ZIMBABWE EXPANDED PROGRAMME ON IMMUNISATION
COMPREHENSIVE MULTI YEAR PLAN
2016-2020

Revised September 2017

Prepared by Ministry of Health and Child Care

Contents

EXECUTIVE SUMMARY

This comprehensive Multi Year Plan (cMYP) which covers the period 2016 to 2020 is the culmination of several developments and updates since 2005 when the country first developed the Zimbabwe Financial Sustainability Plan of 2005 to 2009. The first cMYP covered the period 2007 – 2011 and second one 2011 to 2015. During this period, the country went through severe socio-economic challenges which had a crippling effect on the running of the immunization programme. The programme made tremendous achievements during the first two decades of independence under the auspices of the Primary Health Care concept which the Government of Zimbabwe adopted in 1980. Universal Childhood Immunization Coverage was achieved by 1990. Morbidity and mortality due to vaccine preventable diseases greatly decreased, indeed the last clinical polio case was seen in 1989. The interval of measles outbreaks which used to occur almost annually but this interval has increased to at least 5 years as the measles vaccination coverage improved.

The socio-economic challenges which began in the late nineties resulted in severe foreign currency shortage which impacted negatively on the programme. The programme could no longer import vaccines and other supplies directly. There was also high attrition of experienced and skilled personnel. All these challenges resulted in the immunization coverage (DTP3) decreasing from 87% in 2006 to 66% in 2009, the same period (2009-2010) the country was affected by the worst measles outbreak. However immunization coverage (DTP3) increased from 2010 reaching a peak of 103% in 2012 before declining to 87% in 2015.

The Government of Zimbabwe, through the Ministry of Health and Child Care, in partnership with UN Agencies and other development partners is working towards redressing some of these challenges. The current National Health Strategy, 2016 – 2020, calls for universal immunization against vaccine preventable diseases. There have been several reviews and assessments of the immunization programme and the recommendations from these reviews were considered in the development of this cMYP.

The Child Survival Strategy (2009 – 2015) reports that pneumonia and diarrhoea are the third and fourth leading causes of morbidity and mortality in under-fives contributing to 9% of childhood diseases. Zimbabwe introduced Hib as DTP-HepB-Hib, Pneumococcal Conjugate 13 and Rotavirus Vaccines in 2008, 2012 and 2014 respectively in an effort to reduce the incidence of pneumococcal infections and rotavirus diarrhoea. Human Papilloma Virus (HPV) vaccine demonstration project was conducted in Beitbridge and Marondera districts. The first cohort was vaccinated in September 2014, the second cohort was vaccinated in 2015 and the first dose of the bridging project was administered in 2016. The country introduced Measles Rubella (MR) and Measles Second Dose (MSD) through a campaign in 2015. Inactivated Polio Vaccine will be introduced once available on the global market. All new and underutilized vaccines are introduced with support from GAVI and country co-financing. The country has adequate cold chain capacity to accommodate these new vaccines at all levels.

This comprehensive Multi Year Plan (cMYP) presents the strategic goals, objectives as well as the cost and financing implications of the major initiatives required to improve the health of Zimbabweans through a strong and sustainable immunization programme. In line with the Global Vaccine Action Plan (GVAP), this comprehensive Multi Year Plan 2016 - 2020 will focus on six key guiding principles:

Country ownership;

Shared responsibility and partnership;

Equity;

Integration;

Sustainability;

Innovation;

ZEPI requires USD187,541,458 for the period 2016-2020 for both routine and supplementary immunisation activities (SIAs). Programmatic funding requirements will rise to USD 58,922,384 in 2018 when Human Papilloma Virus (HPV) vaccine will be introduced. The 2019 resource requirements will be USD35,697,888 due to Measles SIAs planned. Major funding gaps are in 2020, when all vaccine procurement funding from government is probable while the lowest funding gap in 2016 is because of the secured funding from the Global Alliance for Vaccines and Immunisation (GAVI) who are expected to fund the introduction of HPV vaccine in terms of New Vaccine Support (NVS), Vaccine Introduction Grant (VIG) as well as operational costs associated with the introduction of the new vaccine. The government of Zimbabwe will mobilise additional funds in order to address funding gaps. The Government's demonstrated commitment to the health service, even during this most difficult period, has encouraged partners to support the program. In addition there is a close interaction with UN country teams that form the backbone of the Inter Agency Coordination Committee (ICC) on EPI. The Ministry of Health and Child Care successfully applied for GAVI Health Systems Strengthening support and the first tranche was received in the second half of 2013. Despite the socio-economic challenges being faced, the country is co-financing for the procurement of new and underutilized vaccines.

CONTEXT FOR THE COMPREHENSIVE MULTI YEAR PLAN

Background

The country's under-5 mortality rate has been reduced from 84 per 1,000 live births (ZDHS 2010/11) to 69 per 1000 live births (ZDHS 2015); and infant mortality reduced from 57 to 50 per 1000 live births. In order to effectively reduce the childhood mortality trends in the country, a Child Survival Strategy outlining the major target killers, key intervention strategies and actions was developed. The Zimbabwe Expanded Programme on Immunization is one of the key interventions aiming at reducing vaccine preventable diseases such as pneumonia, diarrhea and measles which are the third, fourth and fifth leading causes of mortality in children less than five years of age respectively.

Geographic and Demographic Situation

Zimbabwe is a landlocked country in central Southern Africa, with a total land area of 390,757 square kilometers and a population density of 33 people per square kilometre. It shares borders with Zambia, Mozambique, South Africa, Botswana, and Namibia. The country's population for 2014 as projected from

the 2012 census is estimated to be 13,457,008, of which 3.28 percent are children under 1 year of age and 15.1% are children under 5 years of age. According to the Zimbabwe Census Report of 2012, the average life expectancy at birth is 58 years. The healthy life expectancy i.e. an estimate of how many years a person might live in good health, was estimated at 39 years. Females have a lower healthy life expectancy of 38 years compared to 40 years for males. The total fertility rate is estimated at 4 (ZDHS 2015).

Socio – Economic Context

Delivery of quality Maternal and Child Health (MCH) services and improvement in the health status of women and children not only rest with immediate environmental and health systems, but also with socioeconomic factors including the performance of macroeconomic factors which have a bearing on health access, improvement in education levels, women's empowerment and optimization of public financing mechanisms. Since the late 1990s the country's economy, which is mostly agriculture based, began to decline. In subsequent years the country's real economic growth rates declined to negative values estimated at -12.1 percent in 2003 to the lowest rate of -14.1 percent in January 2009, ranking 215th in the world. The negative economic growth resulted in the highest inflation record in the country's history, massive devaluation of the currency, low productive capacity, job losses, food shortages, poverty, massive de-industrialization and general despondency. The hyperinflation officially ended in February 2009 when the country abandoned the local currency for a multi-currency economy based mainly on the United States dollar and the South African rand. The economic decline has had a profound effect on child survival through a strained health delivery system due to shortage of both human and material resources, failing health delivery infrastructure, community inability to pay for health services and general household level food insecurity.

Between 2010 and 2013, the Government of Zimbabwe (GoZ) launched the Three Year Rolling Macroeconomic and Budget Framework, 2010-12 (STERP II), and implemented a five-year strategic development plan, the Zimbabwe 2011-2015 Medium Term Plan (MTP) aimed at stimulating sustainable economic recovery and growth. To guide national development for the period 2013 to 2018, the GoZ crafted a new economic blue print known as the Zimbabwe Agenda for Sustainable Socio-Economic Transformation (ZIMASSET). ZIMASSET was crafted to achieve sustainable development and social equity anchored on indigenization, empowerment and employment creation which will be largely propelled by the judicious exploitation of the country's human and natural resources. The four strategic clusters identified under ZIMASSET are: Food Security and Nutrition; Social Services and Poverty Eradication; Infrastructure and Utilities; and Value Addition and Beneficiation (GoZ, 2013).

Current Challenges to Health Service

- **Health Services Structures**

At national level, Maternal and Child Health (MCH) services are coordinated by officers who have different reporting hierarchies, resulting in a fragmented response to MCH needs; that is EPI reports to the Curative Directorate while others report to the Preventive Directorate. The freezing of posts in the health sector has resulted in many critical posts remaining vacant and this has negatively impacted on the coordination of activities in EPI and other programmes.

- **Human Resources**

From the late 1990s there has been a marked increase in the vacancy rates of health professionals in Zimbabwe. This peaked in 2009 when the economic situation in the country deteriorated significantly. According to the Human Resources Department's report in December 2010, the vacancy levels in the public health sector were 87 percent for nursing among others. Massive health professional migration resulted in the decimation of the experienced cadre, leaving those with skills strained to train new cadres well enough to meet the national demands. This has resulted in the loss of quality cadres capable of working with minimum supervision, and inadequately trained cadres at the point of care. The Primary Care Nurses who staff the rural health centers have limited knowledge and skills in EPI. However, the staffing situation has improved from 2010 levels. The Village Health Workers, who provide basic maternal and child health care, are inadequate in number and receive very minimal allowances which do not motivate them.

- **Health Financing and Budgeting**

The MOHCC was allocated US$285 million for the 2010 budget and US$ million in 2014. The trend has seen budget disbursements being below 15% of allocation over the years. While in the past the Government of Zimbabwe funded the majority of health related activities with partners filling in the gaps, in recent past decade funding from donors – including bilateral agencies and the United Nations Family - has been critical in the provision of Health Services in Zimbabwe. However, it is important to note that it is difficult to obtain long term funding commitment from these partners. According to the World Health Report of 2009, Zimbabwe's total health expenditure of 2006 was 9.3% of the gross domestic product. General government expenditure on health was 55% of the total expenditure on health in 2014, with the remainder 45% being private expenditure. In 2006, the external resources accounted for 17.3% of the total expenditure, a significant increase from 1.6% in 2000.

- **Community Challenges in Accessing Health Services**

There are challenges faced by the community in accessing health services including:

- Long distance to a health facility; some clients walking up to 30 km to the nearest health facility.
- Financial barriers such as user fees and transport costs
- Shortages of essential medicines and equipment for high quality care
- Inadequate human resources establishment

Monitoring, Evaluation and Health Management Information Systems

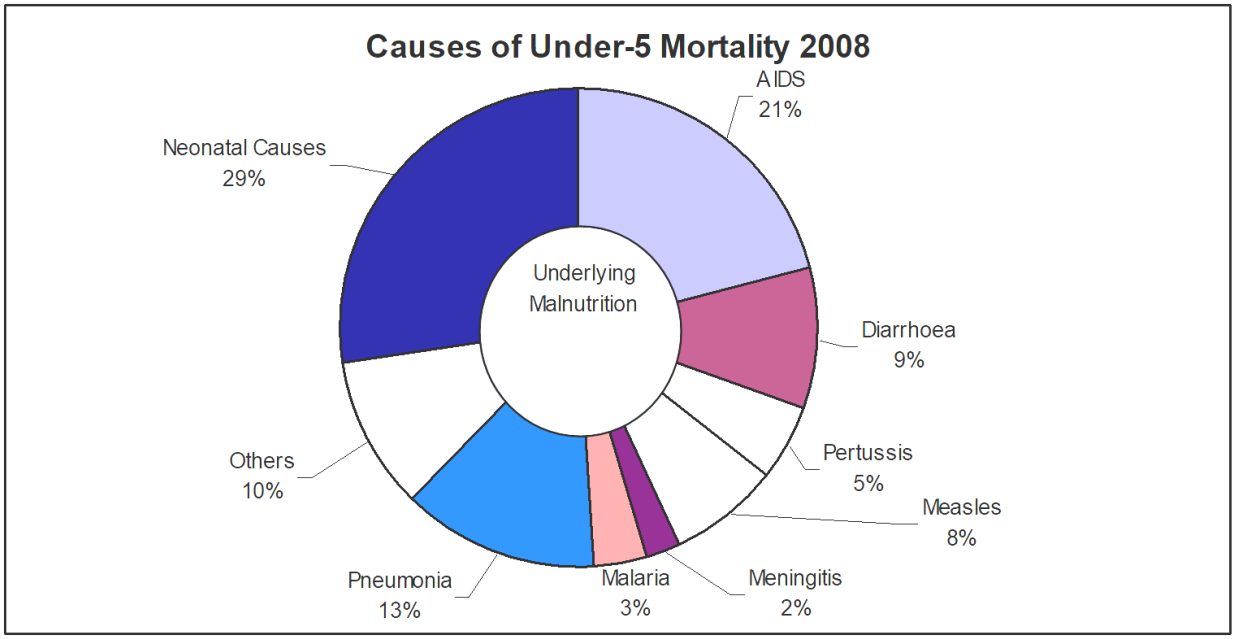
Zimbabwe's public health information system is based on the T (Tally) forms system which is the main source for most health data. Data is tallied and compiled at service delivery and summary report submitted to district level. Data is captured at district level and all admitting hospitals through the web based system (DHIS2) which is connected to the main server at national level. The web based DHIS2 system is more efficient than the previous system in that data is now accessible at all levels as soon as it is captured.

SITUATION ANALYSIS

Morbidity and Mortality in Children

According to the Ministry of Health and Child Care's National Health Profile of 2014 acute respiratory infections, diarrhoea, skin disease, diseases of the eye, malaria and nutritional conditions are ranked among the top causes of morbidity in children under-5 years in Zimbabwe. Acute respiratory infections accounted for most outpatient attendances. A significant proportion of children present with pneumonia, often of the severe form. Figure 1 below shows the causes of mortality for children under-5 years in Zimbabwe. Neonatal causes contribute 29% of under-5 deaths. The single leading cause of child mortality in Zimbabwe is HIV and AIDS which contributes 21 percent of deaths. The other major contributions to under-5 mortality are pneumonia, diarrhoea and measles, although HIV and AIDS may also underlie deaths recorded under pneumonia and diarrhoea. Diarrhoea contributes 9% of under-5 mortality. Malnutrition is an underlying factor in most of these deaths. Most of these deaths can be prevented through simple, cost-effective interventions such as immunisation.

Fig 1: Causes of Under-5 Mortality in Zimbabwe



Source: Adapted from the Child Health Epidemiologic Reference Group Lancet Publication May 12, 2010

The Zimbabwe infant mortality rate is estimated at 50 per 1,000 live births. The under-5 mortality rate is estimated at 69 per 1,000 live births (ZDHS 2015). These figures demonstrate change from the infant mortality rate of 55 per 1 000 live births (MICS 2014) and 84 per 1 000 live births for under-fives according to the 2012 census.

Service Delivery

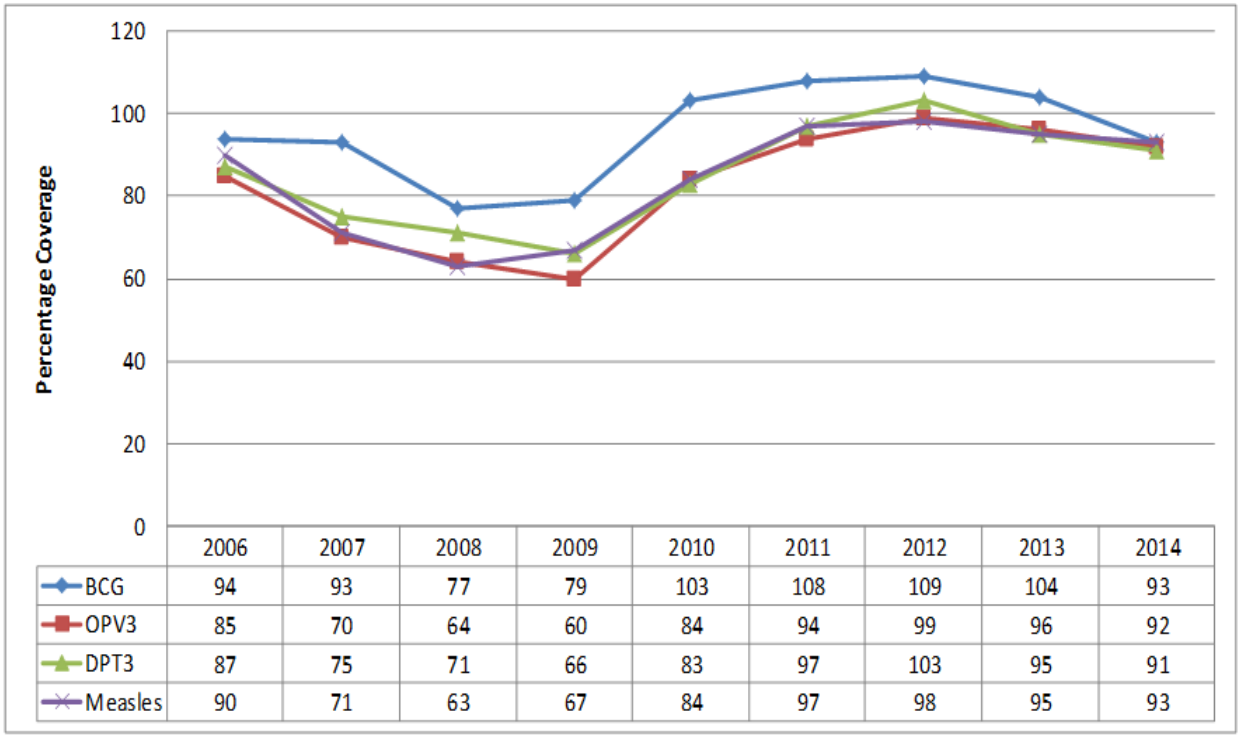
The Government of Zimbabwe, in line with the Primary Health Care strategy of organizing services, aims at ensuring the provision of quality and safe health services that meet the needs of the people through a network of health facilities organized to function on the basis of increasing levels of sophistication. Patients with more complex health problems are expected to be referred up the referral chain. Each level of care is expected to provide a package of well-defined services provided by appropriately trained health professionals. The public health delivery system consists of four levels of care: primary, secondary, tertiary and central levels.

The primary level incorporates the first point of contact between the people and the formal health sector, the Rural Health Centre or clinic. This is the most peripheral unit of the health delivery system. Rural health

centres refer patients to District Hospitals (secondary care facilities). Each district is supposed to have a district hospital and should save a population of approximately 140,000 people. The provincial hospital level provides referral support to district hospitals. There are a limited number of specialists at the provincial and general hospitals. Provincial hospitals refer to Central (Quaternary) Hospitals.

The UNICEF/WHO estimates reported DTP3 coverage of 95% for the two years 2012 and 2013. Although the country has achieved the regional and global goal of 90% at national level, 9.52% of the districts have not yet attained DTP3 coverage above 80%.The measles coverage decreased from 95% in 2013 to 93% in 2014. The MICS of 2014 reported 69.2% children as fully immunized, an increase from 63% reported in the MIMS 2009/10. Figure 2 below shows the performance trends in the immunization programme 2006 – 2014. The country has trained at least one nurse per facility in Effective Vaccine Management (EVM) and RED strategy between 2012 and 2014. However the training needs to continue as the system keeps on absorbing new staff. The EPI Policy Document, Integrated Communication Strategy and Immunisation in Practice modules were reviewed; EPI Policy Implementation Guidelines were developed and all distributed to service delivery level in 2012. Mid-Level Managers need to be trained to enhance their skills in EPI especially in view of the GVAP.

Figure 2: Trends in EPI coverage during the last decade by antigen (2006-2014)



	2006	2007	2008	2009	2010	2011	2012	2013	2014
BCG	94	93	77	79	103	108	109	104	93
OPV3	85	70	64	60	84	94	99	96	92
DPT3	87	75	71	66	83	97	103	95	91
Measles	90	71	63	67	84	97	98	95	93

Source: National Health Information System

Surveillance

Zimbabwe has maintained polio free status since 2005 and has been meeting the non-polio AFP surveillance performance indicators. In 2014, the annualized non polio AFP rate was 3.2 with a stool adequacy rate of 94%. The country met the standard measles surveillance performance indicator of 2 cases per 100,000 population. The country is now in the pre elimination phase for measles and has to meet all the pre elimination targets by 2020. Maternal and neonatal tetanus elimination status was achieved in 2002 and has been maintained ever since. Zimbabwe has sentinel surveillance sites for Hib, PBM, CRS and rotavirus to monitor disease burden and the impact of vaccination. An upward trend has been noted for rubella Igm positive cases and as a result the country introduced Measles Rubella (MR) Vaccine in a campaign mode in September 2015. This was subsequently followed by the introduction of measles second

dose (MSD) in the form of MR into the routine immunisation. In addition, the country adopted WHO recommendations to introduce Inactivated Polio Vaccine as one of the strategies towards Polio End Game.

Advocacy and Communication

High level advocacy involving the policy makers in MOHCC and Ministry of Finance and other stakeholders culminated in the country introducing Hib in 2008, Pneumococcal in 2012 and Rotavirus vaccines in 2014. In response to the 2009 – 2010 measles outbreak, consultations were held with the Parliamentary Portfolio on Health, Prime Minister's Office and religious leaders of the population segment that refuses vaccinations (Apostolic Sects). This all culminated into the first ever National Consultative Conference on Child Health with the Apostolic Sects, hosted by the then Prime Minister. This resulted in the Apostolic Sects bringing their children for vaccination during the measles national immunization days' campaign. Dialogue with these sects is continuing in the provinces in which they reside. Social mobilization activities are being conducted at all levels to garner support for the immunization programme from local partners and other stakeholders. During the consultations for the draft national constitution, the communities, including children themselves advocated for immunization to be made mandatory for all children in the constitution. The EPI Integrated Communication Strategy has been reviewed, printed and distributed to all levels.

Vaccine Supply and Logistics

The country procures all its vaccines and supplies through UNICEF with traditional vaccines funding sourced by UNICEF and GAVI funding for new and underutilized vaccines. The government co-finances GAVI procured vaccines. The country conducted a Cold Chain Assessment in 2010 and the results have been used to develop a 5 year National Replacement and Refurbishment Plan 2010/15. UNICEF has procured all the cold chain equipment according to this assessment; hence the country has adequate cold chain capacity at all levels. An Effective Vaccine Management Assessment was conducted in 2016 and a detailed improvement plan was developed. Recommendations from the EVMA are being implemented.

To counter the challenges of power cuts, the country has procured some standby generators with support from UNICEF. Currently the national, all provincial and 71% of the district stores have standby generators. In addition, the government has entered into a Public Private Partnership with Econet Wireless (a telecoms service provider) with the later procuring AC and solar direct drive refrigerators for EPI. The company has promised to continue supporting the immunisation program. MCHIP through ELMA support procured 104 solar direct drive refrigerators for Mat North and Mat South provinces. GAVI/HSS funded 104 solar direct drive refrigerators are expected in the country first quarter 2017. The Health Transition Fund procured 107 solar refrigerators and these have been installed at service points.

The Central Vaccine Stores building was expanded to accommodate six by 40m^3 and four by 30m^3 cold rooms with funding from the government of Zimbabwe. The new building has a workshop for refrigerator repairs, store rooms for diluents and spares, four offices and a boardroom. All the ten new cold rooms are installed and functioning. Each of the eleven provinces got one by thirty cubic metre cold room installed and functional.

Program Management

The programme trained health workers on RED strategy and plans to train middle managers in programme management in 2017. Quarterly support supervisory visits and review meetings are conducted at national and provincial levels to monitor and evaluate the programme's performance. The country conducted a PCV13 Post Introduction Evaluation where it was noted that an AEFI system was in place, health care worker knowledge is adequate, EPI data management and safe practices were above average, among other things. The 2013 Data Quality Self-Assessment achieved a quality index of 79% falling short by 1% to achieve the minimum standard expected of 80% of a well-functioning system.

The 2016 EVMA showed that, broadly speaking, vaccines and diluents are stored at the correct temperatures, cold and dry storage and transport capacities are sufficient, buildings and cold chain equipment are adequate and appropriate vaccine management policies are adopted and implemented.
The country is in the process of implementing some of the recommendations to improve the programme's performance.

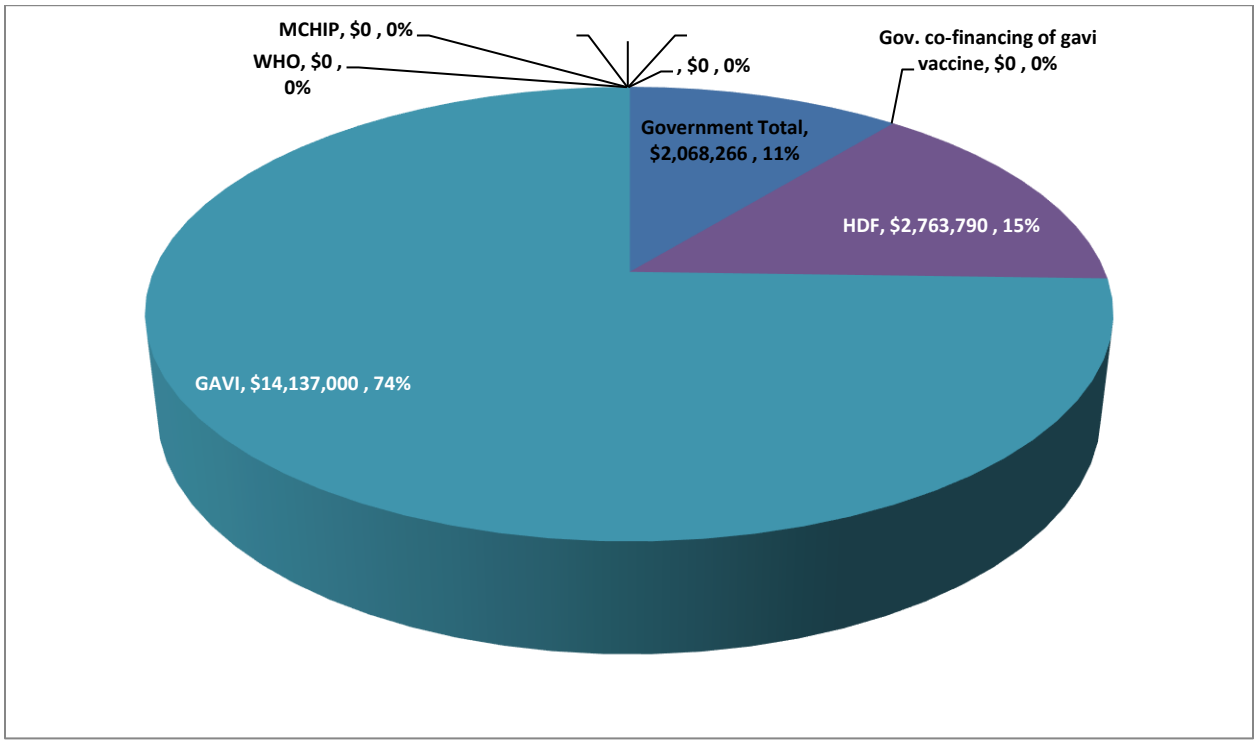
Cost and Financing

The comprehensive multi-year plan (cMYP) costing tool provides the financing requirements and sources of funds for all activities. While the Government of Zimbabwe is committed to the immunization programme as a pillar for child survival, the current economic situation has rendered it unable to fund most of the programmes requirement. Partners such as UNICEF, WHO, GAVI and MCHIP have been supporting the programme. All traditional vaccines are being procured by UNICEF/HDF while GAVI supports new and underutilized vaccines. In addition, GAVI also funds the country's immunisation program through the Immunisation Support Services as well as the current Health Systems Strengthening.

The country hopes that UNICEF under the Health Development Fund (HDF) will continue to fund procurement of traditional vaccines until such a time government is able to takeover. Locally, the government will continue to advocate for financial support from both local and international partners to finance immunisation activities. The government mainly supports the program in terms of salaries and allowances for staff as well as infrastructure. Allowances for outreach mainly come from HDF while funds for campaigns are mobilized through WHO, UNICEF and GAVI.

According to the baseline information available, the Government contributed 11% of the programme requirements in 2014, with GAVI contributing 74%, HDF 15%, while WHO, UNICEF and MCHIP contributed the balance. Figure 3 below shows the baseline financing profile.

Fig 3: Baseline Financing Profile (Routine Immunisation Only)



Source: Zimbabwe cMYP Costing Tool 2016-2020

Fig 4: Projection of Future Secure Financing and Gaps (Shared Costs Excluded)

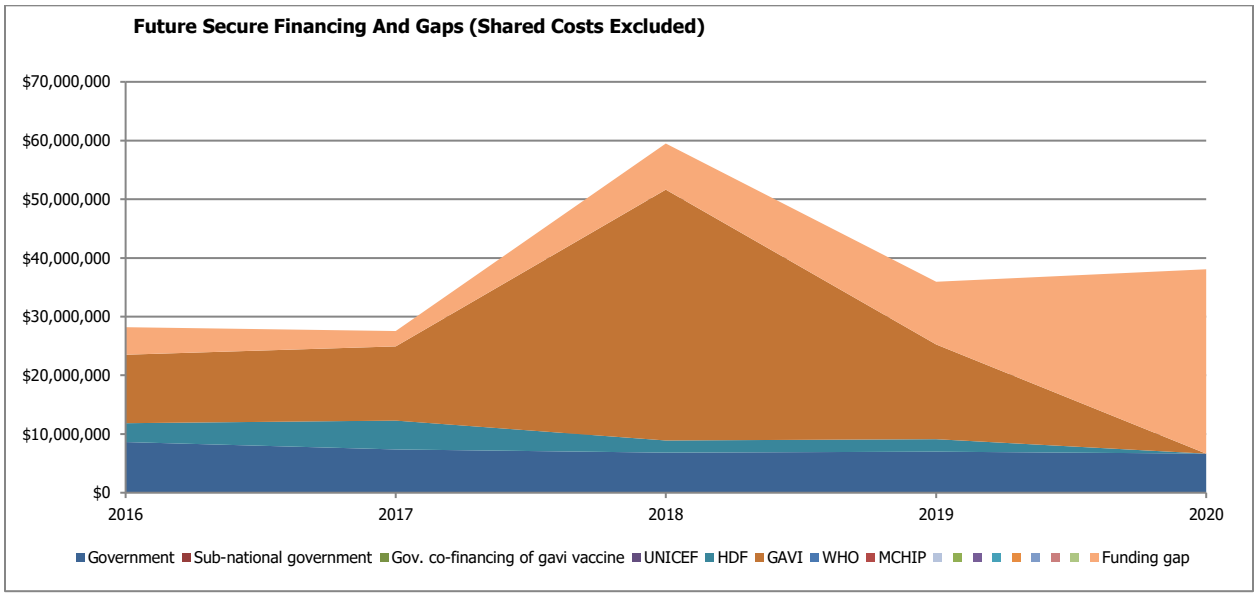
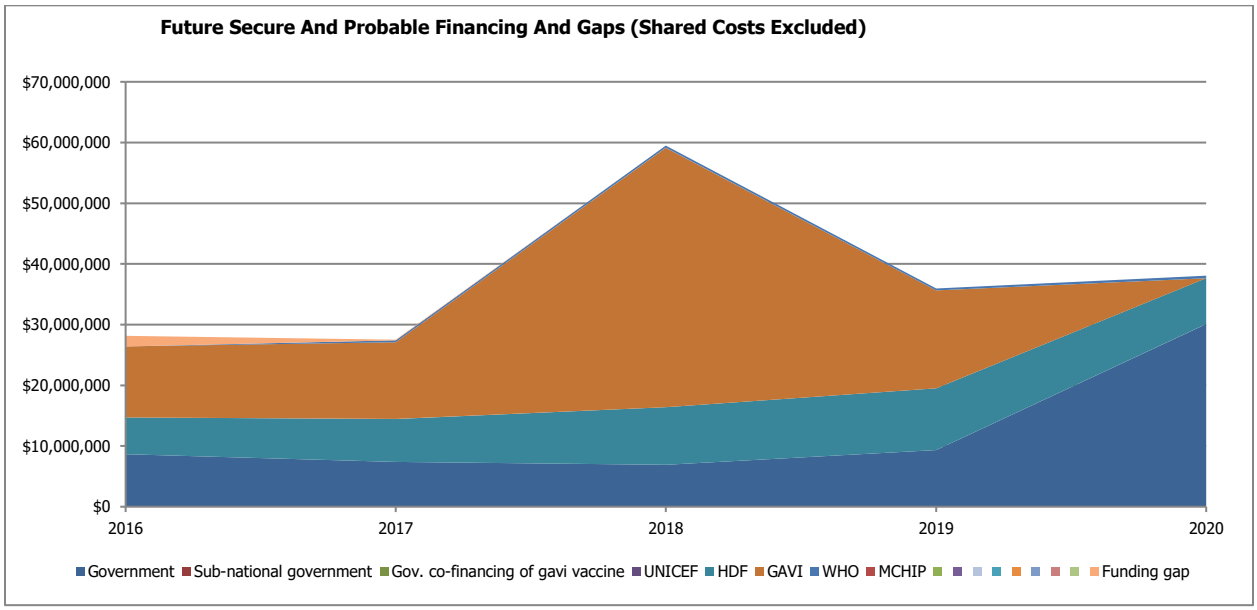


Fig 5: Future Secure and Probable Financing



The cost of introducing HPV Vaccine in 2018 will drive the cost of the routine immunization programme from USD28,177,881 in 2016 to USD60,940,119 in 2018. Secured government contribution is projected to remain static over the life span of the cMYP given the prevailing economic situation. Proportion of government funding increases in 2020 when GAVI funding for new and underused vaccines ends (see Fig 5). However government financing is secured for period 2017 to 2019 only (see Fig 4). It is assumed that if GAVI does not extend funding for new and underused vaccines beyond 2019 then the government is to

take over in which case the funding is probable. The Government of Zimbabwe will mobilize resources within the country for the co-financing requirements during period of GAVI funding. Fundraising efforts for more resources will continue in order to bridge the gap. It is also expected that the Health Development Fund, if still operational will be used to address the funding gap. It is envisaged that the economic situation will improve and Government of Zimbabwe will be able to put more funds in the immunization programme and partners such as UNICEF will continue to mobilize resources for the programme. The proposed MR follow up campaign in 2019 will push up program costs as indicated in Fig 4 and 5 above.

PROGRAM CHARACTERISTICS, OBJECTIVES AND STRATEGIES

The Government of Zimbabwe through the Ministry of Health and Child Care is committed to the Immunization programme as a pillar for child survival and improvement of child health. The main objective of EPI is to reduce morbidity and mortality from vaccine preventable childhood diseases. New vaccines will be introduced as necessary. The ZEPI has the following broad objectives:

1. Protect more people of all ages with safe vaccines
2. Accelerate the reduction of morbidity and mortality from vaccine preventable diseases
3. Introduce new and under – utilized vaccines
4. Strengthen EPI surveillance, health information and data quality management
5. Integrate EPI with other health interventions
6. Strengthen advocacy and communication

Protecting more people of all ages with safe vaccines

The 2015 immunization coverage stands at 87% (DTP3) and 76% of the districts achieved at least 80% DTP3 coverage. The country plans to reach more people of all ages with vaccines by strengthening routine immunization. The outreach services that have been revitalized through implementation of the RED strategy will continue throughout the lifespan of this plan. Health Centre Committees are being utilised to link health services including immunisation with the communities. Efforts will be made to reduce the high dropout rate through tracking of defaulters by the Village Health Workers and integrating the services and other interventions.

Accelerating reduction of morbidity and mortality from vaccine preventable diseases

Zimbabwe achieved elimination status for maternal and neonatal tetanus in 2000; is in the pre elimination phase for measles and application for polio free certification status was accepted by African Regional Certification Committee (ARCC) in 2005. The country has plans to maintain the elimination status for maternal and neonatal tetanus and the polio certification status. Supplementary Immunization Activities (SIA) for measles will be conducted in 2019 to ensure that children under five years get a second dose in order to increase their immunity; these SIAs will be integrated with vitamin A supplementation.

Introducing new vaccines

Zimbabwe joins other countries in the world in introducing new vaccines in order to reduce morbidity and mortality due to vaccine preventable diseases. The country introduced pneumococcal vaccine in August 2012, Rotavirus vaccine in 2014 and plans to introduce HPV in 2018. IPV will be introduced when available on the world market.

Strengthening EPI Surveillance, Health Information and Data Quality Management

At country level standard surveillance performance indicator targets for AFP and measles are being achieved but at subnational level some districts are lagging behind; these will continue to be strengthened until all provinces achieve the set performance indicators. The quality of data will be improved through training of health workers and reinforced during supportive supervision. AEFIs are being monitored and will continue to be monitored including the HPV vaccine.

Integration of EPI with other health interventions

Zimbabwe practices supermarket approach and it is easy to integrate with other interventions to provide holistic care to the child and also maximize use of resources. The programme has already integrated with vitamin A supplementation, Early Infant Diagnosis (HIV and AIDS) and the Community Management of Acute Malnutrition.

Strengthening Advocacy and Communication

The EPI Communication Strategy has been reviewed, printed and distributed to all health facilities. The strategy guides all the advocacy and communication activities at all levels. The main thrust of the strategy is demand creation for immunization services.

Table 1A: Situational Analysis by Accelerated Disease Control Initiatives

Disease Control Initiative	Suggested indicators	National status[a]		
		2012	2013	2014
Polio	OPV3 coverage	98%	96%	92%
	Non-polio AFP rate per 100,000 children under 15 years of age	3.2	4.2	3.2
	Number of rounds of national and sub national immunization days Coverage range	1 ROUND 104%		
MNT	TT2+ coverage	17%	56%	77%
	% target population protected at birth from neonatal tetanus	49%	62%	64%
	Was there an SIA? (Y/N)	N	N	N
	Neonatal deaths reported and investigated	3	4	0
	Delivery at Facility Rate			80%
Measles & Rubella	Measles / MR vaccination coverage (2 doses)	97%	95%	93%
	Number of lab confirmed measles/rubella outbreaks	17	132	1024
	Geographic extent National Immunization Day Age group Coverage	Country Wide 9 to 59 mnths 103		
	Total Measles Cases (Lab/Clinical/epidemiological)	0	0	0
	Total Rubella Cases(Lab/Clinical/epidemiological)	17	132	1024
Yellow fever	YF coverage	N/A	N/A	N/A

	Number and percentage of districts reporting > 1 suspected case			
	Was a preventive campaign conducted? (Y/N)			
Epidemic Meningitis	Meningococcal A Coverage	N/A	N/A	N/A

Table 1B: Situational analysis of routine EPI by immunization system components

System Components	Suggested indicators	RESULTS		
		2012	2013	2014
1. SERVICE DELIVERY				
Immunization Coverage	Official Coverage DTP3	95%	95%	91%
	Official Coverage Measles	97%	93%	92%
	Most Recent Survey Coverage % DTP3 MICS			85.4%
	% Fully Immunized Child MICS			69%
Immunization Demand	% Drop Out DTP1 – DTP3	12%	6%	7%
Immunization Equity	% gap in DTP3 between highest and lowest socio economic quintiles	ND	ND	ND
	Number of districts with DTP3 coverage > 80%	55	56	57
	Number of high risk districts identified for accelerated routine immunization programming	6	7	6
Integration	% Services provided at fixed facilities	100%	100%	100%
	Guidelines on Outreach health service package developed	Y	Y	Y
New Vaccines Introduction	No. of new vaccines introduced into the routine schedule in the last plan period	1	0	1
	DTP3 Coverage	102%	95%	91%
	Rota 2 Coverage	N/A	N/A	82%

System Components	Suggested indicators	RESULTS		
		2012	2013	2014

2. PROGRAMME MANAGEMENT				
Law & Regulation	What numbers of functions are conducted by the NRA?	2	2	2
	Is there legislation or other administrative order establishing a line item for vaccines?	Y	Y	Y
	Is there legislation identifying sources of public revenue for immunization financing?	Y	Y	Y
Policy	Has the national immunization policy been updated?	Y	Y	Y
Planning	Does the country have an annual work plan for immunization funded through Ministry of Health budgeting processes?	Y	Y	Y
	What is the number of districts with an annual micro-plan for immunization?	63	63	63
Coordination	What were the Number of ICC (or equivalent) meetings held last year at which routine immunization was discussed?	3	2	2
	What were the Number of NITAG (or equivalent) meetings held last year?			0
Advocacy	How many presentations on immunization performance, expenditures, were made to parliament?	0	0	0

System Components	**Suggested indicators**	**RESULTS**		
		2012	**2013**	**2014**
3. HUMAN RESOURCES MANAGEMENT				
HR Numbers	No. of health workers/vaccinators per 10,000 population	2	2	2
	% vaccinator posts currently vacant	0%	0%	0%
Capacity Building	No. of health workers & managers trained in immunization services through MLM or IIP training per year;	60	60	65
	No of health workers trained in immunization in the last two years (data from PIE and EPI reviews);	1700	300	1800

	Curriculum review for pre-service medical and nursing immunization education conducted	ND	ND	ND
Supervision	Average no. of central supervision visits to each District level per year	4	4	4

System Components	Suggested indicators	RESULTS		
		2012	2013	2014
4. COSTING AND FINANCING				
Financial sustainability	What percentage of total routine vaccine spending was financed using government funds? (including loans and excluding external public financing)	5%	5%	6%
	Was the line item in the national budget for immunization 100% funded.	N	N	N
	What % of immunization resources are being met by the domestic health budget (as identified in the annual budget plan)	14%	36%	30%
	Government expenditures on routine immunization per surviving infant (JRF 6700)	3.8	20.77	30.4
	Are sub-national immunization budgets and expenditures monitored and reported at national level?	Y	Y	Y

System Components	Suggested indicators	RESULTS		
		2012	2013	2014
5. VACCINE SUPPLY, QUALITY & LOGISTICS				
Transport / Mobility	Percentage of districts with a sufficient number of supervisory/EPI field activity vehicles /motorbikes/bicycles in working condition	100	100	100
Vaccine supply	Was there a stock-out at national level during the last year?	Y	N	N
	If yes, specify duration in months	0.7		
	If yes, specify which antigen(s)	PCV13		

Cold chain/Logistics	% of districts with adequate numbers of appropriate and functional cold chain equipment	100%	100%	100%
	What was the year of last inventory assessment for all cold chain, transport and waste management equipment (or EVM)	EVM		
	Proportion of EVMA criteria with at least 80% score at service delivery level	71%		
	% Districts with Availability of a cold chain replacement plan	100%	100%	100%
Waste disposal	Availability of a waste management policy and plan	Y	Y	Y

System Components	**Suggested indicators**	**RESULTS**		
		2012	**2013**	**2014**
6. SURVEILLANCE & 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 years of age	3.2	4.2	3.2
	% suspected measles cases for which a laboratory test was conducted	100%	100%	100%
	Number of neonatal deaths for which a follow up investigation was conducted	100%	100%	
	Sentinel Surveillance for Rotavirus established in 2008	2008		

	Sentinel Surveillance for meningitis (Hib/PCV) established	2008		
	% of suspected meningitis cases tested for Hib/pneumococcal disease according to standard protocol	ND	ND	ND
Coverage Monitoring	% gap in match between DTP3 survey coverage and officially reported figures	No Survey Conducted		
Immunization safety	% of districts that have been supplied with adequate (equal or more) number of AD syringes for all routine immunizations	100	100	100%
Adverse Events	National AEFI System is Active with a designated national committee	Y	Y	Y
	Number of serious AEFI cases reported and investigated	13	6	11

System Components	**Suggested indicators**	**RESULTS**		
		2012	**2013**	**2014**
7. DEMAND GENERATION AND COMMUNICATION				
Communication Strategy	Availability of a routine immunization communication plan	Y	Y	Y
Research	Year of last study on community knowledge, attitudes and practices in relation to immunization			Jan-15
Demand	% of outreach services held as planned	ND	ND	ND

	High risk plan for disadvantaged communities	Y	Y	Y

STEP 2 TABLE 2 OBJECTIVES AND MILESTONES				
Immunization Services	**Current Performance**	**Objectives**	**Milestones**	**Order of priority**
Service Delivery -Routine Immunization				
Proportion of districts with DTP3 coverage ≥ 80%	**90% of the districts had ≥80% DTP3 coverage**	**To increase proportion of districts with ≥80% DTP3 coverage from 90% in 2014 to 96% by 2020**	**92% in 2016 93% in 2017 94% in 2018 95% in 2019 96% in 2020**	**1**
DTP3 coverage at least 90%	**DTP3 coverage at 91%**	**To increase DTP3 coverage from 91% in 2014 to 97% by 2020**	**96% in 2016 96% in 2017 97% in 2018 97% in 2019 97% in 2020**	**1**
Proportion of districts with DTP1–DTP3 dropout rate at <10%	**83% of the districts had dropout rate at <10%**	**To increase proportion of districts with DTP1-DTP3 dropout rate at <10% from 83% in 2014 to 92% in 2020**	**86% in 2016 87% in 2017 90% in 2018 91% in 2019 92% in 2020**	**2**
Polio Eradication	**82% of provinces met recommended polio certification standard**	**To increase proportion of provinces meeting recommended polio certification standard from 82% in 2014 to 100% by 2020**	**95% in 2016 100% by 2020**	**2**
MNT Elimination	**100% elimination status**	**To maintain elimination status at <1 MNT case per 1000 live births per district**	**100% in 2016 100% in 2017 100% in 2018 100% in 2019 100% in 2020**	**2**
MR Campaign	**95% of the districts had measles SIAs coverage at ≥95% in 2015**	**Increase proportion of districts with ≥95% SIAs coverage from 95% in 2015 to 96% in 2019**	**96% in 2019**	**3**
MSD	**MR1-MR2 dropout rate**	**Achieve a dropout rate of <10% at national level**	**<10% drop out rate by 2020**	**1**
Program Management	**Location of EPI in Curative Division**	**To advocate for transfer of EPI to Preventive Services by 2017**	**Initiate dialogue by 2016 Achieve transfer by 2017**	**2**

Human Resources Management	**20% of current EPI Posts vacant. Current EPI establishment inadequate**	**To increase current EPI staffing levels from 80% in 2016 to 100% by 2018 To create four new posts for HPO, Program Assistant, Surveillance Officer and Monitoring & Evaluation Officer by 2017**	**100% staffing level by 2020**	**1**
Costing and Financing	**Inadequate budgetary allocation to EPI**	**To lobby for an increased budgetary allocation;-to co-finance GAVI vaccines timely 2016 onward-to procure 100% traditional vaccines by 2020**	**Timely release of co-financing funds from 2016 onward 100% traditional vaccines funded by government by 2020**	**1**
Vaccine Supply, Quality & Logistics	**Vaccine stock outs at subnational level**	**Data to be provided**	**Data to be provided**	**1**
Surveillance and Reporting	**EPI Data Quality index at 79% in 2013**	**To achieve >80% EPI data quality index by 2020**	**DQS/DQR 2017**	**1**
Demand Generation and Communication	**80% of caregivers could state at least 3 benefits of vaccination in 2016**	**Increase proportion of caregivers who can state 3 benefits of vaccinations from 80% in 2016 to 90% in 2020**	**90% caregivers who can state at least 3 benefits of vaccination**	**1**

STEP 3 TABLE 3 STRATEGIES AND ACTIVITIES			
Immunization Services	**Objectives**	**Strategies**	**Main Activities**
Service Delivery -Routine Immunization			
Proportion of districts with DTP3 coverage ≥ 80% **Proportion of districts with DTP1–DTP3 dropout rate at <10%**	**To increase proportion of districts with ≥80% DTP3 coverage from 90% in 2014 to 96% by 2020**	**RED** **Integration** **Community Dialogue** **Monitoring and evaluation**	**Routine vaccinations at static and outreach sites** **Quarterly review meetings** **Advocacy, Communication and Social Mobilization** **Engagement of CBOs** **Micro planning**
Polio Eradication	**To meet GPEI targets** **To increase proportion of provinces meeting recommended polio certification standard from 82% in 2014 to 100% by 2020**	**Introduce IPV** **Switch from tOPV to bOPV** **Surveillance** **Supportive Supervision** **Capacity building**	**Active Search** **Training** **Strengthen Supportive Supervision** **Sensitisation and review meetings**

MNT Elimination	**100% elimination status Maintaining elimination status (at <1 MNT case per 1000 live births per district)**	**Institutional deliveries Promote safe delivery**	**Monitor protection at birth Health education to pregnant women on importance of institutional/safe deliveries Training of health workers in EMOC Vaccination of pregnant women with TT**
MR Campaign	**Achieve 96% MR SIAs coverage**	**Fixed and Outreach Strategy Community mobilization Stakeholder Involvement**	**Resource mobilization, advocacy, communication, social mobilization and vaccination**
Program Management	**Have EPI located in Preventive Services**	**Advocacy**	**Meetings with relevant authorities, presentation of justification and advocacy by bilateral partners to Top Management Team**
Human Resources Management	**To increase current EPI staffing levels from 80% in 2014 to 100% by 2018 To create four new posts by 2017**	**Advocacy**	**Meetings with relevant authorities, presentation of justification and advocacy by bilateral partners to Top Management Lobby for unfreeze of posts**
Costing and Financing	**Government to co-finance GAVI vaccines in time Government to fund traditional vaccines by 2020**	**Advocacy Resource mobilization**	**Develop annual EPI budget estimates. Develop comprehensive EPI work plans based on needs Share plans with key stakeholders e.g. Civil Society and respective EPI committees like ICC Appraise Parliamentary Portfolio Committee on Health**
Vaccine Supply, Quality & Logistics	**To maintain proportion of HF with adequate vaccines stock at 90% and above from 2016 onward**	**Capacity building Distribution Planning EVMA Training Procurement of vehicles and cold chain equipment Transport management Supplies Forecasting**	**Training Scheduling deliveries Supportive supervision Review meetings Sourcing of vaccines and supplies Repair and maintenance of equipment Physical Stock Counts Receipt, Issuing and Inspection**
Surveillance and Reporting	**Polio eradication by 2020 Maintain Elimination of MNT**	**Capacity Building Data review meetings Information Systems**	**Production and distribution of data collection tools Training in DHIS2 Integration of key immunisation indicators in the DHIS2**

Demand Generation and Communication	**Increase demand creation to 90% by 2020**	**Program Communication Advocacy, Research and IPC Community dialogue Production of IEC materials Distribution of IEC materials**	**Training Engagement of stakeholders Production of messages Design of messages Data collection and analysis African Vaccination Week Community dialogue**

STEP 5 TABLE 4 TIMELINES

Immunization Services	Objectives	Strategies	Activities	Timeline				
Service Delivery -Routine Immunization				**2016**	**2017**	**2018**	**2019**	**2020**
Proportion of districts with DTP3 coverage ≥ 80%	**To increase proportion of districts with ≥80% DTP3 coverage from 90% in 2014 to 96% by 2020**	**RED Integration Community Dialogue Monitoring and evaluation**	**Routine vaccinations at static and outreach sites Quarterly review meetings Advocacy, Communication and Social Mobilization Engagement of CBOs Micro planning**	**x**	**x**	**x**	**x**	**x**
Proportion of districts with DTP1–DTP3 dropout rate at <10%	**To increase proportion of districts with DTP1-DTP3 dropout rate at >10% from 83% in 2014 to 100% in 2020**			**x**	**x**	**x**	**x**	**x**
Polio Eradication	**To meet GPEI targets To increase proportion of provinces meeting recommended polio certification standard from 82% in 2014 to 100% by 2020**	**Introduce IPV Switch from tOPV to bOPV Surveillance Supportive Supervision Capacity building**	**Active Search Training Strengthen Supportive Supervision Sensitisation and review meetings**	**x**	**x**	**x**	**x**	**x**
MNT Elimination	**100% elimination status Maintaining elimination status (at <1 MNT case per 1000 live births per district)**	**Institutional deliveries Promote safe delivery**	**Monitor protection at birth Health education to pregnant women on importance of institutional/safe deliveries Training of health workers in EMOC**	**x**	**x**	**x**	**x**	**x**

			Vaccination of pregnant women with TT					
MR Campaign	**Achieve 96% MR SIAs coverage**	**Fixed and Outreach Strategy Community mobilization Stakeholder Involvement**	**Resource mobilization, advocacy, communication, social mobilization and vaccination**				**X**	
Program Management	**Have EPI located in Preventive Services**	**Advocacy**	**Meetings with relevant authorities, presentation of justification and advocacy by bilateral partners to Top Management Team**		**x**			
Human Resources Management	**To increase current EPI staffing levels from 80% in 2014 to 100% by 2018 To create four new posts by 2017**	**Advocacy**	**Meetings with relevant authorities, presentation of justification and advocacy by bilateral partners to Top Management Lobby for unfreeze of posts**	**x**	**x**	**x**		
Costing and Financing	**Government to co-finance GAVI vaccines in time Government to fund traditional vaccines by 2020**	**Advocacy Resource mobilization**	**Develop annual EPI budget estimates. Develop comprehensive EPI work plans based on needs Share plans with key stakeholders e.g. Civil Society and respective EPI committees like ICC Appraise Parliamentary Portfolio Committee on Health**	**x**	**x**	**x**	**x**	**x**

Vaccine Supply, Quality & Logistics	**To maintain proportion of HF with adequate vaccines stock at 90% and above from 2016 onward**	**Capacity building Distribution Planning EVMA Training Procurement of vehicles and cold chain equipment Transport management Supplies Forecasting**	**Training Scheduling deliveries Supportive supervision Review meetings Sourcing of vaccines and supplies Repair and maintenance of equipment Physical Stock Counts Receipt, Issuing and Inspection**	**x**	**x**	**x**	**x**	**x**
Surveillance and Reporting	**Polio eradication by 2020 Maintain Elimination of MNT**	**Capacity Building Data review meetings Information Systems**	**Production and distribution of data collection tools Training in DHIS2 Integration of key immunisation indicators in the DHIS2**	**x**	**x**	**x**	**x**	**x**
Demand Generation and Communication	**Increase demand creation to 90% by 2020**	**Program Communication Advocacy, Research and IPC Community dialogue Production of IEC materials Distribution of IEC materials**	**Training Engagement of stakeholders Production of messages Design of messages Data collection and analysis African Vaccination Week Community dialogue**	**x**	**x**	**x**	**x**	**x**

STEP 5 TABLE 5 NATIONAL IMMUNIZATION MONITORING & EVALUATION FRAMEWORK

Goal	**IMPACT INDICATORS**	**Baseline**			**Targets**						
		Result	**Year**	**Source**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**Means of verification**
Immunization Component - Immunization Services											
To reduce child mortality by 2/3rds between 1990 and 2015	**Reduce Under 5 Child Mortality Rate**	**75 per 1000 live births**	**2014**	**MICS**			**45/1000**				**DHS Survey 5 yearly**

Objective	OUTCOME INDICATORS	Baseline			Targets						
		Result	Year	Source	2015	2016	2017	2018	2019	2020	Means of verification
Immunization Component - Immunization Services											
To increase proportion of districts with ≥80% DTP3 coverage from 90% in 2014 to 96% by 2020	% of surviving infants receiving the third dose of DTP containing vaccine	91%	2014	NHIS		92%	93%	94%	95%	96%	Coverage Surveys and Administrative Data
Strategies	**OUTPUT INDICATORS**	**Baseline**			**Targets**						
		Result	**Year**	**Source**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**Means of verification**
Immunization Component - Immunization Services											
Fixed and Outreach Services Community Dialogue Program Communication Advocacy	% of facilities offering vaccination services Availability of Vaccines and Supplies Utilization of vaccination services % of target populations receiving immunisation services	91% DTP3	2014	NHIS		96	96	97	97	97	Coverage Surveys and Administrative Data
Inputs & Activities	**INPUT INDICATORS**	**Baseline**			**Targets**						
		Result	**Year**	**Source**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**Means of verification**
Immunization Component - Immunization Services											
Funding for vaccine and supplies procurement and operations Maintenance of cold chain equipment	Availability of immunisation supplies	0	2012	Program Records		100%	100%	100%	100%	100%	Program Records