of annual table calendars			NERICC Communication
69				Production of annual diaries			NERICC Communication
70				Production of notebooks with RI and PHC messages			NERICC Communication
71				Production of folders with RI and PHC messages			NERICC Communication
72			Service Providers' Job Aids	Production of flip charts for health facilities and mobilizers (house-to-house mobilizers)			NERICC Communication

SN	Strategy/intervention	Scope	Activity	Task	Expected outcome/Target	Performance indicator	Responsible
73				Production of generic aprons for health facilities and outreaches			NERICC Communication
74			Caregivers / unde-1 Reminder Products	Production of reminder bands / beads for caregivers			NERICC Communication
75			Content design	Quarterly graphics, illustrations and photography and photoshoots for materials			NERICC Communication
76			Field-testing	Biannual pretesting of materials in the states, LGAs and communities in 12 selected states			NERICC / SERICC Communication
77		National / States	Distribution	Distribution of materials to states			NERICC Communication
78	SOCIAL MEDIA ENGAGEMENT	National		Monthly sponsored posts on popular platforms e.g Facebook, Twitter, Instagram to promote messages, pictures and videos on RI to increase reach and awareness.			National
79				Engagement of social media influencers to promote awareness on RI and PHC			National
80	BULK SMS			Use of sms reminders Regular bulk SMS in English and other languages			National
81	DOCUMENTATION	National	Documentation of activities	Annual professional photographic field documentation			NERICC Communication team
82				Annual Documentary Production			
83				National level Annual Reports			
84		State		State level Annual Reports			
85	MONITORING AND EVALUATION OF DEMAND CREATION STRATEGIES	National	Periodic Quantitative Surveys	Annual Knowledge, Attitude, Behavior and Practice Surveys (KABP surveys) in selected 12 states	•	•	National
86		National / State	Periodic Qualitative Surveys	Quarterly focus group discussions includign community group interviews, key informant interviews and in-depth interviews in 18 low performing states.	•	•	SERICC Communication SHEOs C4D RI Consultants
87		National	Supportive Supervision	Direct observation through monthly field visits and supportive supervision			NERICC Communication team
88	TECHNICAL ASSISTANCE SUPPORT AT NATIONAL, STATE, LGAs AND COMMUNITIES	National	Engagement of Social Media Consultants	Draft TOR and facilitate, adverts, selection and contract proceedures. Engagement of 1 Social Media Consultant (national) dedicated only to RI			NERICC Communication team
89			Engagement of Media Consultant	Draft TOR and facilitate, adverts, selection and contract proceedures. Engagement of a Media Consultant (national) dedicated only to RI			NERICC Communication team
90		18 low performing States	Engagement of Communication for Development Consultants	Draft TOR and facilitate, adverts, selection and contract proceedures. Engagement of Communication for Development Consultants for low performing states (1 per state)	Availability of consultants in the state	Availability of Plans Proportion of plans implemented	National
91		19 non-priority states and the FCT	Engagement of Communication for Development Consultants	Draft TOR and facilitate, adverts, selection and contract proceedures. Engagement of Communication for Development Consultants for low performing states (1 per state)	Availability of consultants in the state	Availability of Plans Proportion of plans implemented	National

SN	Strategy/intervention	Scope	Activity	Task	Expected outcome/Target	Performance indicator	Responsible
92		LGAs of low performing states	Recruit one communication consultants per LGA for all 18 low performing states	Draft TOR and facilitate, adverts, selection and contract proceedures. Engagement of LGA Communication for Development Consultants for low performing states (1 per LGA)	Availability of communication consultants in the LGAs	Availability of Plans Proportion of plans implemented	National
93		Low performing communities	Engagement of existing VCMs in high risk states	Continuing engagement of existing VCMs	Availability of communication consultants in the LGAs	Availability of Plans Proportion of plans implemented	State
94		Low performing communities	Engagement of community mobilizers	Engagement of community mobilizers in other lowest performing communities	Availability of communication consultants in the LGAs	Availability of Plans Proportion of plans implemented	State

Supply Chain

SN	Strategy/intervention	Scope	Activity	Task	Expected outcome/Target	Performance indicator	Responsible
1	Capacity Building for Supply Chain Managers	National/Zone/State	Exchange Program	Deploy national and zonal staff to work with development partners and the private sector for a period of time based on relevant supply chain areas	Availability of pool of staff trained in relevant supply chain management (SCM) areas	Proportion of deployed staff that completed the program	DL & HC/NLWG
		National Zone, State, LGA, HF	Peer-to-Peer Learning	Develop, print and disseminate clear guidelines on the implementation of the peer-to-peer learning	Clear guidelines on peer-to-peer learning developed, printed and disseminated	Availability of clear guidelines on peer-to-peer learning at the point of use	DL & HC/NLWG
				Supply chain staff to be paired to interact with one another for knowledge sharing	Improved knowledge of staff in SCM	Proportion of planned sessions that held	NLWG & SLWG
				Brown Bag sessions - Staff take turn to share experience on different supply chain topics	100% of planned brown bag sessions conducted	Proportion of planned brown bag sessions that held	NLWG & SLWG
		National, Zonal, State, LGA	Coaching	Transfer of knowledge/skills from a higher level SCM (Coach) to a lower level supply chain manager (Coachee)	Improved knowledge of coachee	Proportion of planned coaching sessions that held	NLWG & SLWG
		State, LGA & HF	Mentorship	Conduct regular supportive supervision and provide on-the-Job mentoring during supportive supervision	100% of planned supportive supervison conducted	Proportion of planned supportive supervision that held	NLWG/SLWG
		National, Zonal and State	E-Learning	Supply chain staff to undertake self-paced online programs	Improved skills and knowledge of supply chain staff	Proportion of supply chain staff who completed the course with evidence of certification	DL & HC
		National, Zonal and State		Supply chain staff will be registered to conduct self paced "Free" online programs			DL & HC
				STEP Training	Availability of pool of staff trained in relevant supply chain management areas	Proportion of planned staff that completed the program	DL & HC
		National & Zonal	Training Programs	Participate in International Trainings (Supply chain Focused)	Improved skills and knowledge of supply chain staff	Proportion of supply chain staff who completed the course with evidence of certification	DL & HC
				Participate in In-Country Trainings (Project management, Leadership etc. Focused)		Proportion of supply chain staff who completed the course with evidence of certification	DL & HC
2	Ensure availability of skilled and adequate Human Resource for Supply Chain	National, Zonal, State, LGA	HR Needs/Gap Analysis	Conduct a Rapid HR Needs assessment on the workforce gaps across all supply chain levels	HR gap identified	Availability of HR needs assessment report	DL & HC
		National		Leverage international best practices and "what has worked" in other countries to identify needed workforce versus the workload	Adoption and implementation of international HR best practices	Proportion of adopted international HR best practices implemented	DL & HC
		National, Zonal, State, LGA, HF		Develop, print and disseminate clear Job descriptions/Schedules for all levels of the supply chain	Jobs descriptions available at all level	Proportion of supply chain staff with clear job descriptions	DL & HC
				National Level Meeting to develop draft Job description for National, Zonal, State and LGA level Staff			

SN	Strategy/intervention	Scope	Activity	Task	Expected outcome/Target	Performance indicator	Responsible
				National Level Meeting with state level EPI Managers to develop final Job description for National, Zonal, State and LGA level Staff			
3	Strenghtening Existing Supply chain Leadership Structures	State	Strenghtening the SLWGs	Delegate SLWG to drive and take ownership of some specific supply chain activities eg; CCEOP, CIP	Strenghtened SLWG	Proportion of delegated activities completed successfully	NLWG
				Hold regular SLWG meetings	Strenghtened SLWG	Proportion of minutes of planned meetings submitted	SLWG
				Monitor and evaluate SLWG activities through supportive supervision	Strenghtened SLWG	Proportion of planned supportive supervision conducted	NLWG
2	Cold chain extension to achieve one functional solar CCE per ward policy	Ward	Quarterly update and analysis of IRP	Analyze the updated inventroy	Inventroy replacement and rehabilitation plan developed	Report of IRRP available	NLWG
3		National		Identify and remove obsolete and unservicable equipments	100% of all obsolete and unserviceable equipment removed	% of Unserviceable/obsolete CCE removed from updated state IRP	SWLG
4		National,Zones, State, LGA & HF		De-commission of obsolete CCE	100% of all obsolete and unserviceable CCEs disoposed of according to national guidelines	% of unserviceable CCE disposed	ES SPHCDA
5		National,Zones, State, LGA & HF		Consolidate updated IRP from states	Updated status CCE	100% report from all states	NLWG
6		Ward	Procurement of Vestfrost ILR VLS064	CCEOP joint investment	Availability of CCE at site	% of CCE installed	NLWG
7		Ward	Procurement TCW2043 SDD B-Medical (Gavi platform)	CCEOP joint investment	Availability of CCE at site	% of CCE installed	NLWG
8		Ward	Procurement TCW40 SDD Biomedicals (Gavi CCEO platform)	CCEOP joint investment	Availability of CCE at site	% of CCE installed	NLWG
		Ward	Spare part for all new (6380)and existing equipment (4000)	Procurement PQS non CCEOP equipment	100% availability of spare parts for PQS non CCEOP equipment	% of spare parts available for PQS non CCEOP	SPHCDA/SMoH
21		LGA and Health Facility	Optimise temperature monitoring	Procurement of 30DTRs for LGA & Health Facilities	Effective use of 30DTR device at all levels	% of LGAs and HF that report data from 30DTRs	SLWG/SMoH
		Ward	6% buffer of the total CCEOP budget	CCEOP joint investment	Availability of CCE at site	% of CCE installed	NLWG
10		LGA and HF	Payment for procurement fees at 8.5% of cost	Distribution and installation of Gavi procured CCE	All CCEs delivered to site	% of CCE delivered to site as planned	Dir DL&HC
11	Cold chain expansion to achieve adequate cold storage capacity at state level	States	Bridge CCE gap (Cold Room)at state level	State to procure to bridge CCE gap at state level	All states have adequate capacity for quarterly vaccine storage	% States that have adequate storage capacity by 2020	SPHCDA/SMoH
12		Sub-National (Ward level)	Replace obsolete/unserviceable CCE	State procurement of SDDs to replace obsolete/unserviceable CCE	All obsolete/unserviceable CCEs replaced	% of obsolete/unserviceable CCE replaced	SMoHSPHCDA
14	Cold chain maintanance at the state, LGA and HFlevel	State, LGA and HF	Plan Preventive Maintenance	Print and disseminate more maintenance guidelines, SOP, Checklist	Availability of Maintenance guidelines, SOP, Checklist at all sites	% of sites with guidelines, SOPs, Checklists	NLWG
15		State, LGA and HF		Integrate basic user training of HCWs into other trainings	All HCWs trained on basic user maintenance	% of HWs trained (denominator of 10000)	NLWG
				Cold chain maintenance training for national and state technicians	All national and state technicians trained on CCEM	% of national and state technicians trained on CCEOP	NLWG
				Maintenance of generating sets	90% of faulty equipment repaired 48 hrs	% of generating sets repaired within the recommended timelines	Director DLHC
17		National,Zones, State, LGA & HF	Track warranty process	Manage equipment warranty	90% of faulty equipment repaired 48 hrs	% of CCE repaired with the recommended timelines	Director LHC
				Procurement of toolkits			
				Procurement of protective clothing			
21	Temperature monitoring	LGA and Health Facility	Optimise temperature monitoring	Procurement of 30DTRs for LGA & Health Facilities	Effective use of 30DTR device at all levels	% of LGAs and HF that report data from 30DTRs	SLWG/SMoH

SN	Strategy/intervention	Scope	Activity	Task	Expected outcome/Target	Performance indicator	Responsible
		National, state,LGA and Health Facility		Procurement of Freeze indicator to all levels	Availability of procured freeze indicator	% of National, Zones and state with freeze tag	NLWG/SLWGs
22		National, Zonal & States		Map all walk in cold room (WICR)	All WICR mapped	Propotion of WICR mapped	NLWG
23		National and Sub-National (States)		Procure probes for Beyond Wireless	Availability of 4 probes/ coldroom for each cold room	proportion of probes procured	Dir DL&HC
24		National, Zonal & States		Install adeqaute number of probes in all WICRs/ WIFR	100% WICR/ WIFR with probes	Propotion of WICR/WIFR with adequate probes	NLWG
25		All levels		Conduct monthly temperature records reviews at all levels	Monthly temp record reviews conducted	Proportion of monthly temperature reviews conducted	NLWG/SLWGs
6	3 Hub concept	National	Study/Architectural design	Preparation of designs and BoQs	Approved architectural designs & BoQs	Approved designs and BoQs available and disseminated	FMOH/NPHCDA
8			Construction of Hubs	Land acquisition in Lagos	Land acquired at Federal Central Medical Store Oshodi, Lagos via FMOH/ Minister's clearance	HMH Official letter ceding Land for project	Director DLHC
				Land acquisition in Abuja	Adjacent land to the NSCS acquired	FCT Minister's Official letter ceding Land for project	Director DLHC
9				Construction of the Lagos hub	Contract awarded for the construction of the hub	Lagos Hub completed and functional	Director DLHC
10				Construction of the Kano hub	Contract awarded for the construction of the hub	Kano hub completed and functional	Director DLHC
11				Construction of the Abuja hub	Contract awarded for the construction of the hub	Abuja hub completed and functional	Director DLHC
13	Push Plus	All levels	Conduct holistic appraisal of Push Plus across 07 states: Kano, Bauchi, Borno, Yobe , Sokoto, Lagos, Niger	Conduct assesment of 10% of facilities implementing push plus	Assesment conducted in the identified facilities	Final report of assessment shared	Director DLHC
14				Printing of data collection tools	Data collection tools printed	Data collection tools available	Director DLHC
15				Engagement of consultant to manage data collection	Assesment of the 207 wards/facilities implementing push plus	Final report of assessment produced and shared	Director DLHC
			Distribution of bundled vaccines from National to States	Engage vendors to deliver bundled vaccines to 36 States + FCT on quarterly basis	Absence of vaccines stock out at States Cold Stores	Proportion of states that have experienced stock out over the period in review	Director DLHC
16			Scale up push plus to all LGAs and health facilities in the country	Engage vendors to deliver bundled vaccines to 588 LGAs and 7,376 apex health facilities	On-time and full delivery of bundled vaccines at facilities and LGA cold stores	Proportion of facilities that have experienced stock out over the period in review	Director DLHC
				Engage vendors to deliver bundled vaccines to 774 LGAs and 9,656 apex health facilities	On-time and full delivery of bundled vaccines at facilities and LGA cold stores	Proportion of facilities that have experienced stock out over the period in review	Director DLHC
				Engage WFPs/WTOs/In-charges of equipped facilities to cascade deliveries to unequipped facilities in their wards	On-time and full delivery of bundled vaccines at facilities and LGA cold stores	Proportion of facilities that have experienced stock out over the period in review	Director DLHC
18	Clearing and insurance of vaccines and health commodities	National	Clearing of vaccines	Clearing of vaccines and health commodities by a 3PL	On-time clearance by the vendor	Proportion of vaccines and health commodities cleared on-time	Director DLHC
19			Insurance for vaccines and health commodities	Insurance of vaccines and health commodities by 3PL	Availability of insurance policy for vaccines and health commodities	Proportion of vaccines and health commodities insured	Director DLHC
1	Ensure adequate supply of data management tools	Printing and Supply	Print and supply data management tools	All levels	Data management tool are available and used	Proportion of sites with adequate data management tools	NPHCDA and partners
	Integrate program and logistics data	Implement VAN strategy (includes linkage of Navision with DHIS2)	Link Navision, NLMIS with DHIS2	National	Navision linked with DHIS2	Navision linked with DHIS2	NPHCDA and partners
			Train EPI managers on interpretation of Navision/NLMIS-DHIS analytics	National	EPI managers have the capacity to use analytics to improve the supply chain system	Proportion of EPI managers trained on the interpretation of Navision/NLMIS-DHIS analytics	NPHCDA and partners

SN	Strategy/intervention	Scope	Activity	Task	Expected outcome/Target	Performance indicator	Responsible
		Develop SOP for interpretation of Navision-DHIS2 analytics	Develop SOP for interpretation of Navision-DHIS2 analytics	National	SOP for interpretation of Navision-DHIS2 analytics are available and used	Availability of SOP for interpretation of Navision-DHIS2 analytics	NPHCDA and partners
			Print and distribute SOP for interpretation of Navision-DHIS2 analytics	National		Prorportion of required SOP printed and distributed	NPHCDA and partners
			Disseminate SOP for interpretation of Navision-DHIS2 analytics	All levels		Conduct of dissemination meeting	NPHCDA and partners
2	Entrench vaccines accountabiliy in the country	Training on vaccine acccountability (including analytics and use of data for action)	Train EPI managers and Health Care Workers (HCWs) on vaccines acccountability (including analytics and use of data for action)	All levels	EPI managers and HCWs trained on vaccine acccountability	Proportion of EPI managers and HCWs trained on vaccine accountability	NPHCDA and partners
		State level review meeting	Conduct monthly review meeting across all levels	State levels	Output from data analytics used to inform program decision eg Distribution	Proportion of states conducting monthly review of stock and service delivery data	NLWG and SLWG
		LGA level review meeting	Conduct monthly review meeting across all levels	State/LGAs levels	Output from data analytics used to inform program decision eg Distribution	Proportion of states conducting monthly review of stock and service delivery data	NLWG and SLWG
		Regular physical stock count	Conduct regular physical stock count across all levels	National & Zones	Accurate stock figures	Proportion of stores with less than 5% disparity between record figures and actual physical stock	NLWG and SLWG
		Investigative visits	Conduct investigative visit to open vaccine market	All levels	Non-seepage of public vaccines into the private market	Proportion of planned investigative visits conducted	NLWG and SLWG
		Introduce barcode technology	Introduce barcode technology	National, Zone, State	Improved stock management	Proportion of stores using barcode technology	NPHCDA and partners
	Enhance forecasting based on NPHCDA's state-specific target coverage	Conduct wastage rate study	Develop concept note for wastage rate study	National	Wastage rate study is conducted with output used in forecasting and distribution	Concept note developed	NPHCDA and partners
			Carry out wastage rate study	All levels		Wastage rate study conducted	NLWG and SLWG
		Conduct state-specific forecasting	Hold annual forecast assumption building workshop	National	States specific forecast is available	Workshop conducted with draft State-specific forecast	NPHCDA and partners
			Review and finalize forecast with NPHCDA leadership and UNCEF SD	National		Annual state-specific forecast is finalized	NPHCDA and partners
	Improve visibility into forecast across public health programs	Annual forecast harmonization workshop for all public health programs	Conduct annual forecast harmonization workshop for all public health programs	National	Improved visibility into forecast across all public health programs	Harmonized forecast workshop held	NPHCDA and partners
4	Improve last mile LMIS visibility	Deploy appropriate last mile LMIS	Identify the best last mile LMIS technology solution for the country	National	Last mile LMIS technology solution is identified	Last mile LMIS solution identified	NPHCDA and partners

SN	Strategy/intervention	Scope	Activity	Task	Expected outcome/Target	Performance indicator	Responsible
		technology solution for the country					
			Deploy appropriate last mile LMIS technology solution for the country	LGA, HF	Improved stock visibility	Proportion of sites in which last mile LMIS technology solution has been deployed	NPHCDA and partners
			Maintenance and hosting	National		Last miles LMIS solutions is maintained	NPHCDA and partners
6			Link last mile LMIS solution with DHIS2 and Navision	National		Last mile LMIS solution linked with DHIS2 and Navision	NPHCDA and partners
			Monitor utilization of last mile LMIS solution	National, State		Proportion of sites using last mile LMIS technology solution	NLWG and SLWG
1	EVMA	Conduct EVM Assessment	Conduct Training of assessors on EVMA procedure, and field assessment	All levels	Availability of EVM Assessment Report	Propotion of staff trained on EVM Assessment	NLWG
2	EVM cIP	Documentation of EVMA	Develop EVMA report and archive data	National	Availability of the EVMA report and archived data	Availability of the EVMA report and archived data	NLWG
3		Develop National and State Specific continuous improvement plan (cIP)	Conduct state-specific cIP development workshop at the national level	National, Zone and State	Availability of draft state-specific cIP	Proportion of states with state specific EVM cIP	NLWG
4		Obtain buy in for state-specific cIP from state leadership and development partners	Conduct cIP State engagement meeting (DPM, LIOs, LCCOs and PHC coordinator	State, LGA	100% of states conducted state level engagement	proportion of states engaged	SLWG
	Supervisory EVMA	Supervisory EVMA	Conduct supervisory EVMA	All levels	Availability of EVM performance score	Propotion of states that conducted supervisory EVMA	NLWG/SLWG

Data Management

SN	Strategy/intervention	Scope	Activity	Task	Expected outcome/Target	Performance indicator	Responsible
1 2 3 4	Strengthen coordination structures for data reporting, warehousing, management and use of data for action	National, State and LGA levels	1.1.1 Establishment of a National/States data teams to facilitate Implementation of the DQIP	Establish Data teams at all levels Onboarding of the identified teams to sensitize them on the DQIP Evaluate performance of teams	Improve coordination of data quality activities at all levels	% of states with functional Data teams established	NERICC
  6			National Bi-annual Data review meeting	Development of concept note for the review meeting	Improved data quality	Number of planned meetings conducted	NERICC
8			Strengthen Data review meetings at State	Review data issues across the State Include all key members of staff involved in RI (M&E, CCOs, RIOs). Triangulate data across reporting platforms (DVD-MT and DHIS2) and SMS reporting , supply chain and logistics data, surveilliance	Immunization issues identified and addressed in each state Increase coordination amomg RI divisions	% of states that have conducted monthly RI review meeting	NERICC/SERICC

SN	Strategy/intervention	Scope	Activity	Task	Expected outcome/Target	Performance indicator	Responsible
10 11 12			Revision of SOPs/guidelines for conduct of data review meetings at LGA levels	Review and update SOPs for LGA review meetings	h	% of states that have received the finalized SOP % of states implementing the new SOP (during spot checks)	NERICC
18	Provision of appropriate technologies (equipment) and data capturing tools at all levels	National, State and LGA levels	Procure computers and an in-focus equipment for SERICC to support data related activities	Quantify and specify laptops and in-focus for procurement Procure and distribute computers to SERICC data team	Increased access to data at all levels Increased use of data for action	% of SERICC data teams that have computers % of states that put the computers to use during spot checks visit	NERICC
19			Procure mobile phones for data reporting from the health facility	Procure mobile phones for the relevant LERICC members	Increased reliabilty of reports from the health facilities Decreased data falsification at the LGA level	% of LGAs that improved in timeliness and completeness of reporting	NERICC/LERICC
20			Strenghthen DHIS storage infrastructures	Conduct assessment on existing infrastructures Upgrade existing servers Procure storage infrastructure	Sustained availability of storage space for DHIS reporting	Proportion of storage space added 100% of storage needs met	NERICC
21			Revision of EPI data tools for data capture, field visits / supervisions by government and partners	Revise EPI data tools . Update the RISS Checklist	EPI data tools revised. Increased validity of data tools	Number of data tools revised and disseminated	NERICC
22 23			Print and distribute appropriate EPI data tools to States, LGAs and HFs	Quantify required EPI data tools To print EPI data tools To distribute the printed tools	Increased availability of relevant data tools for capturing data	% of states/HFs that have updated data tools	NERICC
29 30 31			Introduce RI data management in pre-service institutions curriculum	Senstitization meeting with heads of institutions Revision of school curriculum	Increased RI data management skills of HCWs	% of institutions that have implemented revised curriculum	NERICC
33			Collaborate with NPopC to improve birth registration and redefine denominator	Sensitization meeting with NPopC to discuss inaccuracy of birth registration Redefine denominator for RI	Increased reliability of denominator	% of states that link birth registraion to census database	National
36			To establish linkage of immunization system delivery data with birth registration				
37			Produce and disseminate quarterly bulletins on RI performance to States and LGAs	Develop and disseminate bulletins to states and LGAs	Increased understanding of RI performance Increased use of data for action	% of states and LGAs that have received quarterly bulletins	NERICC
42	Improve data quality on DHIS and the use of data for action	National, State and LGA levels	Develop and implement interactive dashboards and score cards for each level using DHIS data	Create dashboards and score cards for policy makers in the immunization system	Increased ability to make evidence based decisions Increased transparency across immunization system	Finalized score cards that incorporates all aspects of routine immunization Finalized dashboards that pull data from DHIS % of states that adopt the score cards	NERICC
46			Regular update of the master list of health facilities on DHIS	Receive update on the number of facilities providing RI in each state	Increased ability to monitor planned RI sessions effectively	Proportion of new facilities included in the data base	NERICC
48 49 50 51	Strengthen human resource capacity, management and organization	National, State and LGA levels	Training and retraining of frontline health workers and managers on the use of DHIS mobile phones, data tools, monitoring techniques, use of data for action(s) etc.	Training HCWs on the use of technology for data collection and use	Increased ability of HCWs to use technology to collect and use data Increased real time data collection	% of state/LGAs using mobile phones for data collection	NERICC
53 54 55			Conduct monthly supportive supervisory visits to all HFs including reporting on the ODK	Conduct supportive supervision to HFs using ODK for reporting	Improved quality of supportive supervision Increased accuracy/reliability of supportive supervision data	% of states that have a reporting rate of above 80% for supportive supervision on the ODK platform	NERICC/SERICC/LERICC
61	To strengthen data quality audit, assurance and	National, State and LGA levels	Conduct boosted SMART survey	Collect data to feed into boosted SMART survey	Increased understanding of issues within the RI system	% of states that conduct the SMART survey	NERICC/SERICC

SN	Strategy/intervention	Scope	Activity	Task	Expected outcome/Target	Performance indicator	Responsible
	assessment mechanisms to improve validation				Increased understanding of accurate coverage rates across states		
			Conduct NICS/MICS				
			Conduct quarterly DQS to LGA and health facilities	Conduct routine data quality surveys	Identified number of existing data quality issues addressed	% of states that conducted DQS	NERICC/SERICC
62			Conduct quarterly RI Lots Quality Assurance Sampling (LQAS)	Collect data to feed into LQAS	Increased understanding of key issues affecting data quality at the LGA level Increased understanding of accurate coverage rates across the LGAs	% of states that conduct 1 LQAS per quarter	NERICC/SERICC/LERICC
63			Annual evaluation of status of implementation of the DQIP	Review implementation of DQIP activities. Identify and address issues concerning data quality improvement programming. External evaluation of DQIP completed.	Progress identified for each activity within the DQIP Issues and delays in program planning identified and addressed Revised workplan for DQIP	% of DQIP activities successfully implemented % of issues addressed in DQIP implementation	NERICC
67	Pass enabling law and develop guidelines	National, State, and LGA level	Revision of the National Immunization Policy to accommodate appropriate rules and regulations to reduce data falsification	Update policy to reflect current issues affecting data quality	Enforcable rules and regulations concerning data quality Better quality routine immunization data	Number of laws passed concerning data quality % states with improved data accuracy	NERICC
71			Printing and distribution of the revised policies and guidelines to all levels/Partners	Disseminate revised policies to the state and LGA level	Increased understanding of new policies concerning immunization data and falsification	% states that adopt policies	NERICC/SERICC
79	Conduct population estimate assessments to address denominator issues	National, State, and LGA levels	Continuous update of GIS population estimates in all the states + FCT	Receive information on GIS population estimates in all states and analyze	Increased accuracy of population targets across the states Reduced wastage across the states	% states that demonstrate increased accuracy of RI data % states that reduce wastage	NERICC
80			Conduct walk-through micro-plan (HH enumeration) every 3-5 years	Conduct household enumeration for under 1 children	Increased accuracy of denomenator across the country	% states that have conducted household enumeration	NERICC
85	To introduce electronic data transmission and immunization registry to capture individual immunization record	National, State, and LGA levels	Scale up electronic data capture using SMS platform	Roll out SMS data collection across the states	Increased accuracy of data reporting Decreased falsification of data	% of states that have successfully adopted SMS platform % of states that increase the accruacy of their data reporting	NERICC
87			Pilot deployment of DHIS2 tracker		DHIS2 tracker deployed in Nigeria Increased accuracy of RI data	% of states that have deployed DHIS2 tracker	NERICC/SERICC
88			Scale up to other states				
			Capacity building	Train HCWs on client enrolment, other data entry tasks, etc.			
90	To strengthen home based records and improve card retention at community levels	National, State and LGA levels	Revision / pilot placement of the home-based records in 6 states				
91			Printing, distribution and placement of the HBRs in all the states	Distribute HBRs to all states	Availability of HBRs in all the states		

[i] The financing for the implementation of the BHCPF will be borne by the Federal Government for the next 3-5 years, in order to promote equity across states. However, eventually Federal funds will be used as an incentive to leverage state funding for health, which is currently low.