THE UNITED REPUBLIC OF TANZANIA

MINISTRY OF HEALTH, COMMUNITY DEVELOPMENT, GENDER, ELDERLY AND CHILDREN SOCIAL WELFARE

TANZANIA MAINLAND

IMMUNIZATION AND VACCINE DEVECELOPMENT PROGRAMME

2016 - 2020 COMPREHENSIVE MULTI YEAR PLAN

Version: February 2016

FOREWORD

Tanzania has been doing impressive achievement in reduction of under-five and infant mortality through provision of immunization services. The achievement of MDG 4 in 2015 larges due to increased access and utilization of immunization services by communities and introduction of new vaccines that target diseases that are of public health importance. With these achievements the country has ongoing challenge of pockets of unvaccinated children in some districts. This unfinished work of reaching every last child is taken forward in comprehensive multiyear plan (cMYP) of 2016-2020 driven by Global Vaccine Action Plan.

The cMYP is not a not a standalone document. It builds on lessons learned during the implementation of cMYP 2010-2015. It was developed to fit within the current country's HSSP IV which provides opportunities for immunization to adequately link strategies and implementation to broader health sector and national development goal. It also links with global strategy of GIVS, Decade of Vaccines and GVAP. Moreover, it also links with the WHO African Regional Immunization strategy for 2016 -2020.

The 2016-2020 cMYP aims at providing the Immunization Program with standardized guidance in making the desired achievements about appropriate immunization services that address the Tanzania community as well as global commitments. By using this cMYP immunization services can be rationalized and well-being of Tanzanian improved. It forms as a tool which is meant to be give direction of the program including all relevant activities such as Management, Logistics and Cold chain, Surveillance, Training, Demand creation and Monitoring and Evaluation.

This cMYP has been produced based on the HSSP IV underlining the need for better performance of health services as well as individuals within the health system. It lays out key goals and objectives for Tanzania's routine immunization (RI) system, and details the strategies that will allow the country to achieve its goals and objectives, while recognizing important challenges. It also recognizes the valuable contribution of partners of immunization services including Global Alliance for Vaccines and Immunization (GAVI), WORLD Health Organization (WHO), United Nations Children's Fund (UNICEF) Clinton Health Access Initiative (CHAI) and Maternal and Child Survival Program (MCSP).

It is my hope that this 2016-2020 cMYP will provide directives for the preparation of annual plans at national, regional, district and health facility level. I therefore invite all stakeholders to consult and use it extensively for the betterment immunization and health services as a whole for the next five years

Hon. Ummy Ally Mwalimu (MP)
Minister of Health, Community Development, Gender, Elderly and Children
February 2016

ACKNOWLEDGEMENT

The development of this cMYP has been made possible due to contributions of multisectoral and interdisplinary expert. The Ministry of Health and Social Welfare wishes to express gratitude to individuals and development partners who worked with the Ministry in the development of this plan.

The MOHSW would like to acknowledge partners and stakeholders who contributed in one way or another to the successful development of this document. The Ministry particularly wishes to acknowledge invaluable contributions of the following partners: the World Health Organisation (WHO), United States Agency for International Development (USAID) through Maternal And Child Survival Program (MCSP), United Nations Children`s Fund (UNICEF), Clinton Health Access Innitiave (CHAI) for their technical and financial support during the whole process of developing this guideline.

Representative participation of Regional, Council and Health facilities is appreciated for their valuable contribution during the whole process from situational analysis of the program to development of monitoring and evaluation of this cMYP

Lastly but not least, The Ministry would also like to acknowledge various contributions made by staff from Immunization and Vaccine Development (IVD) especially the Technical Working Group (TWG) for their tireless effort during the entire process of developing this guideline.

The ministry is committed to dissemination and utilization of this cMYP for annual planning of the program and decentralization for regional, council and health facility planning.

Dr. Mpoki Ulisubisya
Permanent Secretary

ACRONYMS

AD ---------- Auto disposable syringes
AEFI---------- Adverse Event Following Immunization
AFP---------- Acute Flaccid Paralysis
BCG ---------- Bacillus Calmette Guerin
CCOs---------- Cold Chain Operators
CHMT---------- Council Health Management Team
CVS ---------- Central Vaccines Store
DCCO---------- District Cold Chain Officer
DHO---------- District Health Officer
DMO ---------- District Medical Officer
DTP – HB ---------- Diphtheria, Pertussis, Tetanus and Hepatitis B
DRCHCO---------- District Reproductive and Child Health Coordinator.
DVS ---------- District Vaccine Stores
DQA---------- Data Quality Audit
DQSA ---------- Data Quality Self-Assessment
EPI---------- Expanded Programme on Immunization
HMIS---------- Health Management Information System
LPG----------Liquefied Petroleum Gas
MCH ---------- Maternal and Child Health
MTEF----------Medium Term Expenditure Framework
MNT---------- Maternal and Neonatal Tetanus
NBS ---------- National Bureau of Statistics
NIDs---------- National Immunization Days
OPV ---------- Oral Polio Vaccine
PHCC ---------- Primary Health Care Committee
PIE---------- Post Introduction Evaluation
RCCO----------Regional Cold Chain Officer
RAS ---------- Regional Administrative Secretary
RCHS ---------- Reproductive and Child Health Services
RED ---------- Reaching Every District
RMO ---------- Regional Medical Officer
RVS ---------- Regional Vaccines Store
SIAs ---------- Supplemental Immunization Activities.
SNIDs ---------- Sub National Immunization Days
TDHS ---------- Tanzania Demographic Health Survey
UNICEF ---------- United Nations Children's Fund
VVM ---------- Vaccine Vial Monitor
WHA ---------- World Health Assembly
WHO ---------- World Health Organisation
WICR----------Walk-in Cold Room

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

KEY MESSAGES OF 2016-2020 cMYP

Tanzania is the largest country in East Africa with an average size of 947,300 square kilometres and estimated population of 48,560,461(census 2012). The Tanzania Immunization program was initiated in 1975 has been one of the best performing immunization programs in Africa. Immunization is being given very high priority by the Government of Tanzania through its Primary health care strategies. Over the years since inception it has contributed to the reduction of infant and under five mortality with Infant mortality rate being reduced from 99/1000 live births in 1999 to 45/1000 in 2014.

Significant success has been observed in the previous comprehensive multi-year strategic plan (cMYP) period 2010-2015. According to 2014 coverage survey, 86.0% of children were fully immunized by the age of one year. This finding was supported by the recent immunization program review in July 2015 which showed that vaccination sessions were held daily in 85% of health facilities, 92% of visited health facilities had conducted planned outreach sessions in the last year, caregiver acceptance of immunization was high, and cold chain capacity and infrastructure at all levels were adequate for the current population and vaccine schedule.

Immunization coverage has been maintain over 90%, from 2010 to 2014 for all antigens given to under one year children one of the reason being introduction of RED/REC strategy that has helped the country strengthen routine immunization. The number of districts with Penta 3 coverage <80% is reducing, from 56% (55/119) in 2009 to 11.9% (20/168) in 2014. Tanzania was able to introduce new vaccines from 2001 to 2014. Other vaccines which will target the older age group include HPV and Meningitis vaccine. Therefore the current strategy for the program includes having a target group which is older and wider than the current target for infants. New vaccines introduced since 2001 are Hepatitis B vaccine, Haemophillus influenza Vaccine, Pneumonia vaccine, rotavirus vaccine, Measles second dose, Rubella vaccine.

Tanzania's Immunization and Vaccine Development (IVD) program is well structured and capacitated with designated immunization officers at national, regional, and district levels, and received strong technical and financial partner support. Despite these successes, Tanzania continues to have high number of un-immunized and under immunized children. Addressing this challenge will be a key priority of the upcoming strategic period.

The cMYP 2016-2020 was developed during a two-week workshop in October 2015 in Arusha, Tanzania. The workshop included full participation from IVD, national level vaccine partners, and regional health representatives. The workshop was led by IVD and facilitated by WHO to assist with implementation of the cMYP guidelines 2013 and the cMYP costing tool version 3.8.4. Vaccine partners included representatives from Gavi, WHO, UNICEF, MCSP, CHAI, and PATH. The situational analysis of the cMYP was informed by the Comprehensive immunization program review integrated with VPD Surveillance & immunization financing review, Post

Introduction Evaluation of MR +MCV2 and Gavi Joint Appraisal which was conducted in July 2015, and by the Effective Vaccines Management Assessment (EVMA) conducted in May 2015. Goals, objectives, and strategies of the cMYP 2016-2020 reflect many of the recommendations derived from the program review and recent assessments.

With a finalized cMYP 2016-2020 inclusive of costs and a monitoring and evaluation framework, the 2016 annual plan was derived with all immunization activities coordinated behind a single operational plan. IVD and partners will be routinely reviewing progress of the cMYP to ensure Tanzania is on track to sustain and achieve high and equitable coverage and minimize impact of vaccine preventable diseases.

The overall direction of Tanzania's cMYP 2016-2020 can be summarized in the following areas:

Sustain high coverage while reaching every last child equitably

Within the last 5 years, Tanzania has achieved and maintained high coverage above 90% nationally from 2010 to 2015. The number districts with Penta 3 coverage less than 80% has been reduced from 56% (55/119) in 2009 to 11.9% (20/168) in 2014. Tanzania is on track and aiming to reach high coverage across all districts by 2020 through strengthening Reach Every Child (REC) approach, defaulter tracking, targeted strategies for hard to reach populations, and improved micro planning especially in lower performing districts.

Expand immunization service to life course approach

With the 2014 introductions of measles rubella second dose (MR2) nationwide and the Kilimanjaro Region demonstration for human papilloma virus (HPV) vaccine, the immunization program has already taken the bold step to expand immunization services beyond children under one year. Vaccines that target new age populations means readjusting strategies especially in demand creation, communication, integration with other health services, and even expanding service delivery points to ensure that populations are aware and able to access lifesaving vaccines.

Reduce vaccine preventable diseases through new vaccine introductions

Tanzania plans to introduce seven vaccines during the strategic period from 2016-2020. These vaccines include IPV, bOPV, Hepatitis B birth dose, Yellow fever, HPV, Meningitis A, and potentially an efficacious new malaria vaccine. With each new introduction, IVD and its partners are prepared to assess subsequent upgrade of cold chain capacity, supply chain requirements, training of service providers, and appropriate communication to the public.
Critical to reduction of vaccine preventable diseases includes strengthening surveillance through building national laboratory capacity, harmonizing data with Integrated Disease Surveillance Response (IDSR), and increasing outbreak preparedness at sub-national levels.

Adopt and update new technology in cold chain, supply chain and data

The backbone of vaccine delivery lies in sufficient cold chain and supply chain to ensure the quality of vaccines. In the next 5 years, Tanzania will aim to improve storage and maintenance to 100% and availability of vaccines to 100% at all levels. To achieve this, IVD and its partners will need to stay abreast of technology developments and use data to gather accurate information down to the health facility and even individual patient level. IVD has already moved forward to develop an innovative Vaccines Information Management System (VIMS) to consolidate existing vaccines data and expand to electronic data collection at health facilities.

To achieve the goals and objectives of the cMYP 2016-2020, Tanzania and its partners will need to be prepared to step up investments in immunization to cover an estimated USD $879 million for immunization activities during the 5-year period. Tanzania's immunization program has enjoyed strong government support as exemplified by 62% of the program financed by the Government of Tanzania (GoT) in 2014. GoT has fully financed traditional vaccines since 2009 and is expected to continue its commitment to a ring-fence policy to protect funds for vaccines. However, in accordance with Tanzania's current projected entry into the first phase of Gavi transition in 2020, Tanzania will need to begin making preparations to increase country co-financing of Gavi supported vaccines year upon year until full graduation from Gavi vaccines support. In addition to increased financing, the human resource capacity to operationalize and manage the entire immunization program from national to health facility level will need to be continually strengthened.

Lastly, sustaining high coverage while improving equity to every last child in Tanzania will continue to require donor and partner financial and technical support during the 2016-2020 period. Tanzania's current success could not have been achieved without the dedication and coordination of strong partners. Reaching the last mile children in Tanzania before 2020 could chart a clear path forward for other countries looking to close the gap.

Chapter One

COUNTRY BACKGROUND AND INFORMATION

1.1. Tanzania Geography and Population

The United Republic of Tanzania comprises of Tanzania mainland and the Islands of Zanzibar. It is the largest country in East Africa covering an area of 947,300 square kilometres. Tanzania Mainland has 25 administrative Regions and 169 Councils. Of the 169 districts, 34 are urban units, which are further classified as three city councils (Arusha, Mbeya, and Mwanza), nineteen municipal councils, and twelve town councils. Each Council is divided into Divisions, which in turn are composed of 3-4 Wards (with 5-7 villages each). The Local Government Authority (LGA or Council) is the most important administrative and implementation unit for public services.

Figure 1: Map of Tanzania with Regions

According to the latest Population and Housing Census of 2012, Tanzania Mainland had a population of 43,625,354 comprised of 21,239,313 males and 22,386,041 females with an average annual growth rate of 2.7% making the projected population of 2015 to be 48,366,270. The crude birth rate is 41.6 per 1,000 populations and life expectancy at birth is 63 years for women and 60 years for men respectively. Less than one third (29%) of the population resides in urban areas whereas the majority (71%) of population are rural dwellers. (Tanzania Bureau of Statistics, 2013)

1.2 Health Statistics and Trends

In general, health status of the population is improving, with differences between urban and rural areas, whereby some Regions show an unfavourable epidemiological profile. There are also differences between socio-economic strata with on average a poorer health status among deprived groups (HSSP III MTR-Analytic Review 2013).Table 1 below some of the key health indicators.

Table 1: Health Indicators in Tanzania Mainland

Description	Figure	Sources
Total Population:	**47.8 million (mainland)**	**NBS 2015 projection**
Under 15 years old:	44.2% (mainland)	NBS 2015 projection
Women of reproductive age (15-49)	24.3% (mainland)	NBS 2015 projection
Annual Population Growth rate:	2.7%	NBS Census 2012
Life expectancy at birth (years):	61 (63 F, 60 M)	NBS Census 2012
Total Fertility Rate (TFR)	5.2	NBS Census 2012
Under 5 Mortality Rate /1,000 live births	51	One Plan II 2015
Infant Mortality Rate / 1,000 live births	45	NBS Census 2012
Neonatal Mortality/1,000 live births	20	One Plan II 2015
Maternal Mortality Ratio/per 100,000 live birth	432	NBS Census 2012
Births in health facilities	77%	HMIS 2014
Skilled Birth Attendance	69%	HMIS 2014
Leading Cause Admission/Death in Hospitals	Malaria	SPD 2013
HIV Prevalence, 15-49 years	5.3% (6.2% F, 3.9% M)	THMIS 2012

The trends in Child Mortality and Infant Mortality are downwards, and Tanzania has met the targets of the MDG4 in 2015. Child vaccinations are high with coverage of measles vaccination and DPT3 of over 90%. Underweight for under five children is decreasing, but stunting remains high (42% TDHS).Malaria is still the leading cause of morbidity, although slowly reducing in children under 5 years (33% in 2012). Malaria is also the leading cause of death of hospital admitted patients (around 30%). The 2012 Tanzania HIV and Malaria Indicator survey (THMIS) suggest a decline in HIV prevalence from 5.7% to 5.3% (2008-2012).

1.3 Tanzania Mainland Health System

1.3.1 Enabling Policies

The Tanzania Development Vision 2025 identifies health as one of the priority sectors. Among its objectives is the achievement of a high quality of life for all Tanzanians. The National Strategy for Growth and Poverty Reduction in Tanzania Mainland (MKUKUTA-II) was built from its predecessor MKUKUTA I and focuses on growth and enhancement of productivity with more intervention geared to wealth creation.

A national Health Policy is in place and was updated in 2007, providing the Government's vision on long-term developments in the health sector. The Primary Health Service Development Programme (PHSDP/MMAM 2007-2017) addresses the crucial issue of equity by calling for an increase in the coverage and quality of primary health care services for communities living in rural and remote areas. The National Road Map strategic Plan to improve Reproductive, Maternal, New-born, Child & Adolescent Health in Tanzania (RMNCAH 2016-2020) addresses reach every child and woman in hard to reach areas/populations for maternal and child services. Tanzania Mainland is currently implementing its 4th Health Sector Strategic Plan (HSSP 4) for 2015-2020.

1.3.2 Health Services

Primary health care services constitute the basis of the pyramidal structure of health care services in Tanzania. Community-based health activities bring health promotion and prevention to the families in villages and neighbourhoods, often along the lines of Disease Control Programmes. Public and private dispensaries provide preventive and curative outpatient services, while Health Centres can also admit patients, and sometimes provide surgical services.

Council hospitals provide health care to referred patients and provide medical and basic surgical services. Regional Hospitals function as referral hospitals to provide specialist medical care. Zonal and National Hospitals offer advanced medical care and are teaching hospitals for medical, paramedical and nursing training. Pharmaceutical services are provided through public as well as Faith Based Organisations' (FBO) health facilities, private pharmacies and Accredited Drug Dispensing Outlets (ADDOs).

Social services are provided by social welfare officers and social workers under the Councils or by non-governmental organisations, supervised and coordinated by the Head of the Social Welfare Department of the Council.

Figure 2: The health care pyramid in Tanzania (public and private equivalent)

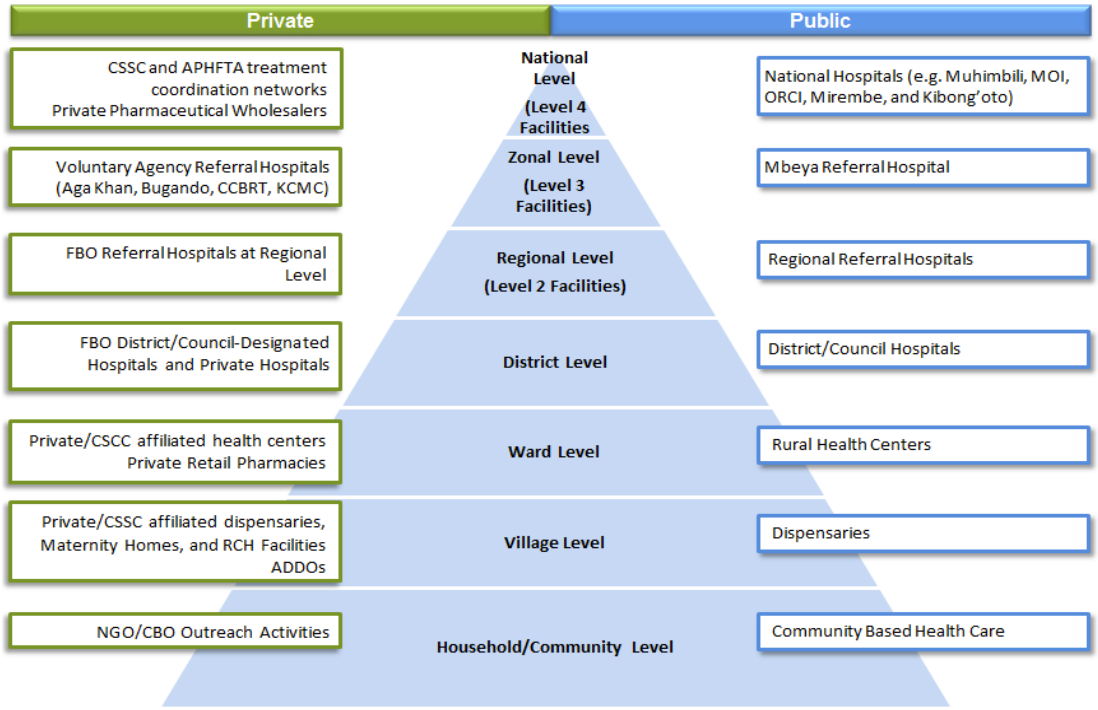


Table 2: Current health service facilities (public and private) in Tanzania

Public Sector Facilities (2014)	**Number**	**Total No. Of Beds**
National general hospitals	1	1,362
National specialised hospitals	4	1,497
Regional hospitals	27	7,749
Zonal hospitals	5	2,327
District / designated district / other hospitals	203	19,767
Parastatal hospitals and health centres	29	1,214
Health centres	614	14,959
Dispensaries	5,819	
Parastatal dispensaries	168	
Specialised clinics	12	
Sub Total	6,882	48,875
Private Sector Facilities (2014)		
Private hospitals	39	1,187
Private health centres	78	800
Dispensaries	1,123	
Private clinics	40	
Private dental clinics	26	
Private eye clinics	5	
Maternity homes	22	
Sub Total	1,333	1,987
Health Sector (Total)	8,215	50,862

1.3.3 Management of Health and Social Welfare Services

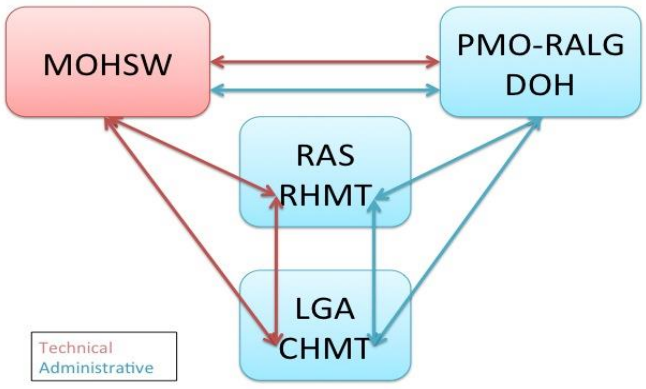
Tanzania has decentralised most Government functions through Decentralisation by Devolution (D-by-D) whereby PMO-RALG is responsible for the management and administration of public services at Regional and Council level. At the local level the LGAs are responsible for planning, delivering and overseeing public services. LGAs and facilities owned by LGAs have responsibilities in social accountability and in establishing partnerships with communities, NGOs and private providers in health and social welfare. They are the main interface between citizens and Government in day-to-day life.

The Council Health Management Teams (CHMTs) manage council health care and social welfare services, work under the Council. The Council Health Services consist of Primary Referral Hospitals and Primary Health Care Facilities (health centres and dispensaries).Personnel working in Council health services is employed by the LGA. All CHMTs produce an annual Comprehensive Council Health Plan (CCHP), which shows the activities and budgets for the services.

The Ministry of Health, Community Development, Gender, Elderly and Children (MHCGEC) has the overall responsibility over the health and social welfare services and defines priorities for services in the health and social welfare sector, e.g. the National Essential Health Care Interventions Package

The MHCGEC provides technical guidance to organisations involved in service delivery and defines, controls and promotes maintenance of quality standards and sets the policy for social welfare. The MOHSW mobilises resources and has the lead in policy and international relations in the area of health and social welfare. The MOHSW delegates some stewardship functions to PMO-RALG and other statutory health agencies, e.g. Medical Stores Department, Tanzania Food and Drug Authority,

Figure 3: Relations between levels of management in health and social services



The Ministry of Finance (MOF) manages the overall revenue, expenditure, and financing of the Government of the United Republic of Tanzania and provides the Government with advice on the broad financial affairs of Tanzania in support of the Government's economic and social objectives. The Ministry has an important role over the health and social welfare sector budget and also over income generating activities (e.g. insurance schemes).

The President's Office, Public Service Management (PO-PSM) assists in matters of human resources management pertaining to Public Service across the entire government system. This includes responsibilities for personnel policies, administration and coordination of training and recruitment. This office plays a crucial role in human resources for health in the country

Chapter Two

IMMUNIZATION AND VACCINES DEVELOPMENT (IVD) PROGRAMME IN TANZANIA

2.1 Overview of Immunisation Services

Immunization and Vaccine Development (IVD) programme is a subsection under the Reproductive and Child Health (RCH) Section, which is one of the five sections of the Preventive Services Department under the Directorate of Preventive Services of MHCGEC. The Programme works in collaboration with Medical Stores Department (MSD) for vaccine and logistics management, the Central Transport Unit and Health Management Information System (HMIS).

The IVD programme has five main sections which are: Administration, Surveillance (Monitoring and Evaluation), Cold Chain and Logistics, New Vaccine Development (including Routine Immunization and Research,) and Training (including demand creation). The national level is responsible for formulating policies, guidelines and standards for strategic planning and budgeting. Other functions include monitoring, training, technical support, supervision, facilitating procurement of vaccines, equipment and related supplies as well as ensuring adherence to quality service delivery.

The programme is supported by Immunization Partners through the National IVD Technical Working Group which works under the close coordination of the National Immunization Coordination Committee-The Inter Agency Co coordinating Committee (ICC). The Committee is chaired by Permanent Secretary with membership of WHO, UNICEF, USAID, CDC, Paediatric Association of Tanzania, National Regulatory Authority (TFDA), Red Cross, CHAI and Lions Club. ICC holds its meetings quarterly and sometimes ad hoc meetings can be held when needs arise.

2.2 Human Resources for Immunization

The IVD Programme Manager is responsible for immunization at the national level. There are VPD Surveillance Officers, Logistics and Cold Chain Officers, Advocacy and Communications officers, Data Manager, Administration Officer and Technicians for maintenance of cold chain.

At regional level, Regional Immunization and Vaccines Officer (RIVO) is the overall in charge of the immunization services in the region answerable to the Regional Medical Officer (RMO) through the Regional Health Management Team (RHMT). RHMT works under the close coordination of the Regional Primary Health Committee under chairmanship of the Regional Commissioner. Members of Regional PHC are Head of Health Related Departments and

Agencies in the region. The RIVOs manage the Regional Vaccine Stores supported by the Regional and District Vaccine Store Keepers.

At district level, District Immunization and Vaccines Officer (DIVO) is the overall in charge of the immunization services in the district answerable to the District Medical Officer (DMO) through the Council Health Management Team (CHMT). CHMT works under the close coordination of the District Primary Health Committee under chairmanship of the District Commissioner. Members of District PHC are Head of Health Related Departments and Agencies in the district council. The DIVOs manage the Districts Vaccine Stores supported by the District Vaccine Store Keepers.

At health facility level, implementation of immunization activities is done by a Public Health Nurse (PHNB) responsible for immunization, social mobilization, outreach activities and record keeping. The Public Health Nurse is answerable to the Health Facility in charge. Each Health facility has a Health Governing Committee with members from the around Village/ Communities and Extension Workers.

2.3 Immunisation Financing

The Sources of financing for the health sector include: On-budget sources: Central Government Funds, General Budget support, Health sector basket fund and foreign funded projects and programmes and Off-budget sources: Health services fund (user fees), Community Health Fund/ TIKA, Council own-sources and foreign funded projects and programs. The Health Basket Fund (HBF) was created in June 1999 and consists of two elements; the central basket and the district basket. The HBF is part of the SWAp approach which provides the framework of collaboration among stakeholders including MOHSW, PMO-RALG, Ministry of Finance (MoF), POPSM, Civil Society, Private Sector and Development Partners (DPs) including United Nations (UN) agencies active in health. It aims to coordinate financing, planning, and monitoring mechanisms as a whole through Health Sector Strategic Plans (HSSPs).

The development of current HSSP IV therefore, provides opportunities for immunization to adequately link strategies and implementation to broader health sector and national development goal. Important in the HSSP IV framework, is implementing the Health Financing Strategy (HFS) with key innovation of the Single National Health Insurer (SNHI), which will generate income for the sector while protecting the poor and vulnerable groups. Other innovative ways of resource mobilisation like sin taxes and levies will be introduced, as well as Trust Funds and Revolving Funds in which IVDP should be one among priority beneficiaries. Nevertheless estimated resource needs for immunizations and vaccines in HSSP IV indicate a reduction by 20% (from 134 billion TZS in 2015/16 to 107 billion TZS in 2019/20). With the expansion of the immunization programme, the estimated resource needs leaves much to be desired.

Analysis of the economy shows that Tanzania's gross national income is $930 per capita (2014; WB). This is expected to continue to grow as the economy reaps the benefit of the investment in oil and gas sector. Health sector share of total government budget has been on decline 9.4% (2012/13) to 7% (2014/15); it decreased in real per capita expenditure from 8.4 (2010/11) to 6.5 (2013/14). NHA figures indicate increased donor dependence to fund health – 48% of THE in 2011/12. While tax revenue is low there is the increased growth portends possibility to expand the fiscal space to accommodate improved funding of health service in general and immunization activities in particular. The review of the funding suggest that planning for immunization using the cMYP process has been useful with partners getting engaged in the process. In this regard, GAVi has been supporting Tanzania dating back to 2001 to the tune of total disbursed fund of $286,339, 988. This has been in the frame of 13% Non -Vaccine support and 87% Vaccine Support. This has been a result of been able to meet its Co-financing obligations by making the GAVI Co-financing payment a first charge in budget.

	FY2002/03	FY2005/06	FY2009/10	FY2011/12
Households	42 %	25 %	32 %	27%
DPs	27 %	44 %	40 %	47%
MOF	25 %	28 %	26 %	21%
Other	5 %	3 %	2 %	5%
TOTAL	100 %	100 %	100 %	100%

The central Government through MHCGEC has consistently ensured the procurement of vaccines, which has had a budget line that is "ring-fenced". This has enabled government to fully fund and procured the traditional vaccines. The challenge remains in operational activities. The funds for operational activities at regional and district levels are provided in the budget of the Regional and Councils as detailed in Comprehensive Council Health Plan (CCHP).Councils rely on a variety of sources that include but not limited to Block Grant, Health Basket Fund, Cost sharing as well Council Own Sources. Councils have leverage on priorities thus budget allocation, which expectedly would vary from Council to Council

2.4 Routine Immunization

Table 3 below shows the new vaccination schedule in Tanzania as per December 2015.The new vaccine introduced in 2015 is the second dose of Measles Rubella (MR2).

Table 3: Routine Immunization schedule, Tanzania, 2015

S/n	Antigen	Age
1	OPV0	At birth up to 14 days
2	BCG	At birth or first contact
3	OPV1, DTP-HepB-Hib1, PCV 1, Rota 1	6 Weeks of age
4	OPV2, DTP-HepB-Hib 2, PCV 2, Rota 2	10 Weeks of age
5	OPV3, DTP-HepB-Hib 3, PCV 3,	14 Weeks of age
6	Measles/ Rubella – 1st dose	9 Months of age
7	Measles/Rubella – 2nd dose	18 Months of age
8	Vitamin A – 1st dose	9 Months of age
9	Vitamin A – 2nd dose	18 Months of age
10	Vitamin A – 3rd dose	21 Months of age
11	TT 1	First contact
12	TT 2	1 Month after the 1st dose
13	TT 3	6 Months after the 2nd dose
14	TT 4	1 Year after the 3rd dose
16	TT 5	1 Year after the 4th dose

2.4.1 IVD Performance.

Tanzania over the past few years has managed to revitalise its RI performance with the introduction of RED in 2009 and up scaled in 2010. Tanzania has managed to maintain high immunization coverage of over 90%, from 2010 to 2014 for all antigens given to under one year children. (Figure 4)

Despite this achievement in immunization coverage in Tanzania, there is an observed increase in number of unvaccinated children from 2010 to 2014 as shown in figure 5.

Figure 4: Tanzania Routine Immunization Performance

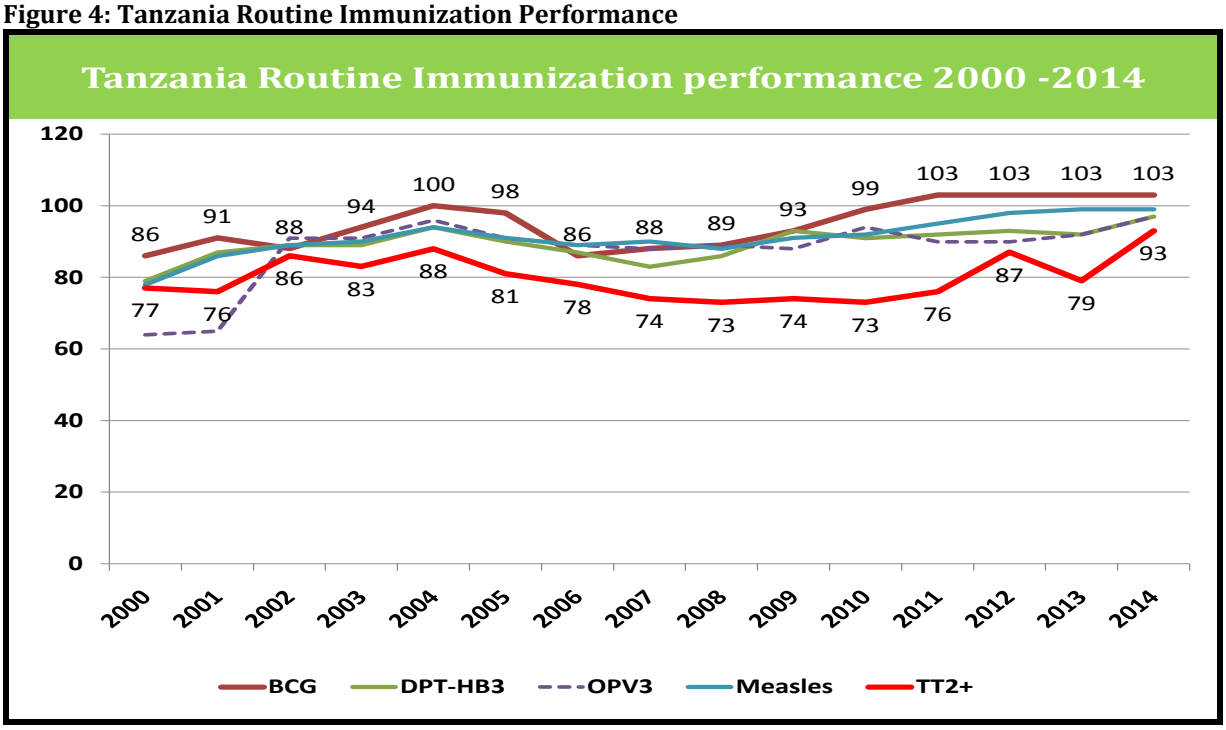
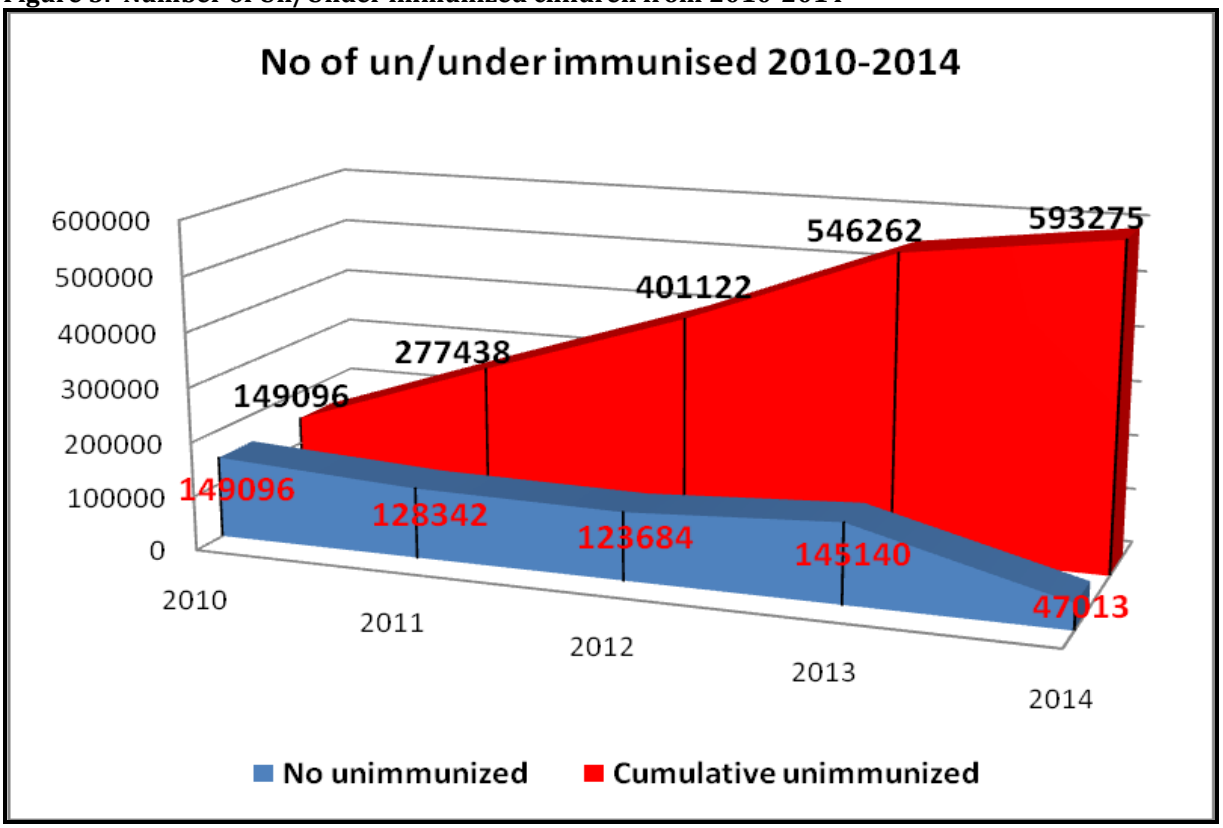


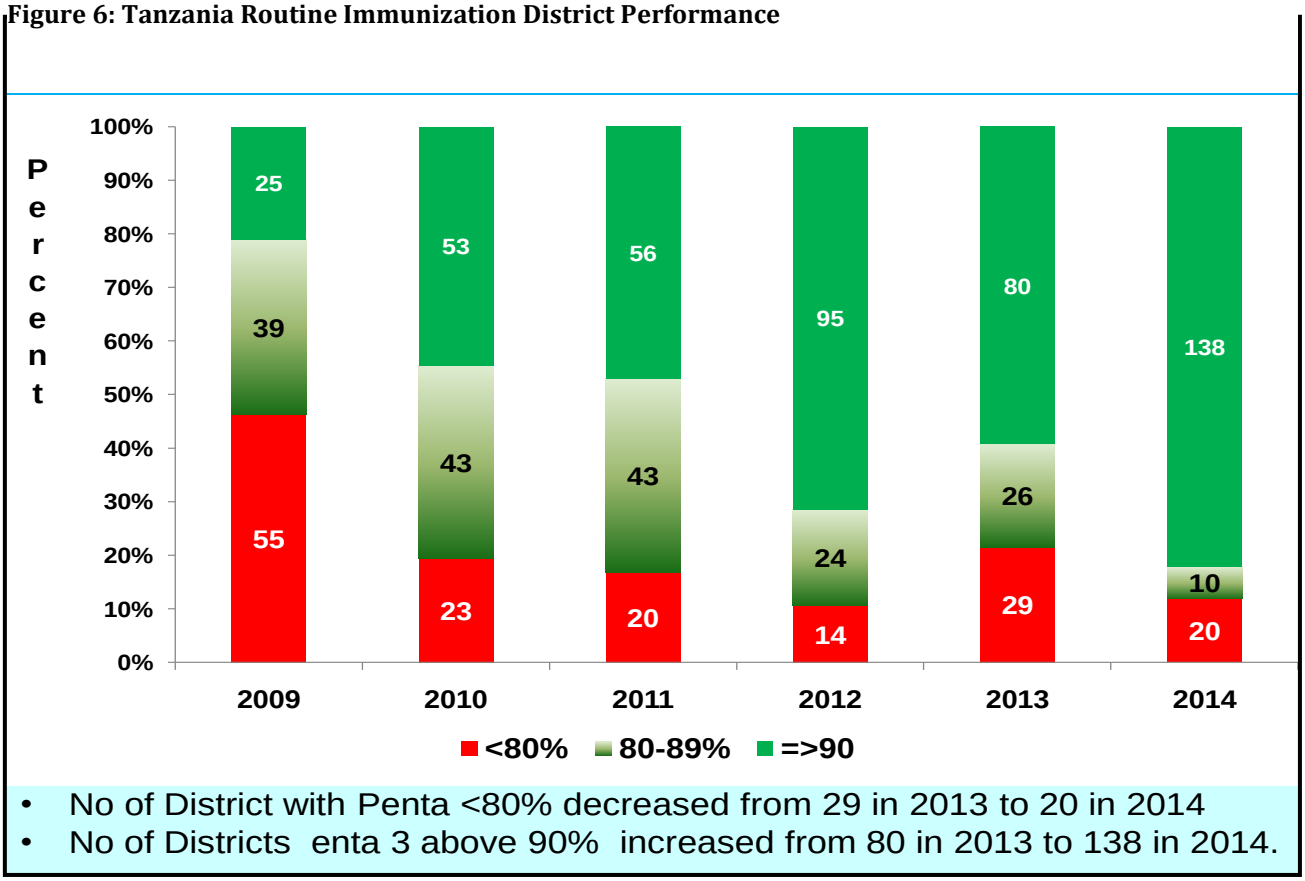
Figure 5: Number of Un/Under immunized children from 2010-2014



The number of districts with Penta 3 coverage <80% is reducing, from 56% (55/119) in 2009 to 11.9% (20/168) in 2014.

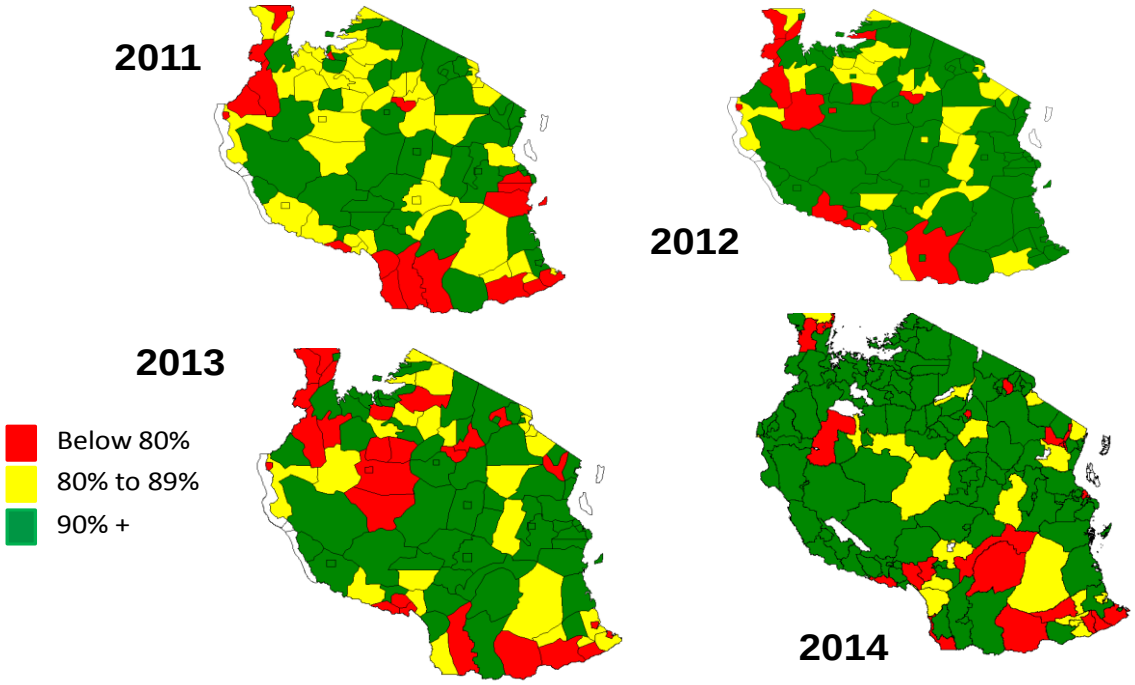
However, there is a district/council performance variation in coverage. Some districts/councils such as Bukoba DC, Karagwe DC, Ngara DC, Kibondo DC, Kigoma urban, Newala DC, Tunduru DC, Songea rural, Tabora urban and Ileje DC have persistently remained with coverage below 80% since 2011. However the denominators have remained one of challenges in most of the Districts/Regions (see Figure 6 &7 below)

Figure 6: Tanzania Routine Immunization District Performance



- No of District with Penta <80% decreased from 29 in 2013 to 20 in 2014
- No of Districts enta 3 above 90% increased from 80 in 2013 to 138 in 2014.

Figure 7: Immunization Performance by Districts, Tanzania 2011-2014



Fully vaccinated children are those who received BCG, Pentavalent vaccine3, OPV 3, Rotavirus 2 and measles vaccine before reaching the age of 12 months. According to 2014 coverage survey, 86.0% (95% CI 85.3-86.7%) (Coverage survey, 2014) of the children were fully immunized by the age of one year, using history and cards. Despite increased number of children vaccinated, Tanzania still having high number of un/under immunized children (Figure 4)

The main reported reason for children not being vaccinated was unavailability of vaccine on the day the child was taken to the facility. Other commonly mentioned reasons included; ignorance on the importance of vaccination, mother being too busy and distant service delivery points (Coverage survey, 2014).

Tanzania being one of the members of the World Health Assembly has adopted the GVAP strategy so as to achieve the Decade of Vaccines vision by delivering universal access to immunization services, so that the full benefits of immunization are extended to all people, regardless of where they are born, who they are, or where they live.

With regard to milestones towards achieving Global Vaccine action Plan, Tanzania has made considerable progress in meeting GVAP goals which were targeted by 2015, including those mentioned in Table 4 below.

Table 4: Tanzania progress toward achieving GVAP

GOAL	TARGET BY 2015	Tanzania progress in reaching GVAP Targets
Achieve a world free of poliomyelitis	Interrupt wild poliovirus transmission globally (by 2014)	The country has received Polio free certification from ARCC in 2015; IPV introduction planned by 2016
Meet global and regional elimination targets	Neonatal tetanus eliminated in all WHO regions Measles eliminated in at least four WHO regions Rubella/congenital rubella syndrome eliminated in at least two WHO regions	MNTE Achieved and validated in 2012, Suspected NT cases not validated . NT case response not done Measles elimination strategic plan 2020; surveillance gaps at sub national level and coverage below GVAP target CRS and Rota virus surveillance is ongoing
Meet vaccination coverage targets in every region, country and community	Reach 90% national coverage and 80% in every district or equivalent administrative unit with three doses of diphtheria-tetanus-pertussis-containing vaccines	Year 2014. National Penta1: 99%; Penta3 coverage: 97%; MCV1: 99%; Proportion of districts attaining 80% of Penta3 coverage: 83%
Develop and introduce new and improved vaccines and technologies	At least 90 low-income and middle-income countries have introduced one or more new or underutilized vaccines	**Achieved! & Introduced :** •HepB & Hib vaccine – 2002 •PCV 13 - April 2013 •IPV: October 2016 and HPV pilot 2015 •Rotavirus – 2013 •2nd dose of measles –2014, Measles Rubella – October 2014 •YF (given to international travellers)
Exceed the Millennium Development Goal 4 target for reducing child mortality	Reduce by two thirds, between 1990 and 2015, the under-five mortality rate (Target 4.A)	U5MR reduced from 165/1000 LB in 1990 to 49/1000 LB in 2015 (World Bank report, 2015) **Target:** 60/1000 LB;

2.4.2 Introduction of New Vaccines

With GAVI financial support a number of new vaccines has being introduced since 2001. Vaccines introduced through GAVI support since 2001 include Hepatitis B as DPT-HepB formulation, Hib vaccine was introduced as DPT-HepB-Hib (pentavalent) formulation in April 2009, PCV-13 (2013), Rotavirus (2013), Measles second dose (2014), HPV demo (2014) and MR as campaign (October 2014) and into routine system in April 2015**.** Inactivated Polio vaccine (IPV) is expected to be introduced into RI in the end of 2016.

Other under-used vaccines currently provided in the country outside the EPI schedule are Yellow Fever and meningococcal vaccines to international travellers, anti-rabies and TT to injured persons. These vaccines also occupy the cold chain storage space and same staff are used to administer the vaccines.

Based on the current vaccines given outside the EPI schedule and new vaccines in the pipeline to be provided in Tanzania, it is evident that the EPI programme will no longer target only infants but also wider age groups, which is in line with the Global Vaccine Action Plan of ensuring that the benefits of immunization are equitably extended to all people.

The World Health Assembly (WHA) mandates that all countries must eventually stop the use of OPV, by beginning with removal of type 2 component of trivalent OPV through a globally-coordinated switch to bivalent OPV containing only types 1 and 3, for routine and campaigns. The global OPV switch is currently scheduled to take place in April 2016. Tanzania being one of the countries currently using tOPV is required to implement the switch in line with Global requirement.

2.5 Surveillance

Vaccine preventable disease surveillance is one of the operational components of the immunisation system which is being implemented within the framework of Integrated Disease Surveillance and response (IDSR) strategy in Tanzania.

Vaccine diseases surveillance is done by Surveillance Officers at the National level, who also supervises Regional AFP focal persons. The Regional AFP focal persons supervise District AFP focal persons (Clinicians/DIVO) who in turn supervise health workers at health facilities. In addition, all major health facilities have specific focal persons for AFP surveillance. WHO Tanzania country office has formulated four (4) surveillance zones to provide technical support for all EPI activities including surveillance and routine immunization. In addition, WHO is responsible for surveillance of Rota and PBM.

At the national level, quarterly review meetings are held with IDSR (Epidemiology section) but these are irregular due to competing priorities. National biannual meetings, are hosted rotationally by regions, to discuss achievements and challenges/issues, and also are used as fora to provide feedback. Participants include national surveillance officers, and regional and district AFP focal persons.

Since 2012, WHO has supported IVD to routinely implement a National Stop Transmission of Polio (NSTOP) program, which aims to enhance case-based AFP and measles surveillance and awareness. NSTOP participants are staff currently working in public health system in Tanzania who are trained by IVD and WHO prior to deployment. Each NSTOP team is deployed for 2weeks, with 2 teams per year since 2013 (5 teams in total since 2012

2.5.1 Polio Eradication Progress and Endgame Strategic Plan

Tanzania was among the countries which declared the completion of poliovirus eradication to be a "programmatic emergency for global public health" during the World Health Assembly (WHA) in May 2012. In this response, the Polio eradication and Endgame Strategic Plan 2013 – 2018 was developed. The plan is a comprehensive, long-term strategy that addresses what is needed to deliver a polio-free world by 2018 with four objectives.

- Prompt Poliovirus Detection and Interruption
- Strengthening Immunization Systems and OPV Withdrawal
- Containment and Certification
- Legacy Planning

Under objective 2, at least one dose of inactivated poliomyelitis vaccine (IPV) will be introduced into routine immunization programmes globally, after which trivalent oral polio vaccines (OPV) will be replaced with bivalent OPV in all OPV-using countries – setting the stage for eventually ending OPV use.

The Polio support committees were established by the Ministry of Health, Community Development, Gender, Elderly and Children (MOHCDGEC) since early 2000 and support the final classification of AFP cases by the National Polio Expert Committee, annual progress report submission by the National Polio Certification Committee and the documentation of the Polio lab containment through the National Task force for containment under the guide of the chair of the NCC. Tanzania will has presented the polio free certification documentation at end of 2015 to the African Regional Certification Commission, and granted a Polio-free Country Certificate.

2.5.1.1 AFP Surveillance

Last case of indigenous wild poliovirus was reported in 1996. Since 2008, non-polio AFP rate of at least 2 per 100,000 populations below 15 years and stool adequacy rate of at least 80% has been maintained. In line with the Polio Eradication Initiatives four committees have been formed and are active to support the eradication activities. Because of the risk of importation from the circulating WPV in neighbouring countries, Tanzania is strengthening its surveillance system especially in the regions bordering affected countries.

2.5.2 Measles Rubella elimination

Tanzania is committed to reach the Measles Rubella elimination goals, which are set in the Global Measles and Rubella Strategic Plan 2012 – 2020, which requires that by end 2015 there, should be a reduction in global measles mortality by at least 95% compared with 2000 estimates and achieve country measles and rubella/CRS elimination.

2.5.2.1Measles Rubella Case-Based Surveillance

Measles case based surveillance started countrywide at the end of 2002 after a nationwide measles catch-up immunization campaign for children aged 9 months up to 15 years Measles surveillance guidelines are available and have been disseminated at all levels. However, this guideline needs to be updated, particularly to include the new standard case definitions and new indicators on non-measles febrile rash illness introduced in 2008.

Table 5: Performance of measles case based surveillance indicators; Tanzania 2010-2014

Indicators	2010	2011	2012	2013	2014
Annualized non measles febrile rash illness rate (target >2.0 per 100,000)	2.2	2.2	3.0	2.3	2.9
Proportion of districts investigating suspected case of measles per year (target >80%)	92%	92%	88.6%	90%	83%

2.5.3 PBM and Rotavirus Surveillance

Haemophilus influenza type B (Hib) surveillance in Tanzania was initiated in 2001 at Muhimbili National Hospital in Dar es Salaam. There are currently three functioning PBM sentinel sites which are Bugando Referral Hospital (Mwanza), Hydom Hospital (Manyara Region) and Muheza Designated District Hospital (Tanga Region). Muhimbili National Hospital experienced challenges in the process of collection and testing of CSF samples and has therefore not been providing data since 2008.

Rotavirus surveillance was initiated in 2006. Since 2013, Tanzania started to implement the Rotavirus Vaccine Impact Assessment and Intussusception Surveillance. There are currently, 7 rotavirus surveillance sentinel sites which are Bombo Regional Hospital (Tanga Region), Bugando Referral Hospital (Mwanza region), Mbeya Referral Hospital (Mbeya Region), Mnazi Mmoja Hospital (Zanzibar), Mwananyamala Hospital (Kinondoni Municipal Council), Temeke Hospital (Temeke Municipal Council), Mawenzi Hospital (Kilimanjaro region) and Dodoma Hospital (Dodoma region). A total of 4,890 specimens were enrolled from these sites until 2014.

2.5.4 Neonatal Tetanus elimination

Tanzania initiated its MNTE strategies in 2001 with a focus on high risk districts, using strategies that included vaccinating pregnant women against Tetanus through routine immunization (RI) by provision of 3 doses of TT vaccine to Women of Reproductive Age (WRA) in the identified high risk districts.

Tanzania also monitors progress through NT surveillance and protection at birth (PAB) estimations, promotes clean deliveries and clean cord care practices. According to

WHO/UNICEF (2014), the administrative coverage of PAB against Tetanus is estimated to be 88%. .

Following the significant progress made towards improving the core indicators, Tanzania was validated for elimination of MNT in May 2012. In order to sustain the validation status, the country is in the process of developing a plan which will be implemented and monitored in coming years.

2.6 Logistics, Vaccine Supply and Quality

2.6.1 Forecasting, procurement and distribution of vaccines

The Government procures traditional EPI vaccines (BCG, OPV, Measles and TT) and their related injection devices and cold chain equipment's. New vaccines including DPT-HepB-Hib, PCV-13 and Rotavirus vaccine are co-financed by the Government and Gavi. The government has, over the years met its co-financing commitments to Gavi for procurement of new vaccines.

Procurement of all vaccines, injection materials and cold chain equipment is done through UNICEF procurement channel. The target population for annual vaccines and supplies forecasting is provided by the National Bureau of Statistics (NBS) and forecasting is done using the standard UNICEF forecasting tool. Ordering and allocation of supplies to regions is done by the IVD Logistics Unit based on requests from regions. The same mechanisms will be used for all future new and under-utilized vaccines that will be introduced into the national schedule. Vaccines, injection materials, and cold chain equipments and related spare parts and supplies are cleared, stored and distributed by the Medical Stores Department (MSD) in Dar es Salaam. A fast-track mechanism is in place for clearance of vaccines at the airport within 1-2 days after arrival. Injection supplies and cold chain equipments are delivered through Dar es Salaam, seaport. EPI/IVD dry supplies are not on the priority list for fast clearance, this can result in shipments remaining at the seaport for up to three months. MSD is currently negotiating for the dry supplies to receive the same clearance priority as vaccines.

MSD delivers the vaccine and related supplies to the Regional Vaccine Stores (RVS), except for Dar es Salaam - where the delivery is done directly to the councils, and Zanzibar - which picks up its vaccines and supplies at MSD. Regions are required to deliver vaccine and related supplies to the councils. However, some regions face operational logistics problem. Councils distribute the bundled vaccines to health facilities yet most of them do not have reliable transport for distribution of bundled vaccines. With the introduction of all of new vaccines planned through 2015, the current transport at region and some council levels may not be adequate to distribute all of the bundled vaccines together. This will result in increased delivery schedules or the need to change transport means with bigger storage capacity.

An Effective Vaccine Management Assessment (EVMA) was conducted in June 2015. The overall score was 87%, which indicate an improvement since the last EVMA which was

conducted in June 2012 in which the national score was 84.6%. Figure 8 below shows results of 2012 and 2015 EVMA. The recommendations from this assessment as well as the 2015 EPI review (see section 3.1) are being addressed as outlined in table 6 below.

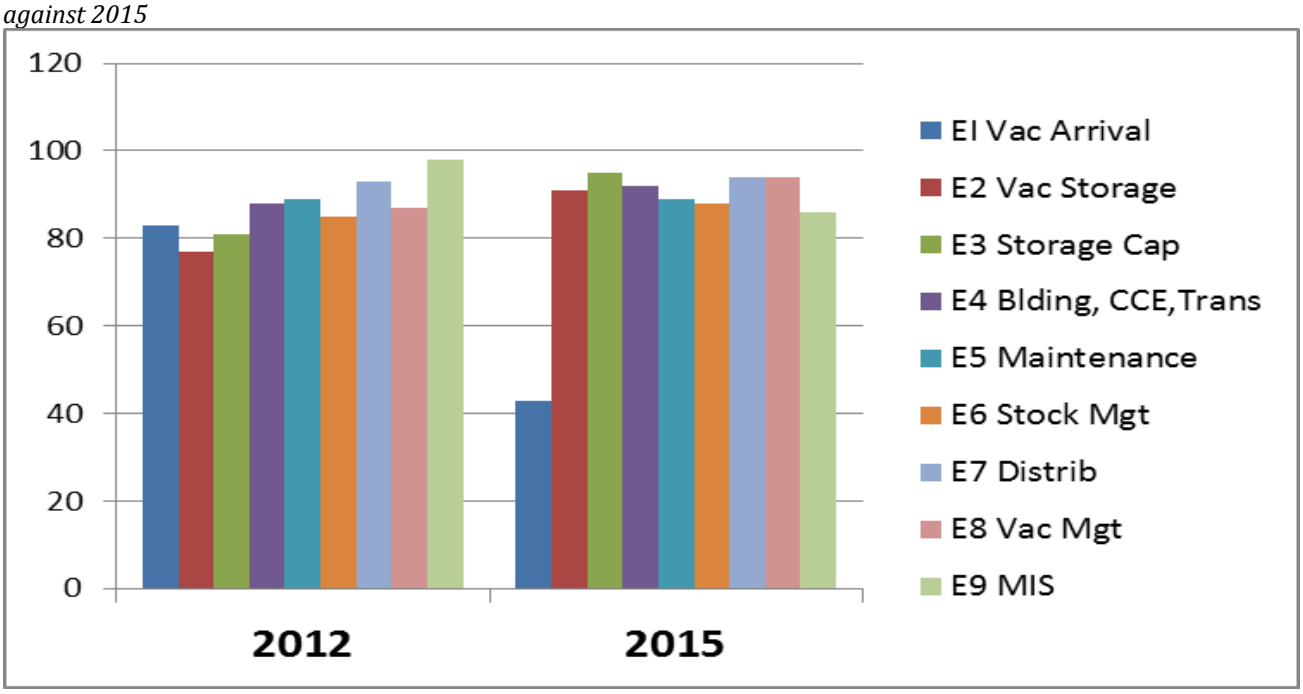
Table 6: EVMA Recommendations

	Recommendation
	Lot release certificates should accompany all vaccine batches that come into the country and these should be archived together with all other shipping documents in the Storekeeper's office
	A formal contingency plan should be developed to deal with unexpected vaccine arrivals into the country.
	The country needs do decide on whether or not Zanzibar should be considered a Central store receiving vaccine direct from manufactures or a Central store receiving vaccines form an inter-country store to minimize loss of points.
	The refrigerated vehicles in the Mainland should have temperature loggers' data downloaded and printed or stored electronically for future reference.
	A suitable voltage regulator should be procured and connected to the Zanzibar cold room to prevent damages that might be caused by power fluctuation.
	Transport system and contingency plan during transport emergency should be established. All issuing stores should have a written transport contingency plan that describes how to deal with emergencies during distribution.

Table 7: EPI Review Recommendations

	Recommendation
	MOHSW to fast track ICC recommendation of repositioning vaccine handling, storage, and distribution at national level for more efficient and cost effective management in order to reduce immunization cost per child.
	Increase cold chain capacity in new facilities.
	Regions and Councils to strengthen distribution of vaccines and related supplies through adequate availability of efficient transport management and adherence to distribution matrix
	MOHSW to ensure implementation of cold chain plans for procurement of new cold chain equipment to meet the needs for new immunizing health facilities, replacement of defective un-repairable cold chain equipment, and accommodate upcoming vaccine introductions.
	Sustain and expand proven effective innovations for safe and potent vaccines such as Remote Temperature Monitoring Devices to district cold stores and real-time alarming at central and regional vaccine stores.
	Implement a system for preventative maintenance and repair at all levels through allocation of adequate funds for spare parts and toolkits and advocate to the existing technology institutions to incorporate in their curriculum a module for cold chain equipment maintenance and repair.

Figure 8: Summary of comparison of Effective Vaccine Management Assessment Performance done in 2012 against 2015

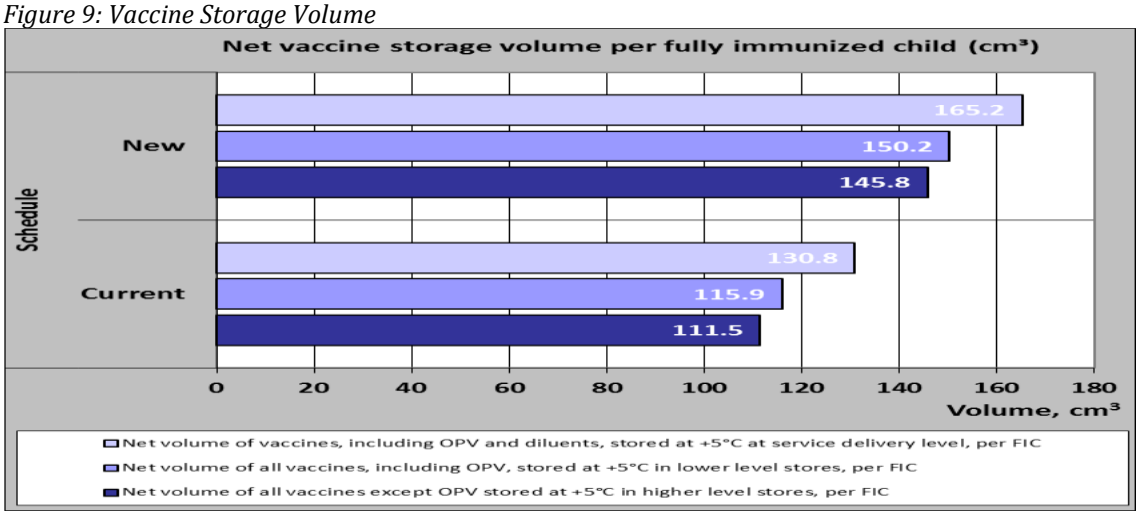


2.7 Vaccine Storage and Distribution

2.7.1 Vaccine volume

The current schedule for the immunisation programme in Tanzania requires 130.8 cm^3 per fully immunised child at service delivery point as depicted in graph below. The country is planning to introduce IPV by October 2016 and HPV vaccine in 2018 and this increases the volume per fully immunised child to 165 cm^3.

Figure 9: Vaccine Storage Volume

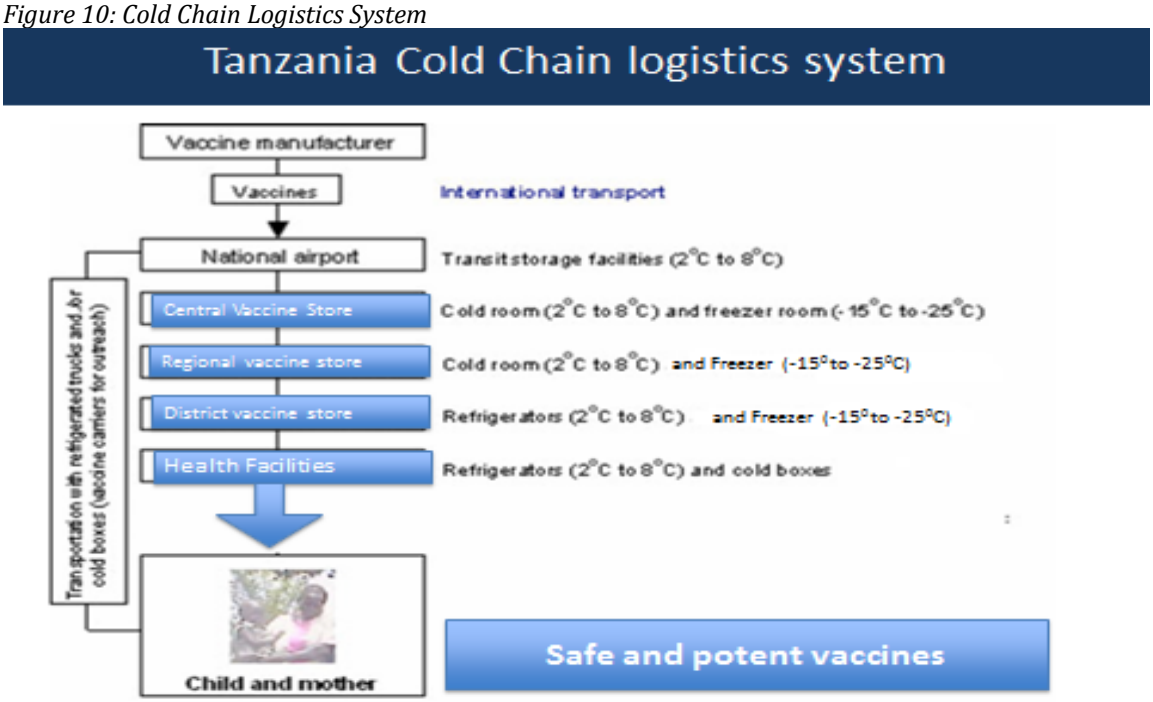


2.7.2 Vaccine Supply chain overview

2.7.2.1 Logistics structure

The diagram below illustrates the Tanzania vaccine supply chain structure. It shows the structure of vaccine delivery, storage at different levels and transportation until it reaches the last mile in a potent state.

Figure 10: Cold Chain Logistics System



2.7.2.2 Fixed infrastructure

The Central Vaccine Stores are housed at the Medical Stores Department in Dar es Salaam. The store is equipped with nine (9), walk in cold rooms (WICR) each with 40 m^3 gross volume, three (3) walk in cold rooms each with 20 m^3 gross volume and two (2) freezer rooms each with 20 m^3. The Zanzibar Central Vaccine Store has one (1) walk in cold room with 10 m^3 and eight (8) ice-lined refrigerators (ILR).

The regional level consists of 27 regional stores with each having one cold room of 30m^3 or 40 m^3 depending on the population size served. Regions are also equipped with conventional EPI refrigerators/freezers for vaccine storage or cooling packs.

All 167 districts/councils have ice lined refrigerators and freezers for vaccine storage. The common types of refrigerators at this level are Dometic TCW3000, Vestfrost MK304 and MK404, and Electrolux TCW1152. All the above levels are each equipped with a standby generator.

Each health facility has one refrigerator, the common type being Dometic type, model RCW50 EG.
A cold chain assessment was conducted in 2012 and this served to inform the programme about equipments which needed to be procured. The bulk quantity of cold chain equipments was procured between 2012 and 2014 and as such most of them are fairly new.

2.7.2.3 Transport infrastructure

The National level has two refrigerated trucks that are used for transportation of vaccines to all regions and some districts (Dar es Salaam). All regional stores have vehicles for vaccine and supplies distribution to districts. Most districts have vehicles for vaccine and supplies distribution. However, most vehicles are pooled at regional and district level.

2.7.2.4 Recording and reporting systems

The policy of the Ministry of Health, Community Development, Gender, Elderly and Children, (MOHCDGEC) Tanzania, is to record vaccine temperatures twice daily at all levels. There is a standard manual temperature recording form used at all levels. The country has introduced a remote temperature monitoring system at National, regional and some districts and the roll out is continuing to remaining districts. The remote system is designed in such a way that when temperatures go out of range, an alert short message is sent to responsible persons for immediate action taking.

Tanzania is using the web-based stock management tool based on WHO developed SMT at national and sub-national level. The tool is still being further refined to include some essential reports. The computerised stock control system is still running parallel with the manual record.
Vaccines and supplies distribution is done by the higher level providing transport. Each distribution level is required to come up with a distribution plan which is shared with lower level facilities. The national and regional levels distribute vaccines on a quarterly basis and the district monthly. The distribution system is “pull” for national and sub-national levels while it is “push” for health facilities. There is a standard web based vaccine order form that is used to order vaccines by sub-national level stores. There is also a standard issue voucher for vaccines and supplies at sub-national level.

Cold chain Management

A cold chain inventory tool (CCIT) was introduced to all regions in 2007 to monitor the status of cold chain equipments from the national to the health facility level. The regions submit updates of CCIT to the national level twice a year (January and July). However, timely and regular submission of the inventory data from the regions is a challenge, as not all of the regions have been able to submit the required information. This is being addressed through refresher training and supportive supervision.

Rapid Assessment of cold chain storage capacity at the district level was conducted to establish the vaccine storage gap in 2012. The identified gap was used to mobilise resources for procurement of cold chain equipment. Currently, the country is conducting assessment to establish the storage capacity at health facility level. The programme continues to budget for procurement of cold chain equipment yearly to bridge the storage gap while it continues to mobilise resources from development partners. Some development partners such as WHO, UNICEF and CHAI have committed to support procurement of refrigerators for districts and health facilities.

Maintenance of cold chain equipment remains a challenge, the programme with support from partner's plans to conduct training on cold chain maintenance and repair to districts maintenance planners.

With support from UNICEF, the country will explore and pilot new solar technologies which are less complex and easy to maintain.

2.7.2.5 Injection Safety

The Tanzania EPI has been using AD syringes, needles and safety boxes in routine immunization services since 2002. Ensuring that all immunization injections and the disposal of used needles and syringes are safe to the recipient, health worker, community and the environment is a priority for the country. The MINISTRY OF HEALTH, COMMUNITY DEVELOPMENT, GENDER, ELDERLY AND CHILDREN (MOHCDGEC) has a Health Care Waste Management Plan and Policy Guidelines (September 2006), which includes handling and disposal of all injectable, including those of the vaccination program.

The following strategies are part of the policy implementation:-

- established and monitoring procedures set up at each level of the health care waste management streams;
- awareness and training programmes for medical and ancillary staff in health-care establishments and health training institutions;
- administrative procedures defined and adequate resources allocated at all levels to ensure proper management of health-care waste;
- Appropriate environmental-friendly and affordable technologies for the treatment and the disposal of health-care waste, taking into consideration the resources of each health-care facility.

In applying this policy, the following strategies are used by the Tanzania EPI:

- Adequate supply of auto-disable syringes and safe vaccines, with receipt at MSD and distribution as noted above. Syringes, needles and safety boxes are bundled with vaccines.
- Surveillance and management of AEFI

- Safe injection practices
- Proper waste management and safety box disposal
- Communication and advocacy.

2.8 Programme management and coordination

2.8.1 Strategic plans and guidelines

The Health Sector Strategic Plan 2015 – 2020 (HSSP IV) was conceived in a participatory process under leadership of the Ministry of Health, Community Development, Gender, Elderly and Children with inputs from Government, Non-Governmental and Private Partners. It provides the strategic direction of the health sector for 2015-2020. Immunization in HSSP4 falls under strategic objective one which strives to achieve objectively measurable quality improvement of primary health care services, delivering a package of essential services in communities and health facilities. Health services will maintain the high levels of vaccination coverage and improve in geographical areas where needed, and will bring new types of vaccination to the people.

Policy guidelines were developed for Reproductive and Child Health in March 2003, within which EPI is included in one-page in very broad terms, with outdated information focused immunization for under one. The immunization policy and operational guidelines developed in 2012 is still in draft form and will be finalized in current cMYP. This will address the current concept in line with GIVS and GVAP global strategy to reach immunization in every eligible group beyond infancy

2.8.2 Partner Coordination

An Inter-Agency Coordination Committee (ICC) was established in 1995 to provide a partner forum to discuss EPI-related issues. Since 1999, key health decisions on financing and planning of Ministry of Health, Community Development, Gender, Elderly and Children have been made through the SWAp collaboration with PMO-RALG, Ministry of Finance, civil society, private sector and development partners including UN agencies active in health).

National Immunization Technical Advisory Group (NITAG) is not functional in Tanzania. This is an important organ responsible for providing scientific recommendations to the Ministry of Health, Community Development, Gender, Elderly and Children to enable to make evidence based immunization related policy and program decision. The plan for this current cMYP is to have functional NITAG.

EPI Technical Coordination meetings have been conducted regular but and there is no formalized coordination mechanism for EPI with the MSD and Tanzania Food and Drug Authority (mandated to regulate vaccines in Tanzania).

Current main partners supporting IVD in Tanzania are WHO, UNICEF, USAID (MCSP) and Clinton Health Access Initiative (CHAI) is supporting the program in areas of cold chain and temperature monitoring. Several other partners or sectors support IVD during SIAs such as Red Cross Society, Faith Based Organizations, and the Ministry of Education.

2.8.3 Supportive Supervision

Supportive supervision remains to be the key activity based on the EPI review 2010 and it is among the RED/REC strategic component. The supportive supervision will give opportunity for districts and health care providers at facility levels to improve their performances in terms of quality and immunization coverage. The Expanded Program on Immunization has identified supportive supervision as a high priority and a critical gap in the delivery of quality immunization services. Supportive supervision is also one of the five key elements of the Reaching Every District (RED) / Reaching Every Child (REC) strategy. It is anticipated that implementation of six-monthly supportive supervision from the national to regional and district levels; and quarterly supportive supervision from the regional level to districts and health facilities will go a long way to improve performance.

The Ministry continuously plans to empower immunization supervisors through trainings on mid-level management, logistics, volcanology and refresher courses depending on their level and identified skills gaps. These trainings will capacitate supervisors to provide mentorship, coaching and on-job trainings. The country is big and has large number of councils to be supervised, due to this the supervision is conducted quarterly and monthly at regional and council levels respectively. The supervision is conducted in order to ensure that all regions and councils are supervised as planned, there is need to decentralize the supportive supervision to zonal level. Equipping the zones with additional staff, transport and funding will enable all councils supervised at least once per quarter.

At regional and district levels, supervision plans are available with the integrated checklist however most of the planned supervision visits are not conducted and the available integrated checklist does not contain the core EPI components. National level has a focused EPI supportive supervision check list which adequately covers the EPI components.

2.8.4 Monitoring and Evaluation

The EPI program uses HMIS (MTUHA) data collection tools for immunization and a mixed processing system (electronic i.e. DVDMT, CCIT, SMT, Epi info and manual). At sub-national level, there is a shortage of personnel to handle the data, with management delegated to RCCO and DCCOs, who have limited skills and other duties. Data quality self-assessment training was

conducted in 2007 and cascaded to regional and district level; however, there has been inadequate follow up of DQS at sub-national level. Other challenges include: inconsistencies in demographic target data between different levels and national targets (National Bureau of Statistics); high (>10%) or negative dropout rates in some districts and health facilities; and some incorrect data transcription. There is limited feedback on performance (routine EPI and surveillance) from the national to the sub national level, and the last annual EPI evaluation meeting was conducted in 2013. As noted in the 2010 EPI review, data management is a major challenge especially with regards to timeliness, accuracy, analysis and feedback at all levels.

2.9 Human Resources

2.7.1 Staffing

Generally there is a great shortage of staff at all levels but marked at the health facility level. The RIVO and DIVO provide great support at regional and District level. Moreover, there are 8 Zonal Reproductive and Child Health Coordinators (ZRCHC); one of their responsibilities is to provide supportive supervision to the councils in their zones. However these ZRCHC are overwhelmed with other activities such as maternal health, family planning, PMCT and Child Health Care. EPI activities are allocated only less than 10% of their time.

Only 42% of positions are filled with qualified health workers in the country. Shortage of adequate human resource especially in remote areas is an area of concern of the MOHSW. The MOHSW and PMORALG in collaboration with the Public Service Management Office are responsible for recruitment and distribution of health staff throughout the country.

2.9.2. Capacity Building for IVD

Human resource capacity is central to managing and delivering health care to the population.

In-service Training

In-service training is an essential component to ensure health care providers and health administrative staffs related to immunization are up-to-date with current policies, technologies and vaccines being used. In-service training spans topics of service delivery such as new vaccine introductions, interpersonal communication, RED/REC strategy, cold chain logistics, VPD surveillance, data tool use and data management, and planning.

New comers.

A new comer's course is provided for newly appointed RIVOs, DIVOs and Zonal Officers. In 2012 and 2013, 30 new RIVOs and DIVOs received newcomer training. No newcomers training conducted since 2013, with increase administrative districts and newly deployed managers at district and regional level the demand for this training is high. The new comers training takes 2

week to cover cold chain and logistic, VPD surveillance, service delivery, REC, demand creation for vaccine and data management.

Mid-Level Management (MLM)

MLM is an essential training for managers with responsibility for managing all aspects of immunization program within each administrative area. With only 50 TOT trained in MLM in 2013, this was prioritized in 2015 to ensure all RIVOs and DIVOs received the full MLM package. In 2015 only 8 regions were covered with MLM training which included RIVOs, DIVOs, RMOs and DMOs.

Refresher

Refresher training is conducted at all level for staff working on immunization to keep them updated on immunization services. Refresher trainings for health care workers were integrated within the new vaccine introduction cascade trainings in 2012 and 2014 where 12900 health workers were trained. This was a cost saving mechanism which was effective in including routine immunization refresher issues with new vaccines training. With approximately 20 percent of the health workforce being replaced annually, refresher training is imperative to ensure new staff are adequately oriented to perform vaccine services. There is no systematic EPI training schedule in place for refresher training for EPI. Likewise, there are no standardized training materials for operational level training.

Pre-service Training

There are 8 Zonal Health Training centers in Tanzania Mainland. However, IVD has had minimal interaction with pre-service training institutions. IVD prototype training curricula available to countries in the African region is not available in the country and hence has not been adapted therefore Training curricula is not standardized.

Beyond the importance of pre-service curricula to include up-to-date immunization practices and new technology immunization job aids are essential to be used in training institutes for reference and review. Immunization job aids have not been updated but is slated for completion in the new cMYP 2016-2020.

Continuous Training

IVD has identified the importance of continuous learning to ensure that new skills and knowledge are adopted and practiced according to guidelines. Therefore in the scope of capability building for the new cMYP, continuous training mechanisms will be established to encourage opportunity for building skills and knowledge. An innovative e-learning platform is being developed with immunization training modules for strengthening knowledge of regional and district officers. In 2015 the platform was piloted in 4 regions in order to gain insight on

usability for further modification. Although the platform will require enrollees to have internet access for downloading modules and uploading test and assignments, it is expected that during the next 5 years internet connectivity will also improve country wide to allow increasing accessibility for more users.

In addition, mentorship has been identified as a powerful on-the-job mechanism for building capability. Although it is intended that mentorship will occur during routine quarterly supportive supervision visits, this is limitation because the visits are integrated with other health areas and time with health care workers is limited. With partners, IVD will plan on how to strengthen the mentorship component, including providing guidance material to regional and district officers on how to effectively conduct mentorship and maximize opportunities of interaction with health care workers.

Chapter Three

SITUATIONAL ANALYSIS

3.1 Situational Analysis by Accelerated Disease Control Initiatives

Disease Control Initiative	Suggested indicators	National status		
		2012	2013	2014
Polio	OPV3 coverage	90%	91%	97%
	Non-polio AFP rate per 100,000 children under 15 years of age	3	3.2	3.5
	Stool adequacy rate	95%	88%	90.6%
	Number of rounds of national and sub national immunization days Coverage range	NA	NA	NA
MNT	TT2+ coverage	79%	78%	94%
	% target population protected at birth from neonatal tetanus	88%	88%	88%
	Number and proportion of districts reporting > 1 case of neonatal tetanus per 1000 live births	0	0	0
	Was there an SIA? (Y/N)	N	NA	NA
	Neonatal deaths reported and investigated	No data	No data	No data
	Delivery at Facility Rate	50.2%	50.2%	50.2%
Measles & Rubella	Measles / MR vaccination coverage (1st dose)	98%	99%	99%
	Measles / MR vaccination coverage (2nd dose)	NA	NA	33%
	Number of lab confirmed measles outbreaks	33	50	9
	Number of lab confirmed rubella outbreaks	3	37	58
	Number of Confirmed CRS cases	NA	NA	6
	Geographic extent National Immunization Day	NA	NA	Country Wide
	Age group for SIA's	NA	NA	9m - <15 yrs.
	Coverage for SIA's	NA	NA	97%
	Total Measles Cases (Lab/Clinical/epidemiological)	1570	166	88
	Total Rubella Cases (Lab/Clinical/epidemiological)	987	116	529
Epidemic Meningitis	Meningococcal A Coverage	NA	NA	NA

3.2 Situational Analysis of Routine IVD by Immunization System Components

System Components	Suggested indicators	RESULTS		
		2012	2013	2014
1. Service delivery				
Immunization Coverage	Official Coverage Estimates of DTP3	93%	91%	97%
	Official Coverage Estimates of Measles1	98%	99%	99%
	Other Official Coverage Estimates as per Immunization Schedule	92%	91%	97%
	% gap in match between DTP3 survey coverage and officially reported figures	5%	8%	2%
	Most Recent Survey Coverage of DTP3-card and history	NA	NA	97%
	% Fully Immunized Child	75%	75%	86%
	% of Councils implementing RED/REC strategy	N/A	N/A	16%
	Number of Operational research/evaluation on acceptability and utilization done	N/A	N/A	N/A
Immunization Demand	% Drop Out DTP1 – DTP3	6%	4%	10%
	% Drop Out BCG - Measles1	15%	12%	13%
Immunization Equity	% gap in DTP3 between highest and lowest socio economic quintiles	12.8%	12.8%	12.8%
	Number/percentage of districts with DTP3 coverage > 80%	119(88%)	106 (79%)	148 (91%)
	Number of marginalized, hard to reach community identified for accelerated routine immunization programming	No data	No data	No data
	% of districts with more than 1000 un/under vaccinated children identified for accelerated routine immunization programming	N/A	N/A	30%
	% planned outreach visits conducted	N/A	N/A	52%
Integration	% Immunization Services provided at fixed facilities	79%	80%	84%
New Vaccines Introduction	Number of new vaccines introduced into the routine immunization during in the last plan period	NA	2	1
	PCV13-3 Coverage	NA	80%	92%
	Rotavirus Coverage	NA	85%	97%
VPD outbreak preparedness	Outbreak preparedness plan updated	N/A	N/A	YES

System Components	Suggested indicators	RESULTS		
		2012	2013	2014
2. Programme Management				
Law and Regulations	Number of functions conducted by NRA	4	4	4
	Presence of legislation or other administrative order establishing a line item for vaccines	Yes	Yes	Yes
	Presence of legislation identifying sources of public revenue for immunization financing	No	No	Yes
	Presence of immunization legislation in the country	No	No	No
Policy	National immunization policy guideline available	No	No	No
Planning	Country annual work plan for immunization funded through Ministry of Health budgeting process	Yes	Yes	Yes
	Number (Percent) of council with an annual micro plan for immunization	133 (97%)	135 (98%)	165 (95%)
	Developed human resources succession plan for key immunization focal position in national and sub national levels	No	No	No
Coordination	Number of ICC (or equivalent) meetings held	4	5	4
	Number of NITAG meetings held	NA	NA	NA
	Number of IVD technical working group meetings held at national level	0	0	8
Advocacy	Number of presentations on immunization performances and expenditures made to parliament	1	1	1
Supervision	Number of supportive supervision conducted by national level at sub national levels	10	15	32
3. **Human Resources Management**				
Human resource management.	Gap (%) in human resource for health	42.6%	42.6%	32%
	Number of health workers/vaccinators per health facility	2	2	2
Supervision	Number of supportive supervision conducted by national level at sub national levels	10	15	32

4. Costing and Financing				
Financial sustainability	Percentage of total routine vaccine expenditure using central government funds (Including loans and excluding eternal public financing)	25%	7%	6%
	Percentage of total routine vaccine expenditure using local government funds	No data	No data	No data
	Line item in the approved national budget for immunization 100% funded	No	Yes	Yes
	Percentage of submitted national immunization budget approved			
	Government expenditures on routine immunization per surviving infants	$ 3.5	$ 2.6	$ 8.9
	Sub-national immunization budget and expenditures component aggregated monitored and reported at national level	No	No	No

System Components	Suggested indicators	Result		
		2012	2013	2014
5. Vaccine supply, Quality and Logistics				
Transport	Percentage of districts with functional vehicles/motorbikes/ for supervisory/IVD field activity	50%	50%	68%
Vaccine supply	Stock out of vaccine and related supplies at Council level	Yes	Yes	No
	If yes, specify duration in months	1 month	1 month	N/A
	If yes, specify which antigen (s)	BCG, Polio, TT vaccines	BCG	N/A
	Stock out of vaccine and related supplies at Health Facility level	No data	No data	No data
	If yes, specify duration in months	NA	NA	NA
	If yes, specify which antigen (s)	NA	NA	NA
Cold Chain/Logistics	% of districts with appropriate functional cold chain equipment	100%	100%	100%
	% of Health Facilities with appropriate functional cold chain equipment	90%	98%	78%
	% of districts with storage capacity of 3 months plus 1 month buffer	63%	75%	80%
	% of districts with adequate dry storage space	No data	No data	50%
	Inventory assessment for all cold chain, transport and waste management equipment conducted	Yes	Yes	Yes
	% of PHC facilities with > 80% score for all indicators on the last EVM assessment	85%	85%	87%
	% of districts with availability of cold chain replacement plan	No data	100%	100%
	% of districts with written Preventive Maintenance Plan	No Data	70%	70%
Waste disposal	% of facilities with appropriate healthcare waste disposal facilities	No data	No data	No data
	Availability of waste management policy and plan	Yes	Yes	Yes
Temperature Monitoring and Control	% of districts and HFs vaccine stores with appropriate continuous temperature monitoring devices	55%	68%	85%
	% of WICRs with remote temperature monitoring devices	NA	99%	99%

System Components	Suggested indicators	Results		
		2012	2013	2014
6. Monitoring, Surveillance and Reporting				
Routine surveillance	Percentage of surveillance reports received at national level from districts compared to number of reports expected	100%	100%	100%
	AFP detection rate/100,000 population under 15 year of age	2.1	3	3.5
	% suspected measles cases for which a laboratory tests was conducted	85	88.6	84.4
	Number of neonatal deaths for which a follow up investigation was conducted	No data	No data	No data
	Sentinel surveillance for Rotavirus established	4	7	7
	% Rotavirus sentinel surveillance enrolment rates for eligible children in all sites	No data	No data	73%
	Sentinel surveillance for Meningitis (Hib/PCV) established	2	3	2
	Sentinel surveillance for CRS established	0	0	5
	% of suspected meningitis cases tested for Hib/pneumococcal diseases according to standard protocol	No data	No data	90%
	Percentage of districts report at least one case of Yellow fever	No data	No data	No data
Immunization safety	% of districts that, have been supplied with adequate (equal or more) number of AD syringes for all routine immunization	100%	90%	100%
Adverse Events	Functional National AEFI system in place	No	No	No
	Number of serious AEFI cases reported and investigated	0	21	32

System Components	Suggested indicators	Results		
		2012	2013	2014
7. Demand Generation and communication				
Communication strategy	Availability of a routine immunization communication plan	No	No	No
Research	Operational research on community knowledge, attitudes and practices in relation to immunization conducted	Yes	No	No
Demand	Number of councils received IEC materials for routine immunization	No data	No Data	No data
	Percentage of councils received IEC materials for NVI	100%	100%	100%
	Number of CHWs oriented on CSM and defaulter tracing	No data	670	No data
	% of low performing councils with HFGC members oriented on Immunization services	NA	NA	NA
Advocacy	Number of council whose immunization budgets have ACSM components	No data	No data	No data
	Percentage of IVD funds dedicated for ACSM activities	No data	No data	No data

8. Capacity Building/Training				
	% of Health facility with at least 2 health workers trained in any immunization training	100%	100%	100%
	Immunization pre service curriculum reviewed and updated	No	No	No
	Immunization component integrated into CHW pre Service curriculum	NA	NA	NA
	Percentage of new immunization staff received new comer training	No data	No data	No data
	Number of MLM courses conducted	0	1	0
	% of Health facility with at least 2 health care staff trained on new vaccine introduction	100%	NA	100%
	Percentage of districts trained on RED/REC strategy	N/A	N/A	10.3%

3.3 Comprehensive 2010 – 2015 EPI Review Findings

A comprehensive review of the Expanded Program on Immunization (EPI) was conducted from July 8th through 24th 2015. It was integrated with an AFP and measles surveillance, an immunization financing, post-Introduction evaluation (PIE) for measles second dose and Measles Rubella (MR), HPV demonstration programme and a data quality review as well as a Gavi Joint Appraisal.

The broad objectives of the comprehensive review were to assess progress since the last comprehensive EPI (2010) and in depth surveillance reviews (2012), make recommendations and develop a roadmap for implementation of the recommendations. Findings of the combined review were meant to be used to inform the development of this 2016-2020 comprehensive multi-year plan (cMYP), in line with the Health Sector Strategic Development Plan (HSSDP) and the National Development Plan II (NDP).

An extensive desk review of previous surveys and assessments was conducted prior to fieldwork and the synthesis was used to refine the review instruments. Purposive sampling was used to select 10 regions and 20 districts covering all the zones of the United Republic of Tanzania. Selection was based on performance in routine immunization (RI) selected indicators and surveillance performance and districts were classified as poor or good performing accordingly. Two districts and two health facilities per district were selected using similar criteria. The WHO AFRO adapted questionnaires were used to elicit information from immunization and surveillance focal persons and their teams at all levels. Immunization sessions were observed and interviews were conducted with parents/caregivers. Key informant interviews were held with the Ministry of Health at national level, Immunization partners and national measles laboratory.

A total of 10 regions, 20 districts and 40 health facilities (HF) were reached, 33 immunization sessions were observed and a total of 123 children were observed receiving immunisations and interviews were held with 126 caregivers. At national level, 21 key informant discussions were held from different sources such as Ministry of Health officials, IVD national team, immunization partners and MSD to name a few.

The EPI review showed that Tanzania has a strong IVD which is well run with good and effective partner collaboration and support. It is adequately staffed with trained and experienced designated focal persons for both immunization and surveillance. The commitment of the government of the United Republic of Tanzania to immunization activities is expressed in all areas of the immunization program, notably through consistent fulfilment of Global Alliance of Vaccine Initiative (Gavi) vaccine co-financing obligations, adequate cold chain capacity at all levels of the EPI program (except Zanzibar), and adherence to high vaccine management standards corroborating findings from the recent Effective Vaccines Management Assessment

(EVMA) conducted in May 2015. Overall data quality was considered good, however HMIS and DVD-MT systems are significantly discrepant (with higher number of doses in the DVD-MT system). While surveillance system is established, one cannot conclude that the system is sensitive enough to detect an importation due to limited active surveillance and delayed availability of results (turnaround time). Measles surveillance is under performing with challenges in shipping of specimens from IVD to National level compromising the quality of the system as a whole. Despite effective preparations of introduction of MR in the EPI schedule, coverage for MR2 remains low at all levels which is not in line with measles and rubella elimination. For Tanzania to maintain, sustain and consolidate its fight against VPD, timely remedial action should be taken by IVD with sustained support of its partners to address these shortcomings as per given recommendations.

3.3.1 The Key Recommendations

3.3.1.1 Program Management and Human resources

1. The country to work towards establishing a functional NITAG to provide evidence-based advise/strategic directions to the Ministry of Health, Community Development, Gender, Elderly and Children (MOHCGEC) and the ICC
2. The MOHCGEC to assign responsibility for all vaccines to IVD, including those against meningitis, yellow fever, cholera and potential future vaccines (e.g. Malaria) to encompass the provision of a life course approach to immunization.
3. In line with the enlarged scope of IVD beyond <1 and WCBA, taking into account that the role of IVD is mainly preventive rather than curative is need for the MOHCGEC to seriously consider re-positioning of IVD directly under Disease Prevention Unit so that they effectively deliver their mandate, affording it the opportunity to better collaborate and coordinate with relevant units within and outside the RCH Section.
4. Capacity building – Implement in-service training at all levels and review pre-service curricula
    - As part of the Strategic Plan of the Health Workforce, provide mentorship programs as part of on-the-job training; and annually conduct combined crash trainings for newcomers on EPI, IDSR, MCH, IMCI and nutrition
    - Review pre-service training and advocate for revision of curricula to incorporate among other EPI issues data management including performance monitoring and module for cold chain equipment maintenance and repair.
5. Support IVD to revitalize and scale-up comprehensive REC micro planning in all facilities; and emphasize using data for program planning and decision making among other issues
6. Supportive Supervision
    a. Expand the scope of integrated supportive supervision at Council level to encompass critical EPI indicators and regions and councils to avail adequate resources to ensure these are conducted as planned and have a focus on capacity building.
    b. Advocate for separate integrated technical supportive supervision for immunization and surveillance and services closely related to EPI, such as MCH, IMCI and nutrition.

3.3.1.2 Immunization Financing

7. Review immunization investment requirement using the cMYP costing tool and compare with results from One Health Tool (as reflected in HSSP IV)
8. The ICC to advocate with GoT and partners for support for under-funded operational activities (e.g. surveillance, supervision) and lobby PMORALG to initiate basket funding process earlier to avoid delays in disbursements of funds
9. Build capacity of regions and districts for quality budget monitoring and timely reporting on expenditures

3.3.1.3 Vaccine Supply and Quality

10. MOHCGEC to fast track ICC recommendation of repositioning vaccine handling, storage, and distribution at national level for more efficient and cost effective management in order to reduce immunization cost per child.
11. Regions and Councils to strengthen distribution of vaccines and related supplies through efficient transport management and adherence to distribution matrix.
12. MOHSW to ensure implementation of cold chain plans and Implement a system for preventative maintenance and repair at all levels
13. The IVD in consultation/collaboration with MOHCGEC relevant units and with Ministry of Environment to develop /adapt and ensure appropriate waste management practices as per set standards/policy.

3.3.1.4 Service Delivery

14. Where feasible, the practice of opening a vial for every eligible child should be followed, combined with messages to the community on specific days when BCG and MCV are offered, if they cannot be offered at every session

3.3.1.5 Performance Monitoring

15. Fast track the development of the plan for rollout and maintenance of Vaccine Information Management System (VIMS)
16. Update data management tools to accommodate new vaccines and update all data collection tools.
17. Consider establishing a centralized data repository including VIMS and in the meantime establish a **data management technical working group** at national level with a key role of data harmonization

3.3.1.6 AFP and Measles Surveillance

18. Establish a surveillance technical working group which meets on a weekly basis that would facilitate data harmonisation and at lower levels establish a forum for IVD and IDSR to work together
19. In view of the declining trends in AFP surveillance indicators, strengthen active case search in priority facilities
20. At MOHCGEC-IVD, identify /deploy focal point for measles surveillance and improve tracking of specimens. In the long term consider taking measles samples directly to National Laboratory using the AFP mechanism and collaborating with other specimen transport mechanisms such as those for HIV or exploring innovative specimen transport mechanisms

3.3.1.7 Communication

21. Intensify social mobilization activities to improve on access and utilisation of life course immunisation throughout the country
22. MOHSW to standardize CHW (and "volunteer") cadres across the health sector to ensure their involvement and motivation to support health interventions, including social mobilisation for routine immunization and defaulter tracking.

3.3.1.8 MR/MR2 specifically

23. Use MR2 as platform to enhance community demand for vaccination beyond 12months of age. To increase uptake, advocate for proactive screening at health facility to identify MR2 eligible children,
24. Prioritize active defaulter tracking for MR2 by using existing mechanisms at health facility & in the community - REC
25. Institutionalize completion of MR drop out on IVD monthly report
26. IVD to clarify MR2 target population with lower levels

3.3.1.9 HPV

Before Deciding on Scale Up Approach

27. Conduct cost comparison on options for HPV vaccine program implementation – compare routine and campaign modalities
28. Reinvigorate discussions with Department of Education to understand opportunities and barriers for collaboration
29. Develop policy for where missed doses should be delivered

For Scale Up

30. For national scale up, consider routine implementation with outreach to schools and encourage missed doses to be offered at health facilities
31. Develop HPV vaccination micro-plan at all levels and include in RHP and CCHP
32. Conduct community mobilization & disseminate promotional materials prior to administration of first dose each year
33. Support health facilities to determine their target population through receiving a list of target girls from schools and working with village leaders to enumerate out-of-school girls

3.4 Road Map for Implementation

Tanzania plans to use these recommendations for the development of the cMYP 2016-2020 scheduled for the second week September

Chapter Four

GOAL AND SPECIFIC OBJECTIVES

4.1 Goal

To contribute in the reduction of morbidity, mortality and disability due to vaccines preventable diseases through provision of high quality immunization services in Tanzania

4.2 Specific Objectives

The following is the list of specific objectives aimed by IVD to be achieved by 31st December, 2020

4.2.1 Service delivery and new vaccine introduction

- Sustain National DTP3 coverage of above 90% and 90% of the councils attaining coverage of above 90% by December 2020
- 100% of the Councils are implementing REC approach by December 2020
- Identify barriers to access and utilization of immunization services in poor performing Region/Councils by December 2020
- Introduce Seven (7) new vaccines (IPV, bOPV, HepB BD, Yellow fever, HPV, MenA, Malaria) in RI by December 2020
- Ensure the Country is prepared to respond to VPD outbreak by December 2020
- Successful implementation of Measles Rubella SIA with coverage of above 90% in 2017
- Strengthen immunization plans and their implementation at all levels by December 2020

4.2.2 Program Management and financing

- Strengthen program governance by December 2020
- Improved program performance in low performing councils to reach national targets by December 2020
- Strengthen IVD program management capacity by December 2020
- Improved program financing at all levels by December 2020
- Sustain program performance monitoring by December 2020

4.2.3 Training

- Train 90% of health staff on immunization by December 2020
- 100% of Managers involved in immunization services at all levels (national/regional/council) receive MLM training by December 2020
- Updated pre service job aides on Immunization incorporated in training health institutions providing immunization in 8 zones by 2020

4.2.4 Cold Chain and Logistics

- Improve and maintain 100% availability of IVD Vaccines at all levels by December 2020
- Improve Vaccine Management Performance to 90% or above at all levels by December 2020
- Increase and maintain adequate storage capacity for vaccines and related supplies to 100% at all levels by December 2020
- Attain 80% of HFs with standard waste disposal facilities by December 2020
- 100% of Non-functional repairable refrigerators at Council and HFs are repaired by December 2020

4.2.5 Surveillance

- Attain and maintain two certification indicators in all regions by December 2020
- Improve quality of Neonatal tetanus surveillance in districts by December 2020
- Attain and maintain FRI surveillance indicators to all councils by December 2020
- Estimate the burden of yellow fever before and after vaccine introduction by December 2020
- Increase number of VPD sentinel sites which meets minimum quality criteria required to assess program impact to 100% by December 2020
- Monitor and effectively investigate at least 80% of serious AEFI cases by December 2020
- Build capacity for the laboratory to conduct advanced tests to meet surveillance needs by December 2020
- At least 90% of regions/councils timely respond to outbreaks control by December 2020

4.2.6 Demand Creation and Communication

- Increased community awareness on immunization services to equal and above 90% by December 2020
- Increase demand and utilization of immunization services by the community to 100% by December 2020.

Chapter Five

STRATEGIES, KEY ACTIVITIES AND TIMELINE

Current Performance	Objectives	Milestones	Regional and Global goals	Order of priority	Strategy	Priority Key Activities	Timeline				
							2016	2017	2018	2019	2020
1. Service Deliveries											
National DTP3 coverage has been maintained above 90% however 9% of the Councils have coverage less	Sustain National DTP3 coverage above 90% and Councils with coverage above 90% to 90% by 2020	**2016 to 2020:** National DTP3 coverage is above 90% and 90% of the Councils have coverage above 90%	Meet vaccination coverage targets in every region, country and community	1	Operationalization of REC Strategy	Support councils in developing HF immunization micro plan and link with CCHP					
					Defaulter tracing mechanism using CHW/VHW	Support Councils and HF to conduct fixed, outreach and mobile services					
					Reduction of dropout rate	Conduct regular supportive supervision to regions, councils and health facilities to improve quality of the immunization services					
					Increase and maintain percentage of fully immunized population	Strengthening Defaulter tracing mechanism using CHW/VHW					

Current Performance	Objectives	Milestones	Regional and Global goals	Order of priority	Strategy	Priority Key Activities	Timeline				
							2016	2017	2018	2019	2020
1. Service Deliveries											
					Decrease number of Councils with more than 1000 un/under immunized children	Identification of Councils and HF with high number of under vaccinated children					
			GVAP Strategic Objective 3: The benefits of immunization are equitable extended to all people	1		Conduct quarterly immunization Review identify Health Facilities/Councils with more large number of un/under immunized children					
						Advocate for motivation of CHW/VHW to conduct defaulter tracing at community level					
						Engage under saved and marginalized groups to develop locally tailored targeted strategies for reducing inequalities					
						Support Councils to develop REC micro plan					

Current Performance	Objectives	Milestones	Regional and Global goals	Order of priority	Strategy	Priority Key Activities	Timeline				
							2016	2017	2018	2019	2020
1. Service Deliveries											
16% of the councils are implementing REC approach	100% of the Councils are implementing REC approach by 2020	% Councils implementing REC **2016:** 30% **2017:** 50% **2018:** 70% **2018:** 80%**2019:** 90%	GVAP Strategic Objective 3: The benefits of immunization are equitable extended to all people	1	Operationalization of REC strategy	Support councils to monitor implementation of Outreach services					
						Support councils to update integrated supportive supervision checklist to address service delivery issues					
						Support councils to establish regular meeting s between community and health staff					
Barriers of access and utilization of immunization services in poor performing Region/Councils not identified	Identify barriers to access and utilization of immunization services in poor performing Region/Councils by 2020	**2016:** Research Conducted **2017-2018** Implementation of research findings and recommendations **2019:** Research to Evaluate implementation	GVAP Strategic Objective 6: Country, Regional and Global research and development innovations maximize the benefits of immunization	2	Establish Linkage with Higher learning Institution to coordinate operational research on immunization services	Conduct regular meetings with higher learning institutions to advocate research opportunities on immunization services					
						Develop research committee for proposals review and approval					

Current Performance	Objectives	Milestones	Regional and Global goals	Order of priority	Strategy	Priority Key Activities	Timeline				
							2016	2017	2018	2019	2020
1. Service Deliveries											
						To coordinate the process of data collection, analysis and dissemination of report					
IPV, bOPV, HPV, HepB BD dose, Malaria, Yellow Fever and MenA vaccines not yet introduced in Tanzania	To introduce five (7) new vaccines (IPV, bOPV, HepB BD, Yellow fever, HPV, MenA, Malaria) in RI by 2020	**2016:** IPV and bOPV vaccines introduced in RI **2017:** HPV **2018-2019:** HepB BD, Malaria, Yellow Fever and MenA	Develop and introduce new and improved vaccines and technologies	2	Resource mobilization	Develop new vaccine Introduction Plan					
					Micro Planning	Conduct microplanning workshops at each level					
						Introduction of new vaccines					
						Monitoring and evaluation					
Outbreak preparedness plan updated in 2014	To ensure the Tanzania is prepared to respond to VPD outbreak by 2020	**2016:** Outbreak Simulation **2017:** Updated outbreak plan **2018:** Implement outbreak plan **2019:** Monitoring of outbreak	Meet global and regional elimination targets	3	Develop Outbreak preparedness and response plan	Conduct outbreak simulation response					
						Update of outbreak response plan annually					
						Implementation of outbreak response					
						Monitoring and evaluation of outbreak response					

Current Performance	Objectives	Milestones	Regional and Global goals	Order of priority	Strategy	Priority Key Activities	Timeline				
							2016	2017	2018	2019	2020
1. Service Deliveries											
SIA conducted successfully with coverage of 97% in 2014	Successful implementation of Measles Rubella SIA with coverage of above 90% in 2017	**2016:** Measles Rubella SIA Micro plan **2017:** Pre implementation Supervision	Meet global and Regional elimination targets	3	Supplemental immunization activity	Develop Measles Rubella SIA micro plan					
						To conduct pre implementation supervision of Measles Rubella SIA					
						To conduct Measles Rubella SIA					

Current Performance	Objectives	Milestones	Regional and Global goals	Orders of Priority	Implementation strategies	Key Activities	Timeline				
							2016	2017	2018	2019	2020
2. Programme Management											
cMYP not disseminated at the subnational level Council planners fully conversant with	Strengthen immunization plans and their implementation at all levels by 2020	2016: cMYP disseminated at all levels 2016: MTEF plan submitted and cMYP	GVAP Strategic Objective 1	1	Ensure availability of a minimum requirement for consideration in immunization council planning	Participate in CCHP planning to follow up budget line for immunization in CCHP					
						Develop MTEF plan					
						Disseminate cMYP 2016/2020 to subnational level					

immunization activities MTEF plans submitted timely		reviewed 2017: MTEF plan submitted and cMYP reviewed 2018: MTEF plan submitted and cMYP reviewed 2019: MTEF plan submitted and cMYP reviewed			Ensure timely submission of IVD plans	Conduct annual cMYP review meeting					
						Conduct cMYP review annually					
100% ICC and 75% TWG meetings are held as planned Strong coordination among partners and between program and partners NITAG not in place	Strengthen program governance by 2020	2016: 100% quarterly ICC meetings and 80% TWG meetings conducted 2016:NITAG TOR developed and submitted for	GVAP Strategic Objective 1	1	Ensure coordination meetings are conducted as scheduled	Conduct quarterly ICC meetings					
					Strengthen immunization services guiding structures	Conduct monthly TWG meetings					
						Mapping of immunization partners at all levels					
						Develop a TOR for NITAG and circulate to stakeholders for approvals					
						Conduct NITAG meetings					

Immunization Policy guidelines not in place		approval 2017: 100% TWG and ICC and NITAG meetings conducted 2018: 100% NITAG , TWG, ICC meetings conducted 2019: 100% NITAG , TWG, ICC meetings conducted				Develop and disseminate immunization policy guideline					
3. Human Resource Management											
Inadequate supportive supervision by national level at sub national levels Lack of updates the IVD staff with new skills and technologies skills	Improved program performance in low performing councils to reach national targets by 2020	2016-2020: 100% of low performing councils supervised by the central level	GVAP strategic objectives 3 and 4	1	Improve quality and frequency of supportive supervision to low performing regions and councils	Conduct quarterly program performance review meetings					
						Conduct quarterly supervisions					
						Develop biannual IVD TWG joint supportive supervision					
	Strengthen IVD program management capacity by December 2020	2016-2020: 30% of IVD staff attend tailor made	GVAP strategic objectives 3 and 4	2	Capacity Building at all levels	Conduct Tailor made trainings for IVD staff (leadership, financial management and abstract writing skills)					

		trainings annually 2016-2020: IVD staff performance conducted annually 2016: Network infrastructure functioning in IVD central office			Operationalize OPRAS Ensure smooth running of IVD operations	Participate and present oral/posters presentations in local, international and regional conferences						
						Conduct staff performance appraisal annually						
						Develop succession plan for IVD staff at all levels						
						Upgrade ICT infrastructure (procure served, domain hosting, computer accessories networking and software and licenses)						
						Facilitate day to day office operations (provision of working tools, utilities, service maintenance contracts, radio calls, vehicle locks, vehicle maintenance						
Inadequate provision of immunization training for health staff involved in immunization	Training to 90% of health staff on immunization by end of 2020	2016; 50% of immunization related health care staff trained 2017: 60% 2018: 70% 2019: 80%	GVAP strategic objective 4: Strong immunization systems are an integral part of a well-functioning health system.	1	Upgrade standard training guideline/ modules for immunization services	Form task force for training						
						Update the guidelines						
						Printing and distribute the training guideline						
						Dissemination of immunization practice guide						
					Training to improve immunization services	Conduct the newcomer trainings						
						Conduct refresher trainings						

						Conduct training on data management						
						Conduct training on logistics and vaccine management						
					Professionalize health, vaccines logistics and management	Enrolment of logisticians for the EAC course for masters/diploma/certificate training						
					Establish and implement continuous learning mechanisms, i.e. e –learning	Develop E- learning modules						
						Orientation to participants on e-learning modules						
						Develop online repository for all immunization related training materials						
					Coordinate and track trainings conducted and participants involved	Establish data base of training						
Only 60% of immunization manager receive MLM training	100% of Managers involved in immunization services receive MLM training from national/regional/councils by end 2020	2016 70% of sub-national managers and health institute tutors received MLM training 2017: 80% of	GVAP strategic objective 4: Strong immunization systems are an integral part of a well-functioning health system.	1	Employ MLM training modules to build capacity of sub-national level immunization managers	Review MLM Training modules						

		sub-national managers and health institute tutors received MLM training 2018: 90% 2019: 90%				Conduct the MLM training at various level					
Pre service job aids not updated to new immunization technology and practices	Updated pre service job aids on Immunization incorporated in training health institute providing immunization in 8 zones by 2020	2016 Developed and updated job aids Job aids disseminated to training health	GVAP strategic objective 4: Strong immunization systems are an integral part of a well-	2	Ensure availability of job aids to training health institutes Bring current immunization staff experience	Develop job aids					
						Disseminate job aids					
						IVD to participate in the pre-service curriculum update in 2020					

		institutes in 1 zone 2017 Job aids disseminated to training health institutes in 2 zone 2018 Job aids disseminated to training health institutes in 4 zones 2019 Job aids disseminated to training health institutes in 6 zones	functioning health system.		and knowledge into training health institutes	National IVD, RIVOs to be involved in training in surrounding health institutes					
4. Costing and Finance											
Decreased government spending on routine vaccine spending over the past three years	Improved program financing at all levels	2016-2019: Public sector funding on immunization increased by 10%	GVAP Strategic Objective 1 &4	1	Resource Mobilization from public and private stakeholders at all levels	Advocate for increased of funding for immunization services (vaccines and operations) eg to NHIF, MOH management.					

Only 60% of the required immunization budget approved and 100% funded		annually 2016: Financial sustainability plan developed 2016-2019: Annual advocacy meetings conduced			Monitoring of program expenditure at all levels	Dialogue with PPP to support immunization services operations eg distribution,					
Sub national immunization budget and expenditure not aggregated						Engage ICC for resource mobilization					
No financial sustainability plan		2017-2020: annual program expenditure reports available				Conduct study of fully immunized child					
						monitoring expenditure of immunization services at all level					
						develop financial sustainability plan					
Annual report submitted timely	Sustain program performance monitoring by 2020	2016-2020: Routine reports timely submitted	GVAP Strategy 1	1	Ensure timely and complete reporting	Prepare quarterly and biannual reports					
						Annual Program review meetings and report writing					
						JRF report writing and submission					
						APR/Joint Appraisal writing and submission					
						Annual budget writing and submission					
						Performance framework writing and submission					
						Parliamentary report writing and submission					

Current Performance	Objectives	Milestones	Regional and Global goals	Orders of Priority	Implementation strategies	Key Activities	Timeline				
							2016	2017	2018	2019	2020
5. Vaccines, cold-chain and logistics											
16% of Immunizing HFs had experienced stock out in 2014	Improve and maintain availability of IVD Vaccines to 100% at all levels by 2020	2016: 90% of immunizing HFs with no stock out 2017: 95% of immunizing HFs with no stock out 2018: 100% of immunizing HFs with no stock out 2019: Maintain 100% of Immunizing HFs with no stock out 2020: Maintain 100% of Immunizing HFs with no stock out	GVAP strategic objective 5 : Immunization programmes have sustainable access to predictable funding, quality supply and innovative technologies	1	Timely availability of funds for distribution of vaccines and related supplies at all levels	Conduct annual forecasting of vaccines and related supplies at all levels					
						Procurement and clearing of vaccines and related supplies					
						Storage and distribution of vaccines and related supplies					
						Track amount of funds allocated for procurement and distribution of vaccines, LP gas/fuel/electricity on quarterly basis					
						Conduct monthly and quarterly web based stock balance monitoring and provide feedback					

Current Performance	Objectives	Milestones	Regional and Global goals	Orders of Priority	Implementation strategies	Key Activities	Timeline				
							2016	2017	2018	2019	2020
5. Vaccines, cold-chain and logistics											
		2016: Storage, transport facilities and all vaccines logistics operations established at IVD Central 2017: All Vaccines storage facilities have appropriate, functional and continuous temperature monitoring devices 2018: Improve Vaccine Management Performance to 90% or above at all levels 2019: Maintain Vaccine Management				to council level					
						Procurement of refrigerated trucks at national level					
47% score of E1-Indicator of EVMA (Vaccine Arrivals) at national level. 73% Score E2-Indicator of EVMA (Temperature Monitoring)	Improve Vaccine Management Performance to 90% or above at all levels by 2020		GVAP strategic objective 5; Strong immunization systems are an integral part of a well-functioning health system.	1	Utilization of appropriate technologies for temperature monitoring to increase safety and potency of vaccines at all levels	Procurement and distribution of cold chain temperature monitoring devices at all levels					
						Conduct Temperature mapping study at CVS and RVS					
						Develop system to monitor temperature during transportation of vaccines (printing, training,					

Current Performance	Objectives	Milestones	Regional and Global goals	Orders of Priority	Implementation strategies	Key Activities	Timeline				
							2016	2017	2018	2019	2020
5. Vaccines, cold-chain and logistics											
		Performance to 90% or above at all levels 2020: Maintain Vaccine Management Performance to 90% or above at all levels 2020: 100% of RVS, DVS and HFs with adequate storage capacity 2016: 100% of RVS, 90% of DVS and 85% of HFs with adequate storage capacity for				monitoring and supportive supervision					
						Training of immunization and vaccine officers on vaccine and logistics management at all levels					
					Reallocation of vaccines and related supplies, storage facilities (WICR, dry store), transportation facilities (Refrigerated vehicles) and all operations to IVD office	Renovation and expansion of warehouses, renovation of vehicle garage at IVD Mabibo.					
						Shifting of facilities (refrigerated trucks, WICRs, generators and other related supplies) from MSD to IVD central level					

Current Performance	Objectives	Milestones	Regional and Global goals	Orders of Priority	Implementation strategies	Key Activities	Timeline				
							2016	2017	2018	2019	2020
5. Vaccines, cold-chain and logistics											
		vaccines and related supplies 2017: 100% of DVS and 90% of HFs with adequate storage capacity for vaccines and related supplies 2018: 100% of HFs with adequate storage capacity for vaccines and related supplies 2019: 100% of HF with adequate storage capacity for vaccines and related supplies				Facilitate insurance policy provision for central vaccine stores (develop concept note, submit to MOHSW management, procure insurance policy)					
						Installation of WICRs and generators					
Cold Storage capacity at CVS and RVS is at 6 months plus 1 month buffer and 3 months plus 1 month buffer respectively 80% of Councils have storage capacity of 3 months plus 1 month buffer 78% of Health Facilities have appropriate functional cold chain equipment	Increase and maintain adequate storage capacity for vaccines and related supplies to 100% at all levels by 2020				Increased availability of appropriate and adequate Cold Chain Equipment at all levels to meet current and future program needs	Update EPI Logistics tool					
					Advocate for availability of adequate dry stores at Regional and Councils levels	Update CCE Replacement Plan at all levels					

Current Performance	Objectives	Milestones	Regional and Global goals	Orders of Priority	Implementation strategies	Key Activities	Timeline				
							2016	2017	2018	2019	2020
5. Vaccines, cold-chain and logistics											
50% of regions and district have adequate dry storage space					to meet current and future needs	Procurement of refrigerators, spare parts for cold rooms and standby generators					
						Distribution of refrigerators and spare parts for Cold rooms, refrigerators and standby generators					
						Installation of Solar Direct refrigerators					
						Design and share sketch map for DVS and dry stores					
						Monitor establishment of dry storage space					
39% of Health facilities have standard waste disposal facilities (incinerators)	Attain 80% of HFs with standard waste disposal facilities by 2020	2016: Attain 50% of HFs with standard waste disposal facilities 2017: Attain 60% of HFs		3	Advocate establishment of waste disposal facilities	Conduct Sensitization meeting of development partners to contribute to waste management					

Current Performance	Objectives	Milestones	Regional and Global goals	Orders of Priority	Implementation strategies	Key Activities	Timeline				
							2016	2017	2018	2019	2020
5. Vaccines, cold-chain and logistics											
		with standard waste disposal facilities 2018: Attain 70% of HFs with standard waste disposal facilities 2019: Attain 75% of HFs with standard waste disposal facilities 2020: Attain 80% of HFs with standard waste disposal facilities				facilities					
					Coordination with Quality Assurance department - MoHSW	Monitor establishment of HF waste disposal facilities.					
16% and 35% of Councils and HFs respectively have non-functional fridges needed repair	100% of Non-functional repairable refrigerators at Council and HFs are repaired by	2016: 80% of Non functional Repairable fridges repaired		2	Improved technician response time and reduction of equipment downtime	Mapping availability of Cold Chain technicians at regional and district levels					

Current Performance	Objectives	Milestones	Regional and Global goals	Orders of Priority	Implementation strategies	Key Activities	Timeline				
							2016	2017	2018	2019	2020
5. Vaccines, cold-chain and logistics											
	2020	2017: 85% of Non functional Repairable fridges repaired 2018: 90% of Non functional Repairable fridges repaired 2019: 95% of Non functional Repairable fridges repaired 2020: 100% of Non functional Repairable fridges repaired				Training of cold chain technicians on maintenance and repair of CCE at regional and council level					
						Procurement of cold chain tool kits and spare parts for CCE					
						Update and implement repair and maintenance plan					

Current Performance	Objectives	Milestones	Regional and Global goals	Orders of Priority	Implementation strategies	Key Activities	Timeline				
							2016	2017	2018	2019	2020
6. Monitoring, Surveillance and Reporting											
Five (5) regions out 27 regions have AFP detection rate of less than 2 per 100,000. Four (4) regions out of 27 regions have stool adequacy of less than 80%	To attain and maintain two certification indicators in all regions by 2020	2016: 90% of all regions attain two certification indicators. 2017: 95% of all regions attain two certification indicators. 2018: 100% of all regions attain two certification indicators. 2019: 100% of all regions attain two certification indicators.	Achieve a world free poliomyelitis	1	Improving AFP surveillance activities at all levels	Conduct subnational AFP Focal persons review meeting					
						Biannual deployment of NSTOP teams.					
						Conduct active search in the health facilities					
						Weekly information sharing and feedback to subnational levels					
						Shipment of AFP stool specimens from districts to the National level, and National to inter-Country lab					
						Provide AFP specimen collection kits and shipment boxes.					
						Conduct quarterly meeting for NPEC, NCC and NTF					
					Deploy existing technology and community	Develop and contract vendor on the use of automated sms mobile technology to sensitize reporting at the council.					

Current Performance	Objectives	Milestones	Regional and Global goals	Orders of Priority	Implementation strategies	Key Activities	Timeline				
							2016	2017	2018	2019	2020
6. Monitoring, Surveillance and Reporting											
					structures to improve AFP case reporting	Conduct community surveillance sensitization and active search health facilities.					
Inadequate number of neonatal tetanus deaths investigated and reported in 80% of districts.	To improve quality of Neonatal tetanus surveillance in districts by 2020.	2016: 80% of districts report on neonatal deaths investigated for tetanus 2017: 80% of districts report on neonatal deaths investigated for tetanus 2018: 80% of districts report on neonatal deaths investigated for tetanus 2019: 80% of districts report on neonatal deaths investigated for tetanus		2	Use maternal, neonatal deaths review platforms at council level to investigate neonatal tetanus deaths.	Orient RCH teams on MNT autopsy form and for them to fill the form during maternal and neonatal deaths review meetings in the councils.					
						To sensitize CHMTs to conduct sensitization meetings with community leaders on reporting neonatal deaths.					
Low country performance in FRI case base surveillance	To attain and maintain FRI surveillance indicators to all	2016: 80% of councils attain core FRI surveillance	Meet global and regional elimination targets	1	Strengthen FRI surveillance at all councils	Conduct targeted active search					

Current Performance	Objectives	Milestones	Regional and Global goals	Orders of Priority	Implementation strategies	Key Activities	Timeline				
							2016	2017	2018	2019	2020
6. Monitoring, Surveillance and Reporting											
indicators Delays in specimen shipment from field to National lab.	councils by 2020	indicators 2017: 80% of councils attain core FRI surveillance indicators 2018: 85% of councils attain core FRI surveillance indicators 2019: 90% of councils attain core FRI surveillance indicators				Conduct quarterly Supportive supervision to silent councils (integrated) and provide mentorship for FRI case investigation.					
						Update and distribute tailor made FRI surveillance guidelines to all health facilities.					
						Shipment of specimens at all levels.					
						Ensure availability of testing reagents.					
						Conducts monthly inter departmental review meetings between IVD and epidemiology.					
						Conduct quarterly surveillance performance review meetings (sentinels, AFP, FRIs)					
						Sensitize clinicians in avenues like Pediatric annual meetings on FRI surveillance.					
Cases reported from the neighboring country but no	To estimate the burden of yellow fever before and after vaccine	2016: Yellow fever rapid assessment conducted and results	GVAP strategic objective 6: Country, regional and	3	Establishing functional yellow fever surveillance	To establish TWG to work on Yellow fever assessment.					
						Resource mobilization.					

Current Performance	Objectives	Milestones	Regional and Global goals	Orders of Priority	Implementation strategies	Key Activities	Timeline				
							2016	2017	2018	2019	2020
6. Monitoring, Surveillance and Reporting											
established reporting system in the country	introduction by 2020	disseminated. 2017: Yellow fever surveillance system established 2018: Burden of yellow fever documente	global research and development innovations maximize the benefits of immunization.		system	Procure reagents for yellow fever laboratory testing					
						Conduct Yellow Fever rapid assessment.					
						Develop yellow fever surveillance guideline					
						Establish and maintain surveillance system.					
VDP sentinel surveillance sites have enrollment rate of 73%. Concordance of Rotavirus ELISA results among sentinel sites is 88% compared to Regional Reference laboratory.	To increase number of VPD sentinel sites which meets minimum quality criteria required to assess program impact.	2017: All of the sentinel sites meets minimum quality criteria required for to assess program impact 2018: All sentinel sites meets minimum quality criteria required for to assess program impact 2019: All sentinel sites meets minimum quality criteria required for to assess program impact	GVAP strategic objective 6: Country, regional and global research and development innovations maximize the benefits of immunization.	2	Strengthening coordination of sentinel surveillance system	Conduct quarterly supportive supervision visits to sentinel sites.					
					Ensure high quality of data generated at sentinel sites	Updating standard operating procedures for enrollment and data management					
						Conduct refresher trainings.					
						Share monthly feedback with the sites.					
						Conduct biannual sentinel sites review meetings.					
						Provide feedback to the regional authorities.					

Current Performance	Objectives	Milestones	Regional and Global goals	Orders of Priority	Implementation strategies	Key Activities	Timeline				
							2016	2017	2018	2019	2020
6. Monitoring, Surveillance and Reporting											
						Procurement of laboratory reagents for latex agglutination/ binax for 2 PBM laboratories.					
						Conduct operational research in the sentinel sites					
						Provide technical support to sentinel sites to publish surveillance data					
						Conduct biannual sentinel sites review meetings.					
There is under reporting of AEFI cases.	To monitor and effectively investigate at least 80% of serious AEFI cases by 2020	2016: 50% of districts report and investigate serious AEFI cases	GVAP strategic objective 6: Country, regional and global research and development innovations maximize the benefits of immunization.	2	Improve vaccine monitoring safety	Establishing functional AEFI committees at all levels together with TFDA					
		2017: 60% of districts report and investigate in serious AEFI cases				Train regions and districts on AEFI reporting and investigation					
		2018: 70% of districts report and investigate in serious AEFI cases				Conduct quarterly AEFI performance review meetings					
		2019: 80% of districts report and investigate in				Document the burden of AEFI from various vaccines in the country.					

Current Performance	Objectives	Milestones	Regional and Global goals	Orders of Priority	Implementation strategies	Key Activities	Timeline				
							2016	2017	2018	2019	2020
6. Monitoring, Surveillance and Reporting											
		serious AEFI cases				Conduct vaccine safety studies to evaluate vaccine safety concerns					
Inadequate capacity of advanced diagnostics for viral and bacterial VPDs	To build capacity for the laboratory to conduct advanced tests to meet surveillance needs by 2020	2016: Country able to perform genotyping for Rotavirus and RT PCR and Immunology for measles/ rubella.	GVAP strategic objective 6: Country, regional and global research and development innovations maximize the benefits of immunization.	1	Enhancing the capacity of the laboratory to perform various molecular tests	To train National lab staff to perform genotyping for Rotavirus, RT PCR and Immuno-serology for Measles/Rubella.					
		2017: Country passes quality assurance tests for advanced tests.				Procure supplies/reagents for RT PCR and Immuno-serology for Measles/Rubella.					
		2018: Country passes quality assurance tests for advanced tests.				Documenting virus strains circulating in the country.					
		2019: Country passes quality assurance tests for advanced tests.									
Lack of sub national capacity on epidemiological link and outbreak control	At least 90% of regions/councils timely respond to outbreaks control by 2020.	2016: 90% of regions/councils timely respond to outbreaks control	GVAP strategic objective 6: Country, regional and global research and development innovations maximize the benefits of	1	Strengthening coordination and control of outbreaks	To update the preparedness and response plans					
		2017: 90% of regions/councils timely respond to outbreaks control				Conducting simulation of outbreak					
		2018: 90% of regions/councils				Resource mobilization during outbreak					

Current Performance	Objectives	Milestones	Regional and Global goals	Orders of Priority	Implementation strategies	Key Activities	Timeline				
							2016	2017	2018	2019	2020
6. Monitoring, Surveillance and Reporting											
		timely respond to outbreaks control	immunization.								
		2019: 90% of regions/councils timely respond to outbreaks control				Conduct response outbreak meeting for VPD.					
						Orient councils to analyze and use outbreak data to influence priority health intervention.					

Current Performance	Objectives	Milestones	Regional and Global goals	Orders of Priority	Implementation strategies	Key Activities	Timeline				
							2016	2017	2018	2019	2020
7. Demand Generation, Communication											
80% of caregivers are well informed on immunization services	Increased community awareness on immunization services to equal and above 90% by 2020	2016: Increased community awareness on immunization services to 82% 2017: Increased community awareness on immunization services to 84% 2018: Increased community awareness on immunization services to 86%	GAVP strategic objective 2; Individuals and communities understand the value of vaccines and demand immunization as their right and responsibility.	1	Operationalize Communication Strategy	Finalization and printing of communication strategy					
						Dissemination of communication strategy to all regions and councils.					
						Develop ,print and disseminate routine, NUVI and SIAs IEC materials					
						Develop and airing routine TV and radio Spots					
						Conduct KAP Study					
						Dissemination of KAP study result /findings at National/Regional/Council level					
						Implement and monitor KAP Study findings in councils communication plan.					

Current Performance	Objectives	Milestones	Regional and Global goals	Orders of Priority	Implementation strategies	Key Activities	Timeline				
							2016	2017	2018	2019	2020
7. Demand Generation, Communication											
		2019: Increased community awareness on immunization services to 88% 2020: Increased community awareness on immunization services to 90%									
80 (47%) Districts have DTP1-DTP3 dropout rate above 10% in 2014.	To increase demand and utilization of immunization services by the community by 100% by	2016:60% of councils implementing defaulter tracing plans 2017:70% of councils	GVAP Strategic Objective 3: The benefits of immunization are equitable extended to	1	Improve immunization service utilization by the communities Strengthen	Mapping of CHW/VHW					
						Develop CHWs Immunization orientation guide					
						Orientation of CHWs on immunization orientation guide					
						Conduct AVW					

Current Performance	Objectives	Milestones	Regional and Global goals	Orders of Priority	Implementation strategies	Key Activities	Timeline				
							2016	2017	2018	2019	2020
7. Demand Generation, Communication											
	2020.	implementing defaulter tracing plans 2018:80% of councils implementing defaulter tracing plans 2019:90% of councils implementing defaulter tracing plans 20120:100% of councils implementing defaulter tracing plans	all people.		capacity of service providers on interpersonal communication Engage school health program for the immunization service uptake for older age groups Strengthening Defaulter tracing mechanism using CHW/VHW	Develop and print Immunization IPC communication guide for HCWs and CHWs.					
						Orientation of HCWs and CHWs on IPC.					
						Conduct supportive supervision to monitor implementation of IPC in HFs & community					
						Develop orientation plan for immunization services in school health					
						Conduct resource mobilization for immunization services in school health					
						Orientation of Council school health coordinators on immunization activities.					

Current Performance	Objectives	Milestones	Regional and Global goals	Orders of Priority	Implementation strategies	Key Activities	Timeline				
							2016	2017	2018	2019	2020
7. Demand Generation, Communication											
						Develop defaulter tracing package	.	.	.	.	.
						Train CHMT on defaulter tracing					
						Conduct quarterly meeting on defaulter tracing					

Chapter 6

COSTING, FINANCING AND FINANCIAL SUSTAINABILITY

6.1 Methodology

This section of the cMYP reviews the cost implications and relates them to secured and probable financing to derive information on financing gaps. By knowing the magnitude of the gap, one can devise strategies to improve financial sustainability. The broad areas of intervention for the cMYP are Service Delivery, IEC/Social Mobilization, Vaccine Supply, Quality and Logistics, New Vaccine and Research and Programme Management, Personnel, Disease Surveillance, Maintenance for cold chain and capital equipment.

The costing of the Tanzanian cMYP was based on the priorities set out in the programmatic section of the plan and used the standard WHO cMYP costing and Financing tool version 3.8.4.

Standard programme inputs such as vaccines, injection materials and cold chain equipment were costed using mostly UNICEF prices in the costing tool. Coverage and wastage targets for 2016-2020 came from GAVI Annual Progress Report (APR), WHO-UNICEF Joint Reporting Forms (JRF) and estimates by the EPI Team. Operational costs for routine and supplementary immunization activities were based on past expenditure and future needs. SIAs costs for measles-rubella in 2017 are based on information provided on previous measles-rubella SIAs of 2014. The staff cost was derived from the government pay scale and time spent for immunization activities. The financing information on EPI was obtained from past expenditures on EPI by GoT and partners. The future costing and financing for the EPI programme (2016-2020) are in line with the National Health Strategic Plan of Tanzania and are aligned with the MTEF and National Strategy for Economic Growth and Poverty Reduction (MKUKUTA II).

The costs are derived using a combination of costing methodologies such as:

- The ingredient approach, based on the product of unit prices and quantities needed each year, adjusted for the proportion of time used for immunization. This is used for costing inputs such as vaccines, personnel, vehicles, cold chain equipment, etc.
- Rules of thumb, based on immunization practices, such as a percentage of fuel costs as representative of maintenance costs for vehicles. This is used for deriving costs for injection supplies and maintenance of equipment, and vehicles.
- Past spending, where lump sum past expenditure is used to estimate future expenditure. For example, cost per child for specific campaigns, training activities etc.

The 2016-2020 cMYP costing is based on the following considerations:

- Increasing coverage for traditional, new, and underused vaccines
- Reduction of dropout rate
- Introduction of IPV, Meningitis A vaccine, HepB birth dose, and country-wide roll out of HPV
- Increasing activities for IEC/Social Mobilization
- Conducting operational research on EPI
- Increasing vaccine storage capacity to accommodate new vaccines
- Increasing cold chain, vaccine management, and transport capacity
- Improving EPI capacity to manage the program

6.2 Cost profile

The total immunization specific expenditure in 2014 (the base year) was US$171,154,880 million, where all the funds were spent on routine immunization. The breakdown of the expenditure for the routine immunization programme is further illustrated in the table 8.

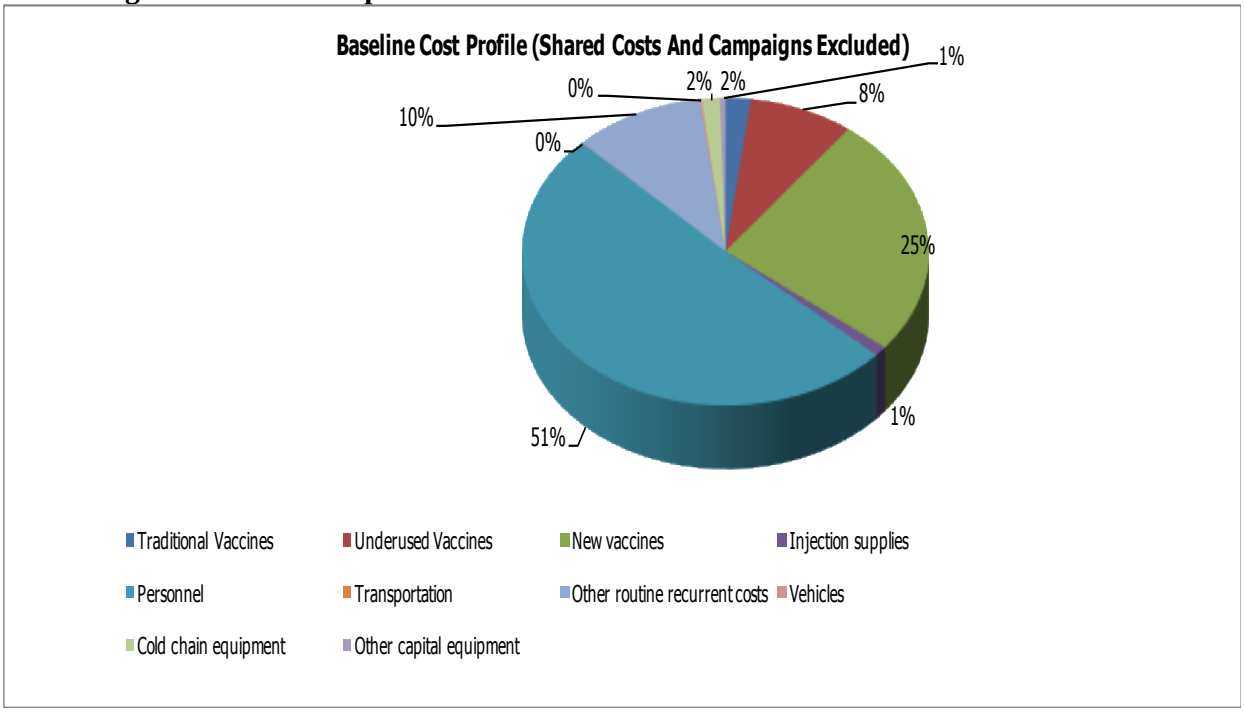
Table 8: Baseline Expenditure for immunization programme

Baseline Indicators	2014
Campaigns	$26,782,485
Routine Immunization only	$100,211,148
Per capita	$2.93
per DTP3 child (surviving infants)	$79.2
% Vaccines and supplies	29%
% Government funding	17%
% Total health expenditures	19%
% Gov. health expenditures	56%
Health expenditures as % of GDP	2.76%
Total Shared Costs	$44,161,247
% Shared health systems cost	35.5%
TOTAL	$171,154,880

6.3 Baseline Expenditure

In terms of baseline expenditure for 2014, 51% ($51.3 million) of expenditure was costs for personnel with source of funding primarily from government and 25% ($25.6 million) of expenditure was for new vaccines with the bulk of the fund coming from GAVI support. The remaining 24% of the expenditure was for traditional and underused vaccines, injection supplies, cold chain equipment, transportation, vehicles, and other routine recurrent costs. For non-routine expenditures, $26.7 million was used for SIAs for measles rubella.

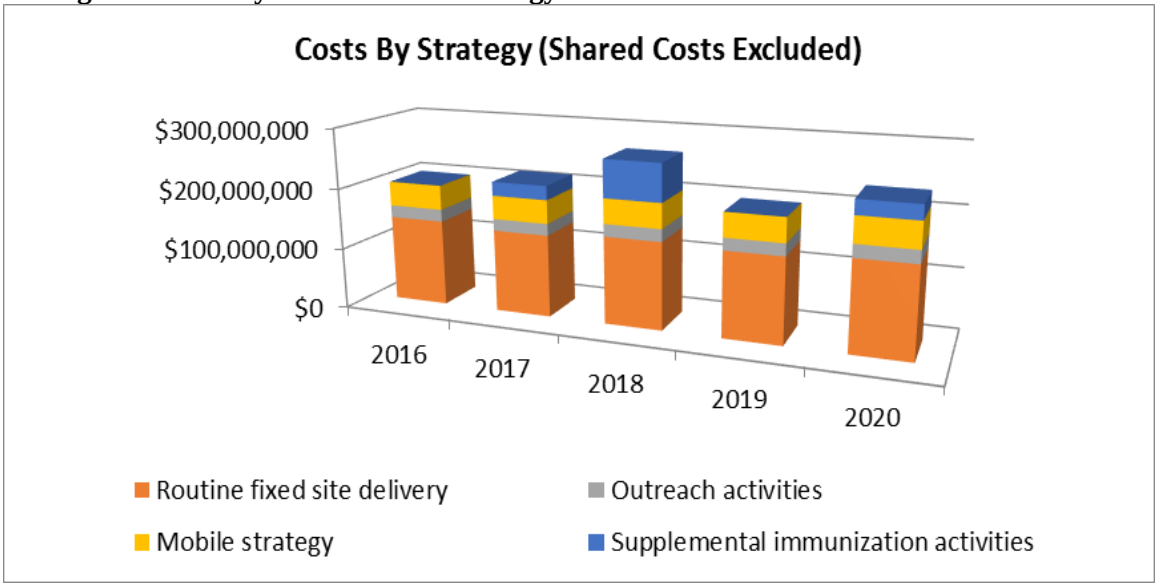
Figure 6. Baseline Expenditure Profile 2014



6.4 Cost by immunization strategy

As shown in Figure 7, the main immunization strategy in Tanzania is routine fixed delivery which will account for over half of the total immunization budget. This is followed by mobile strategy to reach nomadic and difficult to access communities. The follow-up Integrated Measles Campaigns targeting children aged 6-59 months will be conducted in 2017 and 2020 as part of the Measles Elimination Strategy to prevent outbreaks among susceptible populations. Meningitis A campaign is planned for 2018.

Figure 7: Cost by immunization strategy



6.5 Programme cost requirement for 2016 - 2020

The projected cost of the immunization programme in the planning period (2016-2020) is approximately $879,838,126 million (see Table 9). There is an increase of cost in the year 2017 and 2018 due to planned implementation of MR campaign and Meningitis A campaigns respectively

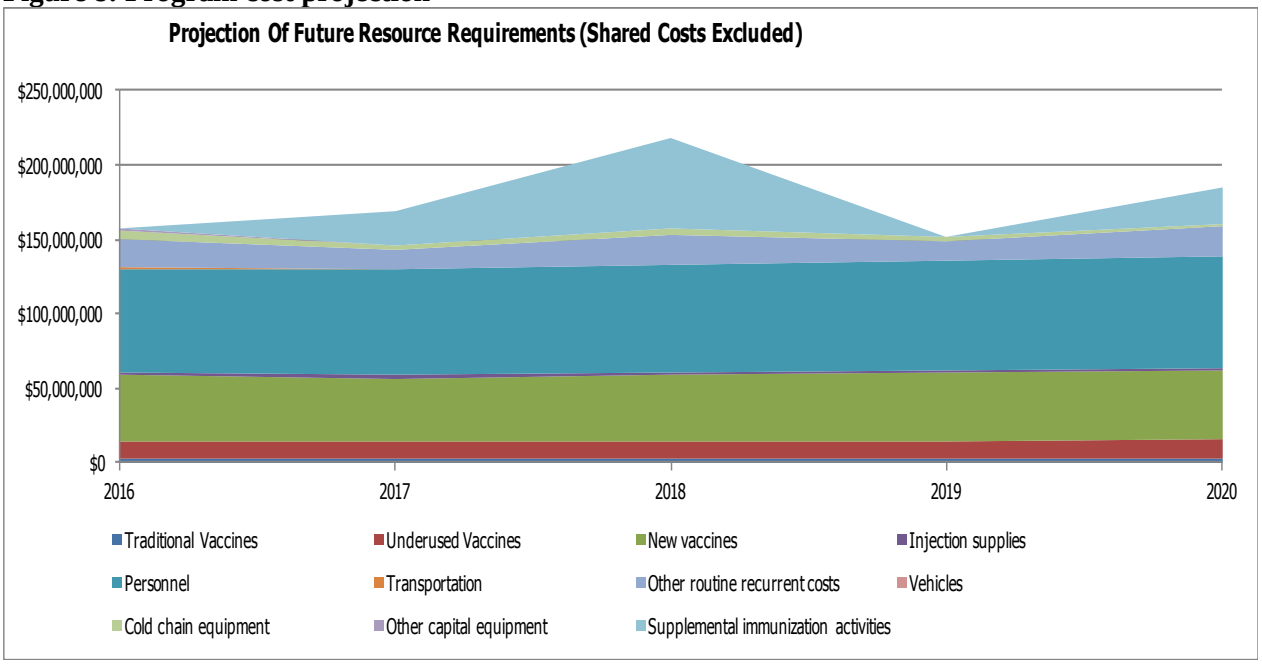
Table 9: projection of Future Resource requirements by Cost Category

Cost category	2016	2017	2018	2019	2020
Routine recurrent costs	**US$**	**US$**	**US$**	**US$**	**US$**
Traditional Vaccines	$2,440,015	$2,239,710	$2,293,345	$2,360,145	$2,426,776
Underused Vaccines	$11,447,244	$11,521,343	$11,966,314	$12,414,289	$12,780,077
New vaccines	$45,404,146	$43,153,983	$44,355,355	$45,537,575	$46,767,312
Injection supplies	$1,747,190	$1,715,028	$1,762,581	$1,820,318	$1,878,222
Personnel	$69,594,371	$70,986,258	$72,405,983	$73,854,103	$75,331,185
Transportation	$139,462	$159,506	$166,245	$94,795	$100,509
Other routine recurrent costs	$19,466,548	$13,313,431	$19,933,423	$11,973,049	$19,435,738
Vehicles	$494,290	$0	$51,834	$0	$53,717
Cold chain equipment	$5,899,405	$2,920,652	$3,764,968	$3,169,632	$1,855,209
Other capital equipment	$95,880	$29,121	$38,909	$77,177	$47,398
Supplemental immunization activities	$0	$22,842,494	$61,803,436	$0	$23,708,429
Sub total	$156,728,550	$168,881,526	$218,542,394	$151,301,084	$184,384,572

6.5.1 Projected Financing from all sources from 2016-2020.

The financing trends and resource requirements for the years covered in the cMYP are further elaborated in Figures 8 and Table 9. In terms of cost drivers (see Figure 8), these personnel dominate all other costs of the programme in the planned years of the cMYP, followed by new vaccines and other recurrent operational costs (e.g. cold chain and capital equipment etc.).

Figure 8: Program cost projection

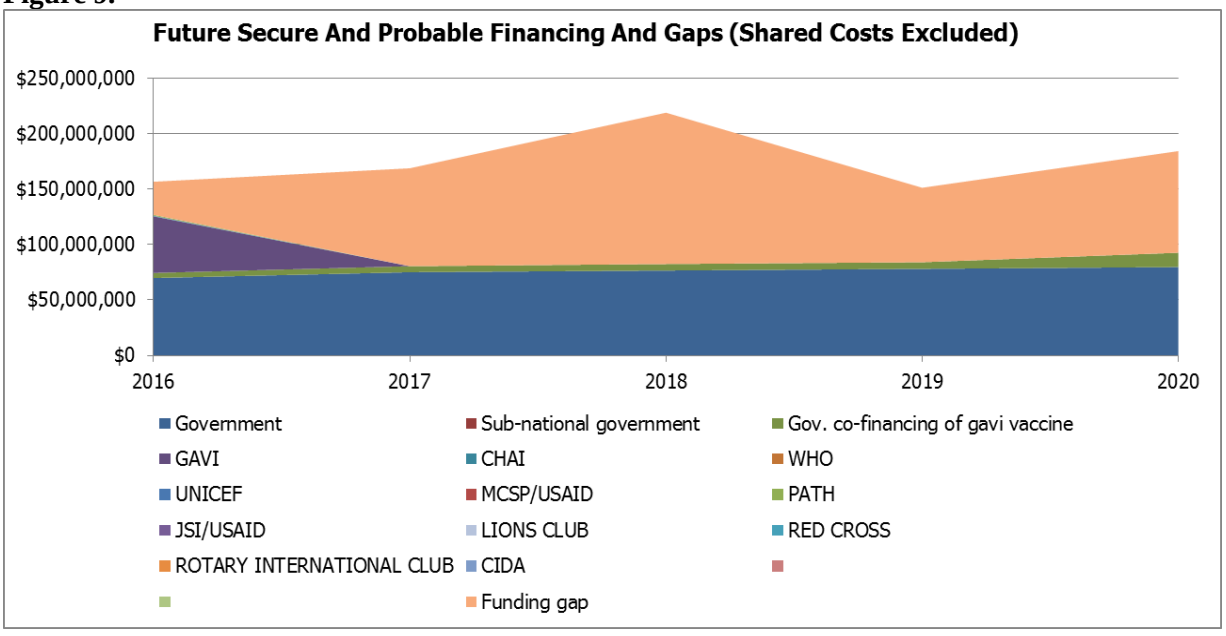


Financing is either classified as secured, or probable. Secured funding refers to those funds already mobilised to support the implementation of the cMYP. Probable funds are those potentially available but may require additional efforts such as proposal development or negotiations to secure them. From the total projected cost of approximately $879,838,126 million from 2016-2020, approximately $414,227,133 million (47%) is expected to be secured primarily from the GoT, thus leading to a cumulative funding gap of an estimated $465,610,993 (53%). (See Table 10). For the year 2016 the total secured fund from GAVI, PATH/BID and UNICEF is $43,415,520 and other partners have yet to confirm their contributions

Table 10: Resource Requirements, Financing and Gaps

Secure + Probable Funding	2016	2017	2018	2019	2020
0	US$	US$	US$	US$	US$
Government	$69,837,528	$75,100,502	$76,628,156	$78,129,361	$79,736,691
Sub-national government	$0	$0	$0	$0	$0
Gov. co-financing of gavi vaccine	$4,570,744	$5,458,815	$5,857,908	$5,982,438	$12,924,990
GAVI	$51,061,641	$0	$0	$0	$0
CHAI	$255,653	$0	$0	$0	$0
WHO	$0	$0	$0	$0	$0
UNICEF	$352,105	$0	$0	$0	$0
MCSP/USAID	$0	$0	$0	$0	$0
PATH	$790,370	$0	$0	$0	$0
JSI/USAID	$0	$0	$0	$0	$0
LIONS CLUB	$0	$0	$0	$0	$0
RED CROSS	$0	$0	$0	$0	$0
ROTARY INTERNATIONAL CLUB	$0	$0	$0	$0	$0
CIDA	$0	$0	$0	$0	$0
	$0	$0	$0	$0	$0
	$0	$0	$0	$0	$0
Total secure funding	$126,868,041	$80,559,317	$82,486,064	$84,111,799	$92,661,681
Total resources needed:	$156,757,110	$168,910,657	$219,050,571	$151,331,392	$184,415,487
Funding gap	$29,889,069	$88,351,341	$136,564,507	$67,219,592	$91,753,805

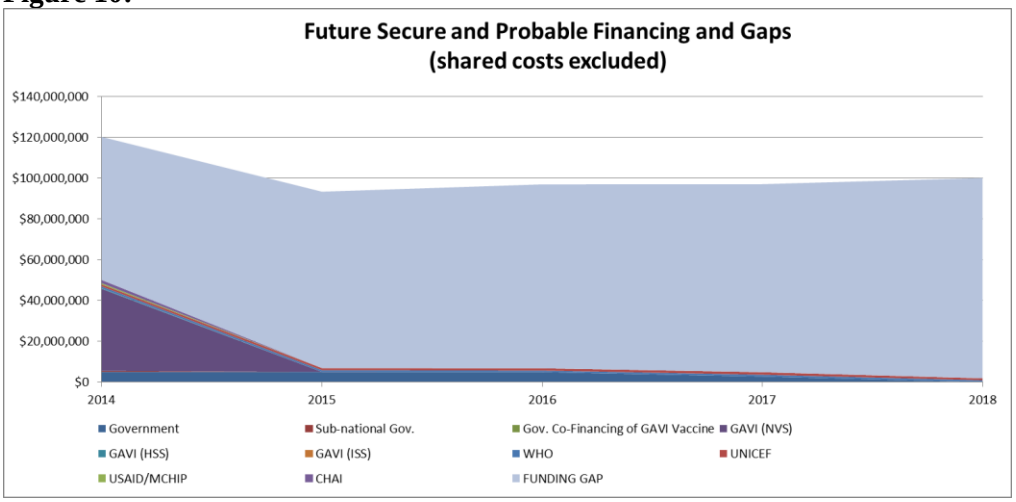
Figure 9.



When both secured and probable funding was taken into account, the funding gap reduced to approximately $8 million for the five years (2012-2016) of the cMYP (see Figure 10). The majority of the probable funds are expected from GAVI. The GoT probable funding is mainly in relation to co-payment for the new vaccines and sub-national funding in 2015 for additional logistics and facility running/rehabilitation costs through MMAM strategy.

Other partner funding is not expected to rapidly increase over the planned period. However, turning such probable funds to secure ones is part of advocacy plans to engage the ICC and partners well in advance of the implementation timeline for the activities concerned. This is ideal at the time of their respective annual programme development periods.

Figure 10:



6.6 Financial sustainability strategies, actions and indicators

6.6.1 Financial sustainability strategies, actions and indicators

The success of the immunization programme in United Republic of Tanzania is dependent, to a great extent, on the mobilization of adequate financing for the implementation of the plan from 2016-2020. It is the responsibility of the EPI through the MOHSW and partners to ensure that the programme secures adequate financial and material support. The financial challenges of the EPI in Tanzania have been highlighted in previous sections. From the analysis of costs and available funding, it is clear that additional resources are needed to ensure smooth implementation of the stated objectives of the cMYP.

Opportunities

There is strong political and financial support by the GoT for EPI in Tanzania, demonstrated by the approximately 62% funding of baseline costs in 2014. This commitment is likely to continue due to the positive economic growth at 7% in 2014, and commitment by the GoT to continue paying its contribution to GAVI at the highest level of co-financing while maintaining the operations of the EPI programme. Tanzania has Medium Term Framework (MTEF) for the next three years, which guarantees EPI funding at the same level at least in the medium-term. The country has a broad donor base with opportunity for basket funding for the combined development programme. The Government of Tanzania has created a budget line for vaccines, which "ring-fenced" any funding allocated to the programme. The health system strengthening IV window (with anticipated GAVI support) is another opportunity for addressing part of the financial gap as well as growing of private sector is a potential chance for supporting immunization activities

Threats

Despite the opportunities and commitments in Tanzania for improved EPI financing and efficient service delivery, resource mobilisation can be constrained by health sector reforms and basket funding which finance the health system as a whole and do not specify support for immunization or other programs. In addition, declining donor funding for other critical areas of health such as HIV/AIDS and malaria has meant the subsequent increase of domestic funding for these areas. With the per capita income in Tanzania at an average of only $955 in 2014 and the government's need to fund various health priorities within its limited budget, the ability to mobilise resources domestically for immunization is also limited.

Donor funding remains important especially for new and non-routine immunization activities. Tanzania's success with national high coverage could be a potential resourcing issue if donors choose to move funding toward lower coverage countries. Unplanned activities and emergencies can also divert resources away from routine EPI activities. Finally, additional financial support is needed to strengthen the overall health system in which EPI operates.

Challenges

As noted previously under threats, although the EPI programme is accorded high priority and supported by government, other competing health priorities (e.g. malaria, tuberculosis, HIV/AIDS, and disease outbreaks) might be a challenge in future resource mobilization from the Government and other donors.

In the last several years, many of the traditional stakeholders that used to support immunization (e.g. DANIDA, JICA, WHO, UNICEF, USAID, KFW, IRELAND AID, DFID, Rotary International, World Bank, GSK, NGOs and other private sector donors have changed their

focus. They had been involved in funding various activities such as training, procurement of supplies and equipment, providing technical support, and/or allowing temporary use of their equipment and provision of infrastructure. However, this support has declined from a majority of partners, while the few remaining channel their funds through the basket fund or directly as unspecified budget support. Timely disbursement of these funds is also a major problem.

Global shortages of vaccines can significantly hinder the sustainability of immunization coverage in Tanzania. As experienced with IPV introduction intended for 2015, global shortages caused Tanzania to push back introduction dates until supply is available in 2016.

6.6.2: Strategies and actions for financial sustainability

Given the opportunities and threats outlined above, the three main strategies GoT intends to pursue to improve the financial sustainability of the EPI include:

(i) Mobilising additional resources
(ii) Improving resource reliability
(iii) Improving programme efficiency

Mobilising additional resources

Tanzania fully finances all traditional vaccines. The resources required for the co-payment for pentavalent, pneumococcal, rotavirus and measles second dose vaccines has already been planned in the government budget in the MTEF. Tanzania has always met the GAVI co-financing requirement and the trend is likely to continue.

Given Tanzania's current rate of increase for GDP per capita, it is expected that Tanzania will need to begin considering to increase co-financing in preparation for transition to Gavi graduation Phase 1 beginning in 2020. Negotiations will need to take place with the SWAP Technical Committee and the Ministry of Finance for the GoT to eventually scale up the financing of pentavalent, rotavirus, PCV13 and other new vaccines after GAVI graduation.

Assistance in addressing the gap in funding shall also be sought through resource mobilisation from traditional bi-lateral and multi-lateral partners for the EPI programme. Past cMYPs have been presented to the SWAP Technical Committee (SWAP TC) members. The programme shall encourage the SWAP TC to hold discussions with partners that could support this cMYP – notably additional targeting of non-traditional EPI partners. Furthermore, of the presence of other donors in country provides the opportunity for resource mobilisation domestically. Some of these donors have supported routine and supplementary immunization activities (SIAs), cold chain, training etc. To ensure that a wider group of partners is aware of the cMYP objectives, advocacy will be intensified by the EPI to promote the programme achievements and build awareness of the financial situation.

Improving Reliability of Resources

The 62% of 2014 EPI funds coming from the GoT budget (in alignment with the national health strategic plan) demonstrates the reliability of funding. In Tanzania there continues to be strong political support for immunization, as shown by the government commitment for ring-fencing funds for vaccines. However, the global economic situation and the lack of reliable funding commitments from partners beyond one year are major challenges. For example, with the exception of GAVI, most donors have only provided annual funding estimates, making long term planning difficult.

Improving Programme Efficiency

The EPI programme started integrating some of its activities with other health initiatives to take advantage of synergy in cost-sharing (e.g. for operational and management costs). For example, a combine SWAP TC oversees implementation of several health initiatives, including immunization, which potentially saves financial and human resources that would otherwise have been needed for several separate ICCs. In addition, the SWAP basket for donor funds enables ease of transfer and use of such funds while maintaining stringent accountability processes.

Within the EPI programme, low wastage rates shall be maintained through strengthening vaccine management, cold chain improvement and proper monitoring and supervision. Standardised cold chain equipment is used at various levels of the EPI delivery system. The cold chain inventory will also be continuously updated and a detailed maintenance plan implemented to improve efficiency. At the various levels, staff will also receive refresher training and health system strengthening efforts will increase (e.g. with GAVI and Global Fund) to strengthen management and implementation.

In addition, strong collaboration between EPI and partners during planning assists to improve coordination of activities and reduce duplication of resources.

6.7 Implementation and follow-up of financial sustainability strategies

Implementation of the financial sustainability strategies are embedded in the overall M&E framework for the cMYP 2016-2020. The result of these strategies will be reviewed at least annually with the cMYP update.

Key financing indicators that will be routinely tracked include:

- % of Epi expenditures funded by government
- immunization expenditure as proportion of total health expenditures

Chapter Seven

MONITORING AND EVALUATION FRAMEWORK

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
To contribute to the reduction of infant and under-fives morbidity and mortality due to vaccines preventable diseases	1. Infant and Under-fives Mortality Rate	2015	51/1,000 live births	Demographic Health Survey						Demographic Health Survey
Objective 1	**Outcome indicators**									
To achieve and maintain VPD standard surveillance indicators	1. Percentage of regions reached 100% of core surveillance indicators 2. Proportional of Councils maintaining over 80% of core surveillance indicators	75%	2014	IVD Annual Progress Report	100 %	100 %	100%	100%	100%	IVD Annual Progress Report
Strategies 1.1	**Output indicators**									

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
Improving VPD surveillance activities at all levels	1. Percentage of councils reporting both AFP and FRI cases in a year	75%	2014	IVD Annual Progress Report	100 %	100 %	100%	100%	100%	IVD Annual Progress Report
Inputs & Activities 1.1.1	**Input indicators**									
Conduct subnational AFP/FRI Focal persons review meetings	Availability of funds to conduct subnational AFP/FRI focal persons meetings									
Biannual deployment of NSTOP teams.	Availability of funds to conduct NSTOP activities									
Conduct active search in the health facilities	Availability of AFP/FRI focal person to conduct active search in the health facilities									
Shipment of AFP/FRI stool specimens from districts to the National level, and National to inter-Country lab	Availability of funds for specimen shipment									
Conduct quarterly meeting for Polio secretariat committee	Availability of funds to hold Polio secretariat meetings									
Sensitize clinicians in avenues like Pediatric annual meetings on AFP/FRI surveillance.	Availability of materials to present to the meetings									
Strategies 1.2	**Output indicators**									
Deploy existing sms technologies and community structures to improve case reporting	1. Percentage of councils reporting both AFP and FRI cases in a year	75%	2014	IVD Annual Progress Report	100 %	100 %	100%	100%	100%	IVD Annual Progress Report

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
Inputs & Activities 1.2.1	**Input indicators**									
Contract vendors on the use of automated sms mobile technology to sensitize reporting at the council.	Availability of funds for contracting vendors for sms mobile technologies									
Conduct community surveillance sensitization and active search at health facilities.	Availability of funds to conduct sensitization meetings									
Strategies 1.3	**Output indicators**									
Use maternal, neonatal deaths review platforms at council level to investigate neonatal tetanus deaths.	1. Percentage (%) of neonatal deaths investigated for NNT through maternal neonatal review meetings.	2014	0	IVD Annual Progress Report	50	60	70	80	80	IVD Annual Progress Report
Inputs & Activities 1.3.1	**Input indicators**									
Orient RCH teams on MNT autopsy form and for them to fill the form during maternal and neonatal deaths review meetings in the councils.	Availability of funds to orient RCH teams on MNT autopsy									
To sensitize CHMTs to conduct sensitization meetings with community leaders on reporting neonatal deaths.	Availability of funds to conduct sensitization meetings									
Strategies 1.4	**Output indicators**									

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
Strengthening coordination and control of outbreaks	1. Percentage (%) of VPDs outbreaks reported and investigated	100%	2014	JRF	100 %	100 %	100%	100%	100%	JRF
Inputs & Activities 1.4.1	**Input indicators**									
To update the preparedness and response plans	Availability of guidelines									
Conducting simulation of outbreak	Availability of funds to conduct simulation									
Conduct response outbreak meeting for VPD.	Availability outbreak technical committees									
Strategies 1.5	**Output indicators**									
Establishing functional yellow fever surveillance system	% of councils reporting yellow fever cases in a year	2014	0	JRF	50%	60%	70%	80%	80%	JRF
Inputs & Activities 1.5.1	**Input indicators**									
To establish TWG to work on Yellow fever assessment.	Availability of TOR									
Conduct Yellow Fever rapid assessment.	Availability of funds to conduct yellow fever rapid assessment									
Operationalize Yellow fever surveillance system	Availability of funds to form surveillance system									
Objective 2	**Outcome indicators**									

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
To increase capacity of laboratory based sentinel sites surveillance to attain 90% of quality indicators	1. Percentage(%) of sentinel sites attaining 90% of quality indicators include the lab	73%	2014	IVD Annual Progress Report	80%	90%	90%	90%	90%	IVD Annual Progress Report
Strategies 2.1	**Output indicators**									
Strengthening coordination and performance of sentinel surveillance network	1. Number of meetings conducted with sentinel sites	2	2014	IVD Annual Progress Report	4	4	4	4	4	IVD Annual Progress Report
Inputs & Activities 2.1.1	**Input indicators**									
Conduct quarterly supportive supervision visits to sentinel sites.	Availability of funds for supportive supervision									
Conduct refresher trainings.	Availability of funds for training									
Conduct operational research in the sentinel sites	Availability of funds for operational research									
Enhancing the capacity of the laboratory to perform various molecular tests	Trained lab technicians on advanced molecular testing for VPD									
Procure lab reagents and supplies for sentinel sites surveillance	Availability of funds									

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
Train National lab staff to perform genotyping for Rotavirus, RT PCR and Immuno-serology for Measles/Rubella.	Availability of funds for training									
Objective 3	**Outcome indicators**									
To monitor and effectively investigate at least 80% of serious AEFI cases by 2020	1. Percentage(%) of districts reported serious AEFI	20%	2014	JRF	50%	60%	70%	80%	80%	JRF
Strategies 3.1	**Output indicators**									
Improve vaccine monitoring safety	1. % of councils trained on AEFI	0%	2014	JRF	50%	70%	100%	100%	100%	JRF
Inputs & Activities 3.1.1	**Input indicators**									
Train regions and districts on AEFI reporting and investigation	Availability of funds for training									
Conduct quarterly AEFI performance review meetings	Availability of funds for review meetings									
Conduct vaccine safety studies to evaluate vaccine safety concerns	Availability of funds									
Objective 4	**Outcome indicators**									
Increase skills and knowledge of 90% of health staff to deliver quality immunization services at all levels by 2020	1. % of immunization related health staff received training	No data	2015	Training management database, training reports	50%	60%	70%	80%	90%	IVD Training Unit

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
Strategies 4.1	**Output indicators**									
Improved standards of conducted trainings on Immunization	1. % of planned trainings conducted with updated guidelines /modules	0	2014	Training reports	100 %	100 %	100%	100%	100%	IVD Training Unit
	2. Number of health care staff trained on new vaccine introducti on	14,000	2014	NVI reports			depend on new vaccine introduced	depend on new vaccine introduc ed	depend on new vaccine introduced	IVD Training Unit
Professionalize health, vaccines logistics and management	1. No. of logistician s certified on the health, vaccines logistics and manageme nt	N/A	2015	Training managemen t database, training reports	15	15	15	15	15	IVD Training Unit/IVD Logistician
Establish and implement continuous learning mechanisms, i.e. e –learning	1. No. of enrolled users for e-learning	N/A	2015	e-learning database	100	200	200	200	200	IVD Training Unit

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
Coordinate and track trainings conducted and participants involved	1. % of all trainings conducted tracked in the training database	N/A	2015	training management database	N/A	50%	60%	80%	100%	IVD Training Unit
Inputs & Activities 4.1.1	**Input indicators**									
Form task force for training	1. No. of active participants in the task force	0	2015	Task force meeting report	10	10	10	10	10	IVD Training Unit
Update the guidelines	1. No. of guidelines reviewed or updated	0	2015	Count of updated or reviewed guidelines	1	0	0	1	0	IVD Training Unit
Printing and distribute the training guideline	1. No. of training guidelines distributed	0	2015	Count of distributed guidelines	1	0	0	0	0	IVD Training Unit
Dissemination of immunization practice guide	1. No. of workshop for dissemination	0	2015	Meeting report	1	0	0	0	0	IVD Training Unit
Conduct the newcomer trainings	1. No of newcomer trainings conducted	0	2015	Training database or report	2	2	2	2	2	IVD Training Unit

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
Conduct refresher trainings	1. No of refresher trainings conducted	0	2015	Training database or report	1	0	1	0	1	IVD Training Unit
Conduct training on data management	1. No of data use and management trainings conducted	2	2015	Training database or report	2	2	2	2	2	IVD Data Manager
Conduct training on logistics and vaccine management	1. No of logistics and vaccine management trainings conducted	0	2015	Training database or report	6	1	1	6	1	IVD Logistician
Develop E- learning modules	1. No of modules developed	N/A	2015	Available modules in e-learning platform	5	10	12	14	16	IVD Training Unit
Orientation to participants on e-learning modules	1. No of orientations conducted	N/A	2015	Training report	1	1	1	1	1	IVD Training Unit

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
Develop online repository for all immunization related training materials	1. No. of guides or other training materials uploaded to the online repository	N/A	2015	Available repository in e-learning platform	10	10	10	10	10	IVD Training Unit
Establish data base of training	1. No of databases established for training	N/A	2015	Available of database in e-learning platform	1	0	0	0	0	IVD Training Unit
Objective 5	**Outcome indicators**									
100% of Managers involved in immunization services receive MLM training from national/regional/councils by end 2020	1. % of sub-national managers and health institute tutors who have passed the MLM post-test assessment	24%	2015	Training management database, training reports	70%	80%	90%	90%	100%	IVD Training Unit
Strategies 5.1	**Output indicators**									

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
Employ MLM training modules to build capacity of sub-national level immunization managers	1. No. of sub-national managers and health institute tutors received MLM training	24%	2015	Training management database, training reports	70%	80%	90%	90%	100%	IVD Training Unit
Inputs & Activities 5.1.1	**Input indicators**									
Review MLM Training modules	1. No of MLM modules reviewed	0	2015	Availability of MLM modules reviewed	16	0	0	0	0	IVD Training Unit
Conduct the MLM training at various level	1. No of MLM trainings conducted	3	2015	Training management database, training reports	6	0	4	0	2	IVD Training Unit
Objective 6	**Outcome indicators**									
Updated pre service job aids on Immunization disseminated in training health institute in 8 zones by 2020	1. No. of zones with disseminated job aids to relevant training health institutes	No data	2015	Training management database, training reports	1	2	4	6	8	IVD Training Unit
Strategies 6.1	**Output indicators**									

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
Bring current immunization staff experience and knowledge into training health institutes	1. No. of health institutes with immunization staff teaching	0	2015	Communication with National IVD and RIVOs	0	3	4	6	8	IVD Training Unit
Inputs & Activities 6.1.1	**Input indicators**									
Develop job aids	1. No. of job aids developed	0	2015	Count of updated job aids available in that year	1	0	0	0	0	IVD Training Unit
Disseminate job aids	1. No. of workshops conducted to disseminate job aids	0	2015	Training report	1	1	2	2	2	IVD Training Unit
IVD to participate in the pre-service curriculum update in 2020	1. No. of IVD participants in pre-service curriculum update	0	2015	Meeting report	0	0	0	0	2	IVD Training Unit
National IVD, RIVOs to be involved in training in surrounding health institutes	1. No. of immunization staff teaching at health institutes	0	2015	Communication with National IVD and RIVOs	0	3	5	7	8	IVD Training Unit

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
Objective 7	**Outcome indicators**									
Improve and maintain availability of IVD Vaccines to 100% at all levels by 2020	1. Proportion of HFs with no vaccines stock out	84%	2014	CCI Assessment	90%	95%	100%	100%	100%	Annual evaluation reports
Strategies 7.1	**Output indicators**									
Timely availability of funds for distribution of vaccines and related supplies at all levels	1. Proportional of funds released for distribution of vaccines	TBD	2014	Program Reports/CCHP Annual Cost Analysis Reports						Program Reports
Inputs & Activities 7.1.1	**Input indicators**									
Conduct Annual Forecasting for Vaccines and related supplies at all levels,	1. Percentage(%) of councils utilizing the tool for annual forecasts	80%	2015	Program Reports	100 %	100 %	100%	100%	100%	
Procurement and clearing of vaccines and related supplies,	Percentage of Needed funds released for procurement of vaccines and related supplies	**TBD**	**2014**	Program Reports/CCHP Annual Cost Analysis Reports	**95 %**	**95%**	**95%**	**95%**	**95%**	

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
Storage and distribution of vaccines and related supplies,	Percentage of Needed funds released for storage and distribution of vaccines and related supplies	**TBD**	**2014**	Program Reports/CCHP Annual Cost Analysis Reports	**95 %**	**95%**	**95%**	**95%**	**95%**	
Track amount of funds allocated for procurement and distribution of vaccines, Liquid Petroleum gas /fuel/electricity on quarterly basis,	Number of review meetings conducted to track amount of funds for procurement and distribution at council level	**TBD**	**2015**	Program Reports	**4**	**4**	**4**	**4**	**4**	
Conduct Monthly and quarterly web based stock balance monitoring and provide feedback to council level,	Proportion of councils reporting through web based stock management tool	**86%**	**2015**	**SMT-WEB**	**100 %**	**100 %**	**100%**	**100%**	**100%**	
Procurement of refrigerated trucks at national level	Percentage of Needed funds released for procurement of refrigerated trucks	NA	2015	Program Reports/CCHP Annual Cost Analysis Reports	90%	90%	90%	90%	90%	
Objective 8	**Outcome indicators**									
Improved effective vaccine	Percentage of		2015	EVMA	88%	89%	90%	90%	90%	EVMA reports

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
management performance for all EVMA indicators to equal or above 90% at all levels by 2020	Health facilities, councils, regions reaching EVM performance of 90% or above			Reports						
Strategies 8.1	**Output indicators**									
Utilization of appropriate technologies for temperature monitoring to increase safety and potency of vaccines at all levels	Proportion of facilities with appropriate technology for temperature monitoring	TBD	2015	Program Reports	95%	95%	95%	95%	95%	
Inputs & Activities 8.1.1	**Input indicators**									
Procurement and distribution of cold chain temperature monitoring devices at all levels	Percentage of Needed funds released for procurement and distribution of temperature monitoring devices		2014	Program Reports/CCHP Annual Cost Analysis Reports	95%	95%	95%	95%	95%	
Conduct Temperature mapping study at CVS and RVS	Protocol for temperature mapping in place									
Develop guideline to monitor temperature during transportation of vaccines (printing, training, monitoring and supportive supervision	Guideline for temperature monitoring during transport developed	NA	2014		1	1	1	1	1	

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
Training of immunization and vaccine officers on vaccine and logistics management at all levels	Percentage of Needed funds released for training		2014		100 %	100 %	100%	100%	100%	
Strategies 8.2	**Output indicators**									
Reallocation of vaccines and related supplies, storage facilities (WICR, dry store), transportation facilities (Refrigerated vehicles) and all operations to IVD office	Storage and transportation facilities established at IVD central	TBD	2015	Program Reports	Yes	Yes	Yes	Yes	Yes	
Inputs & Activities 8.2.1	**Input indicators**									
Renovation and expansion of warehouses, renovation of vehicle garage at IVD Mabibo.	Percentage of Needed funds released for renovation and expansion of warehouses	TBD	2015	Program Reports	100 %	100 %	100%	100%	100%	
Shifting of facilities (refrigerated trucks, WICRs, generators and other related supplies) from MSD to IVD central level	Percentage of Needed funds released for shifting of facilities from MSD to IVD Central		2015	Program Reports	100 %	100 %	100%	100%	100%	
Facilitate insurance policy provision for central vaccine stores (develop concept note, submit to MOHSW management, procure insurance policy)	Concept note developed and submitted to MOHSW management		2015	Program Reports						

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
Installation of WICRs and generators	Percentage of Needed funds released for installation of WICRs and generators	NA		Program Reports	100 %	100 %	100%	100%	100%	
Objective 9	**Outcome indicators**									
Increase and maintain adequate storage capacity for vaccines and related supplies to 100% at all levels by 2020	Proportion of vaccines stores with adequate storage capacity for vaccines and related supplies	78% of Health facilities with adequate storage capacity for vaccine storage	2014	Web CCIT Data	85%	90%	90%	100%	100%	CCI Assessment/EVMA
Strategies 9.1	**Output indicators**									
Increased availability of appropriate and adequate Cold Chain Equipment at all levels to meet current and future program needs	Proportion of vaccines stores with appropriate cold storage equipment to meet current and future needs	TBD								
Inputs & Activities 9.1.1	**Input indicators**									
Update EPI Logistics tool	Percent of funds allocated for the activities				100 %	100 %	100%	100%	100%	

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
Update CCE Replacement Plan at all levels	Proportion of vaccine stores with Replacement Plan in place									
Procurement of refrigerators, spare parts for cold rooms and standby generators	Percentage of Needed funds released for procurement of refrigerators and spareparts									
Distribution of refrigerators and spare parts for Cold rooms, refrigerators and standby generators	System for Distribution of refrigerators in place									
Installation of Solar Direct refrigerators	Percentage of Needed funds released for installation of SDD refrigerators									
Strategies 9.2	**Output indicators**									
Advocate for availability of adequate dry stores at Regional and Councils levels to meet current and future needs	Proportion of vaccine stores with adequate dry storage capacity	TBD								
Inputs & Activities 9.2.1	**Input indicators**									
Design and share sketch map for DVS and dry stores	Architectural plan designed									
Monitor establishment of dry storage space	Proportion of regions and councils with designed sketch shared									

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
Objective 10	**Outcome indicators**									
Attain 80% of HFs with standard waste disposal facilities by 2020	Proportion of HFs with standard waste disposal facilities	39%	2014		50%	60%	70%	75%	80%	
Strategies 10.1	**Output indicators**									
Advocate establishment of waste disposal facilities	Percentage of Health facilities with improved waste disposal facilities									
Inputs & Activities 10.1	**Input indicators**									
Conduct Sensitization meeting of development partners to contribute to waste management facilities	Number of meetings conducted to sensitize partners to contribute to waste management facilities									
Strategies 10.2	**Output indicators**									
Coordination with Quality Assurance department - MoHSW	Co-ordination plan in place	TBD								
Inputs & Activities 10.2.1	**Input indicators**									

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
Monitor establishment of HF waste disposal facilities.	Proportion of HFs with plan to improve waste management facilities in place									
Objective 11	**Outcome indicators**									
100% of Non-functional repairable refrigerators at Council and HFs are repaired by 2020	Proportion of Non-functional repairable refrigerators repaired	70%	2014	Program Reports/Cci	80%	85%	90%	95%	100%	
Strategies 11.1	**Output indicators**									
Improve technician response time and reduction of equipment downtime	Reduced equipment downtime (Reduced time at which the equipment is non-functional)	TBD								
Inputs & Activities 11.2.1	**Input indicators**									
Mapping availability of Cold Chain technicians at regional and district levels	Concept note for identification of technicians mapping developed									
Training of cold chain technicians on maintanance and repair of CCE at regional and council level	Amount of funds released for training of Cold Chain technicians									

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
Procurement of cold chain tool kits and spare parts for CCE	Amount of funds released for procurement of Cold Chain tool kits									
Update and implement repair and maintenance plan	Repair and maintenance plan in place									
Objective 12	**Outcome indicators**									
Increased community awareness on immunization services to equal and above 90% by 2020	90% Increase in community awareness about immunization	80%	2014	2011-2015 CMYP	82%	84%	86%	88%	90%	IVD Annual report
Objective 13	**Outcome indicators**									
To increase demand and utilization of immunization services by the community by 100% by end 2020.	100% decrease in councils with DTP1-DTP3 Dropout <10%	53%	2014	2014 JRF	60%	70%	80%	90%	100%	Annual JRF
Objective 14	**Outcome indicators**									
Increased timeliness and completeness of report to equal or above 80% by 2020		Timeliness 80% Completeness 100%	2014	Annual IVD Annual Progress Report					Timeliness 95% Completeness 100%	Coverage survey report
Strategies 14.1	**Output indicators**									

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
Use of technology to improve reporting system at district and regional level	Percentage of council adopting technological innovations in managing immunization data	0	2015	Councils Annual Report	5%	70%	100%	100%	100%	
Provision of motivation to councils submitting reporting on time	Percentage of council providing motivation for best performing facilities	0	2015	Council Annual Reports	10%	30%	40%	60%	100%	
Capacity building on data management across all levels.	Number of data management trainings conducted to sub national levels	2	2015	Annual IVD Annual Progress Report	2	2	3	2	2	
Inputs & Activities 14.1.1	**Input indicators**									
Review and develop program M&E implementation plan guideline	Complete M&E plan and implementation guidelines circulated to sub national level				**Done**	**Done**	**Done**	**Done**	**Done**	
Develop Vaccine Information Management System including user manuals and training materials	Percentage usage of VIMS at district level				**20%**	**100%**	**100%**	**100%**	**100%**	

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
Train national and sub national officer on the data management	Number of trained immunization officers on data management				**28**	**169**				
Support councils to conduct sensitization meetings on reporting for health facilities that are reporting poorly or not at all	Number of sensitization meeting held by council on data issues				**2**	**2**	**2**	**2**	**2**	
Objective 15	**Outcome indicators**									
Improved quality of routine immunization data to 95 % at all levels by 2020	Percentage of council with improved quality of data	54%	2015	Annual IVD Annual Progress Report	**75%**	**100 %**	**100%**	**100%**	**100%**	
Strategies 15.1	**Output indicators**									
Capacity building on data analyses for health workers	Number of health worker trained on data analysis	Unknown	2015	Annual IVD Annual Progress Report	2320	2320	2320	2320	2320	
Inputs & Activities 15.1.1	**Input indicators**									
Conduct coverage survey and operational research to detect immunization issue and contribute to body of knowledge are conducted.	Number of coverage surveys and operational research conducted			Program Reports	**3**	**3**	**3**	**3**	**3**	
Conduct data quality self-assessments (DQS)	Percentage of councils allocating fund for DQS		2015	CCHP Cost Analysis	**40%**	**60 %**	**80%**	**100%**	**100%**	

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
Establish and implement quarterly data review and harmonization meetings at national level with IVD, IDSR and HMIS.	Number of data harmonization meeting	1	2015	Program Report	**4**	**4**	**4**	**4**	**4**	
Develop and test Electronic immunization register	Resource allocated for implementing EIR									
Conduct situation analysis for Visibility Analytic Network (VAN) adaptation in EPI program	Resource allocated for VAN implementation									
Objective 16	**Outcome indicators**									
Ensure availability of minimum requirements for consideration in immunization council planning	Percentage of CCHPs incorporating immunization activities outlined in the minimum requirement checklist	No data	NA	NA	100 %	100 %	100%	100%	100%	Updated checklist
Ensure timely submission of IVD plans	Number of plans submitted as per schedule	2	2015	Program data	2	2	2	2	2	Approved reports
Capacity building at all levels	Percentage of IVD staff attending skills enhancement trainings	10%	2015	Program Data	10%	10%	10%	10%	10%	Annual Progress Report

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
Operationalize OPRAS	Percentage of IVD staff with annual performance review conducted on time	100%	2015	Program Data	100 %	100 %	100%	100%	100%	Annual Progress Report
Ensure smooth running of IVD operations	Funding disbursed by GoT to OC as a proportion of total requirements	1.50%	2015	Program Data	50%	60%	70%	80%	80%	Annual Progress Report
Improve quality and frequency of supportive supervision to low performing regions and councils	Percentage of districts supervised according to plan	30%	2015	Program Data	100 %	100 %	100%	100%	100%	Annual evaluation reports
Resource Mobilization from public stakeholders at all levels	Number of advocacy meetings for resource mobilization conducted	4ICC	2015	Annual Progress Report	6	6	6	6	6	Annual Progress Report
Routine monitoring of program expenditure at all levels	Number of reports on overall program expenditure submitted	0	2015	Program Data	1	1	1	1	1	Annual Progress Report
Ensure timely and complete reporting	Number of Reports submitted on time	7	2015	Program Data	7	7	7	7	7	Final Reports available
Inputs & Activities 16.1.1	**Input indicators**									

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
Participate in CCHP planning to follow up budget line for immunization in CCHP	Percentage of councils visited				100 %	100 %	100%	100%	100%	
Develop MTEF plans	Perdiem, conference package, travel (manager +1person)									
Disseminate cMYP 2016/2020 to subnational level	Percentage of session planned conducted				100 %	100 %	100%	100%	100%	
Conduct annual cMYP review meeting	Number of session conducted				1	1	1	1	1	
Conduct tailor made trainings for IVD staff (leadership, management, financial management and abstract writing skills)	Percentage of planned training conducted				100 %	100 %	100%	100%	100%	
Participate and present (oral/posters) in local, international, regional conferences	Number of meeting participated									
Conduct staff performance appraisal annually	Number of session conducted				1	1	1	1	1	
Develop succession plan for IVD staff at all levels	Number of Session conducted				1	1	1	1	1	
Upgrade and maintain ICT infrastructure (procure serves, domain hosting computer accessories, networking and software, licenses)	Well-functioning ICT Infrastructure					Done				

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
Facilitate day to day office operations(provision of working tools and utilities, service maintenance contracts, vehicles locks, radio calls)	Budget, tools									
Conduct quarterly program performance review meetings	Budget(conference package)									
Conduct quarterly supervisions	Budget (travel, perdiem)									
Advocate for increase of funding for immunization services (Vaccines and Operations) NHIF, MOH-management	Conference package,									
Dialogue with PPP to support immunization service operations	Conference, stationery									
Engagement of ICC for resource mobilization										
Conduct study for cost of fully immunized child	Budget, TA									
Develop financial sustainability plan	Budget, TA									
Develop tool for monitoring expenditure for immunization services at all levels	Conference package,									
Produce quarterly and bi-annual reports	conference package, travel, fuel perdiem for biannual report									

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
Annual program review meeting and report writing	conference package, travel, fuel perdiem for biannual report									
JRF report writing and submission	refreshments									
IVD Annual Progress Report/Joint appraisal writing and submission	refreshments									
Annual budget development	refreshments									
Performance framework writing and submission	refreshments									
Parliamentary report writing and submission	Budget									
Conduct bi-annual IVD technical working group joint support supervision	Budget(conference package, perdiem									
Objective 17	**Outcome indicators**									
Strengthen IVD program governance and leadership by 2020										
Strategies 17.1	**Output indicators**									
Ensure coordination meetings are conducted as scheduled	Number of coordination meetings conducted as planned	12		Meeting minutes	16	16	16	16	16	Annual Progress Report
Strengthen immunization services guiding structures	Number of policy guidelines approved	0	2015	Program Data	1	1	NA	NA	NA	Approved immunization policy guideline
Inputs & Activities 17.1.1	**Input indicators**									

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
Conduct quarterly ICC meetings	Refreshments	4	2015	ICC minutes	4	4	4	4	4	Signed ICC meeting minutes
Conduct monthly TWG meetings	Refreshments	8	2015	TWG minutes	12	12	12	12	12	Signed TWG meeting minutes
Mapping of immunization partners at all levels	Refreshments	No data available			100 %	100 %	100%	100%	100%	Mapping report
Develop a TOR for NITAG and circulate to stakeholders for approvals	Budget and TA	0	2015	cMYP 2016-2020 situation analysis	100 %	NA	NA	NA	NA	Approved TOR
Conduct NITAG meetings	Conference, travel, perdiem, fuel	0	2015	cMYP 2016-2020 situation analysis		100 %	100%	100%	100%	Signed NITAG minutes
Development and dissemination of immunization Guideline Policy	Budget and TA	0	2015	cMYP 2016-2020 situation analysis	50%	100 %	NA	NA	NA	Endorsed guideline
Objective 18	**Outcome indicators**									
Sustain National DTP3 coverage above 90% and Councils with coverage above 90% to 90% and achieve at least 90% coverage Measles Rubella SIAs by 2020	Percentage of children who received three doses of the diphtheria-tetanus-pertussis vaccine (DTP3)	97%	2015	DVDMT.IVD Annual Progress Report, JRF, 2015	97%		97%	97%	97%	IVD Annual Reports JRF, IVD Annual Progress Report, Demographic Health Survey
Strategies 18.1	**Output indicators**									
Reach every child (REC)	% of Councils			IVD Annual						

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
strategy	implementing REC/RED strategy	16%	2015	reports		30%	50%	70%	90%	Annual evaluation reports
Inputs & Activities 18.1.1	**Input indicators**									
Training of councils on developing HF immunization microplan	Financial, material and Human resources	0	2015	Annual reports		1	1	1	1	Annual evaluation reports
Mapping of partners involved in defaulter tracing in councils with high number of un/under vaccinated children.	Number of partners mapped per council	0	2015	Annual reports	2/council		4/council	6/council	8/council	Annual evaluation reports
Financial support to Councils and HF to conduct fixed, outreach and mobile services	Amount of Financial support given	0	2015	Annual reports	N/A		N/A	N/A	N/A	Annual evaluation reports
To provide quarterly feedback on performance to councils following REC implementation										
Objective 19	**Outcome indicators**									
To introduce five (7) new vaccines (IPV, bOPV, HepB BD, Yellow fever, HPV, MenA, Malaria) in RI by 2020	Number of New vaccine introduced in RI by 2020	3	2015	JRF, 2015	IPV, bOPV		HPV	MenA, Yellow Fever, HepB BD, Malaria	MenA, Yellow Fever, HepB BD, Malaria	Annual evaluation reports, JFR and IVD Annual Progress Report
Strategies 19.1	**Output indicators**									

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
Conduct resource mobilization and preparation of micro plans	Number of resources and microplan tools developed			Annual evaluation reports (IVD Annual Progress Report)	Resource and microplan tool for IPV and bOP		Resource and microplan tool for HPV	Resource and microplan tool for MenA, Yellow Fever, HepB BD, Malaria	Resource and microplan tool for MenA, Yellow Fever, HepB BD, Malaria	Annual evaluation reports
Inputs & Activities 19.1.1	**Input indicators**									
Develop new vaccine Introduction Plan	Number of new vaccine introduction plan	2	2015	Annual evaluation reports (IVD Annual Progress Report),JFR	1		1	5	5	Annual evaluation reports
Conduct microplanning workshops at each level	Number of micro plan tools developed for each new vaccine	3	2015	Annual evaluation reports (IVD Annual Progress Report)	2		1	5	5	Annual evaluation reports
Introduce of new vaccines	Number of	3	2015	Annual	2		1	5	5	Annual

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
	new vaccines introduced			evaluation reports (IVD Annual Progress Report),JFR						evaluation reports
Objective 20	**Outcome indicators**									
To ensure the Tanzania is prepared to respond to VPD outbreak by 2020	Availability of updated outbreak preparedness plan	1	2015	IVD Annual report	1 updated		1 updated	1 updated	1 updated	Annual evaluation reports
Strategies 20.1	**Output indicators**									
Outbreak preparedness and response plan	Availability of updated	1	2015	Annual evaluation reports (IVD Annual Progress Report)			1 updated plan	1 updated plan		Annual evaluation reports
Inputs & Activities 20.1.1	**Input indicators**									
Conduct outbreak simulation response	Pre simulation activities	0	2015	IVD annual report	Successful Simulation		NA	NA	NA	Annual evaluation reports
Update of outbreak response plan annually	Availability of updated	1	2015	Annual evaluation reports (IVD Annual Progress Report)	1 updated plan		1 updated plan	1 updated plan	1 updated plan	Annual evaluation reports

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
Objective 21	**Outcome indicators**									
Successful implementation of Measles Rubella SIA with coverage of above 90% in 2017	Administrative coverage survey coverage data	97%	2014	Annual evaluation reports (IVD Annual Progress Report),JFR	NA		>90% COVERAGE	NA	NA	Annual evaluation reports, IVD Annual Progress Report,JFR
Strategies 21.1	**Output indicators**									
Supplemental immunization activity strategy	Administrative coverage survey coverage data	97%	2014	Annual evaluation reports (IVD Annual Progress Report),JFR	NA		>90% COVERAGE	NA	NA	Annual evaluation reports, IVD Annual Progress Report,JFR
Inputs & Activities 21.1.1	**Input indicators**									
Develop Measles Rubella SIA microplan	Availability of updated SIA microplan tools for 2017	1	2014	IVD Annual report	1 updated SIA microplan tool		NA	NA	NA	Annual evaluation reports, IVD Annual Progress Report,JFR
To conduct pre implementation supervision of Measles Rubella SIA	Pre implementation activities of SIA	0	2015	IVD Annual report	Availability of all pre implementation activities		>90% COVERAGE	NA	NA	Annual evaluation reports, IVD Annual Progress Report, JFR

Goal	Impact Indicators	Baseline			Targets					
		Result	Year	Source	2016	2017	2018	2019	2020	Means of verification
To conduct Measles Rubella SIA	Pre implementation activities of SIA	0	2015	IVD Annual report			>90% COVERAGE	NA	NA	Annual evaluation reports, IVD Annual Progress Report,JFR