THE REPUBLIC OF UGANDA

UGANDA NATIONAL EXPANDED PROGRAMME ON IMMUNIZATION MULTI YEAR PLAN 2012-2016

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Updated cMYP July 2012

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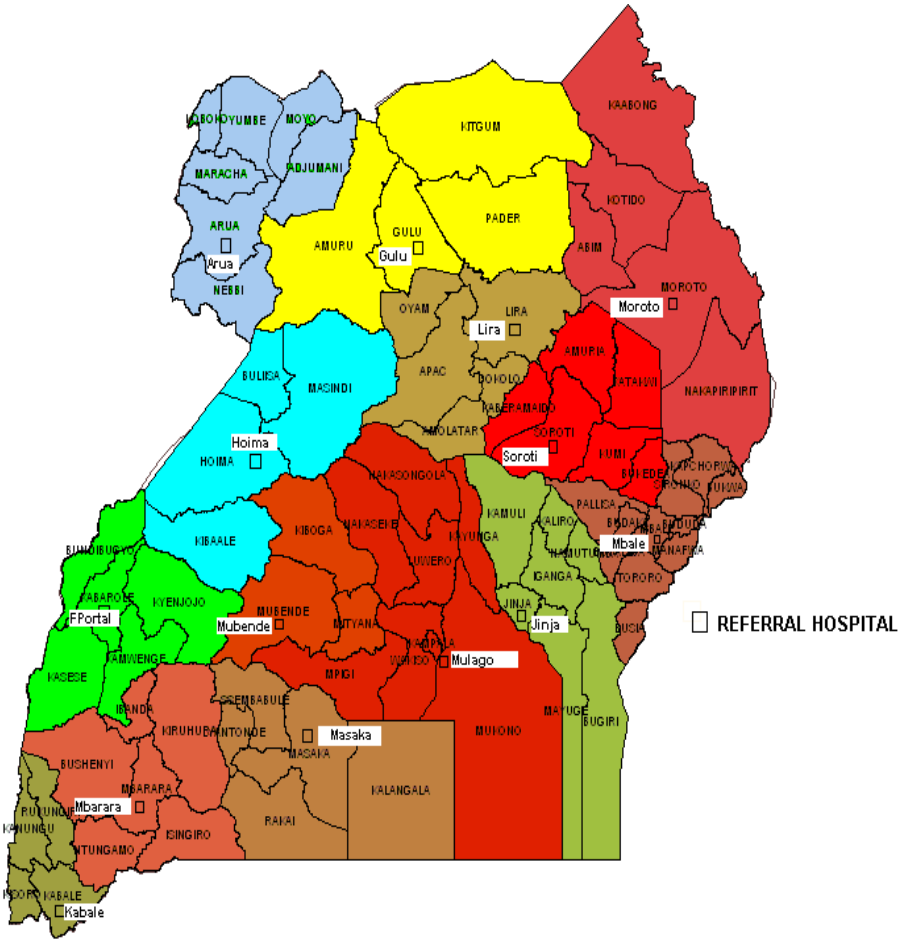

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Foreword

Immunization is a key priority of the Uganda Minimum Health Care Package of the health sector. Over the past ten years, implementation of the EPI revitalization and strategic plans has accelerated government efforts to achieve better health for the children and women of Uganda, thereby contributing to the enhancement of the quality of life and productivity.

A comprehensive review of the programme conducted in 2005 provided vast information on good practices, gaps and lessons learned over the previous 5 years that formed the basis for development the 1st multiyear plan (2006-2010). Several achievements were noted: reversal of the decline of immunization coverage with achievement of high coverage surpassing previously set targets; introduction of underutilized vaccines (hepatitis B and *Haemophilus Influenzae* type b (Hib)) in the routine immunization schedule resulting in increased demand for services; and significant impact in reduction in morbidity and mortality of measles, neonatal tetanus and Hib.

However, several challenges experienced since 2007 in delivery of EPI services have threatened to reverse the achievements of the programme. A decline in immunization coverage with variations in sub national performance has posed a threat to sustainability of low morbidity and mortality due to vaccine preventable diseases. The continued circulation of wild polio virus in South Sudan coupled with the population immunity gaps among under-five children in Uganda, led to the re-emergence of wild polio virus in early 2009 after 13 polio-free years.

The process of development and update of the new strategic country multiyear plan 2012-2016, has accorded the programme and partners an opportunity to rethink approaches to address the current challenges, to explore opportunities for more efficient delivery of services and to devise strategies conforming to the global vision for immunization (GIVS) as we strive to achieve the Millennium Development Goal of reduction of childhood morbidity and mortality by 2015, and the national goals as articulated in the Health Sector Strategic Investment Plan. The focus over the coming years will lie on sustaining availability of current vaccines offered by the programme; introduction of pneumococcal and rotavirus vaccines; maintaining a high immunization coverage in a rapidly growing population and reaching all un-immunized children particularly with re-emergence of wild polio virus; and maintaining a high quality and sensitive disease surveillance system at all levels in order to detect and respond timely to any outbreaks.

I wish to express my appreciation to all those who have contributed to development of this strategic plan including the technical support provided by our partners. We pledge full government support in implementation of the plan and look forward to attainment of the objectives set.

Dr. Aceng Jane Ruth
Director General Health Services

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Executive Summary

The Uganda EPI multiyear plan for 2012-2016 highlights the areas of focus for the immunization programme over the next 5 years based on previous programme performance, priorities for the health sector as stipulated in the Health Sector Strategic Investment Plan (2010/11 – 2014/15) and the global and regional goals set for child survival. The Decade of Vaccines Global Vaccine Action Plan (GVAP), Millennium Development Goals (MDG) on mortality and morbidity reduction and the WHO Strategic direction 2010-2015 provided the overall strategic framework for development of the plan as well as priorities set in the HSSIP.

EPI performance in Uganda has stagnated after showing progressive improvement of routine immunization and surveillance indicators between 2000 and 2006, when DPT3 coverage increasing from 56% in 2000 to 85% in 2006. Several investments into the programme over the years, such as GAVI Immunisation Service Support (GAVI-ISS), Sustainable Outreach Services (SOS) and the Reaching Every District (RED) approach, contributed to the successes attained. The impact of the immunization programme is evident: the country remained polio free from 1996 to early 2009; morbidity due to measles has declined by over 90% compared to 2000 with no confirmed deaths in 2004 and 2005; the number of meningitis cases due to *Haemophilus Influenzae* type b (Hib) declined by 95% at sentinel sites for Hib surveillance since introduction of Hib vaccine in 2002. The number of reported neonatal tetanus cases declined to less than 1/1,000 live birth nationally, this led to Uganda being certified for Maternal Neonatal Tetanus Elimination (MNTE).

However challenges in routine immunisation service delivery have resulted in declining performance during 2007-2010. District variability in performance exists with the proportion of districts achieving the set targets for routine immunization and surveillance not yet up to the required levels. Sustaining availability of current vaccines at the health facility offered by the programme, maintaining a high immunization coverage in a rapidly growing population, reaching all un-immunized children particularly with re-emergence of wild polio virus after 13 years, and maintaining a high quality and sensitive disease surveillance system at all levels are some of the challenges that the programme is faced with.

Over the next four years the programme will focus on the district level to improve routine immunization and surveillance performance; strengthen logistics management at all levels; introduce pneumococcal , rotavirus vaccines and HPV vaccination; strengthen capacity of mid level managers, operational level health workers and pre-service trainees to deliver quality EPI services; advocate for sustainable financing of the programme; achieve and maintain polio free status, maintain neonatal tetanus elimination and pre-elimination measles targets. Strategies such as RED, integration of activities (outreaches, child days, supplemental immunization activities), and advocacy for the programme using evidence-based data will be used to achieve the targets set.

The anticipated programme cost for the five years (2012-2016) is US **$388,091,684**, with 60% of these costs being for vaccines and supplies. The programme intends to introduce new vaccines (PCV, Rota vaccine and HPV), construct new offices and stores at the national level, and conduct polio and measles supplementary immunization activities, all of which contribute significantly to the increased costs in 2012 to 2016. The programme is faced with a substantial funding gap. By the 2016, the apparent funding gap is expected to be **$87,470,768** which is 23% of the total resource needs, excluding shared costs.

1. Introduction

1.1 Country profile

Uganda is located on the equator and covers an area of 241,550.7 km^2, of which 18% consists of Lake Victoria and other lakes, with the rest being made up of plateau with numerous small hills, valleys and extensive savannah plains. It receives abundant rainfall and is rich in tillable land.

Administrative structure
Administratively, currently Uganda is divided into 112 districts as compared to 80 districts by end of financial year 2009/2010. The districts are further divided into 220 counties, 1261 sub-counties, 6,953 parishes and 59,092 LC1s/villages. The village forms the smallest political-administrative unit.

In 2002 the population of Uganda was estimated at 24.2 million: 48.5% were male while 51.5% were female; and 88% are resident in rural areas. The population growth rate is estimated at 3.2% per annum, resulting in an incremental growth of more than one million people annually. The Uganda Bureau of Statistics (UBOS) estimates the population in mid 2012 at 34.1 million persons and by the end of the HSSIP in 2014/15 Uganda's population will be approximately 37.9 million, increasing the average population density from 133, to 156 persons per square km.

Health indices
The national literacy rate is estimated to be 73.6% and the majority of the population (88%) lives in rural areas. However, some of the districts in north and northeast of Uganda have been affected by a prolonged period of conflict resulting in widespread insecurity and large-scale population displacement. This has had an effect on health service delivery and most of these districts have not been able to achieve the national targets for the health indicators.

It is estimated that 49% of Uganda's population constitutes of persons under the age of 15 years, and Under 1 year at 4.3%. Over the next five years the Ugandan population will remain a young population with 18.5% of the total population being under five. There shall be an increase in the number of females in reproductive years from 7 million in 2009 to 8.3 million in 2014, which will put a strain on all reproductive health services (HSSIP).

Between 2002 and 2011 under five mortality rate declined from 156 to 90 deaths per 1,000 live births; IMR decreased from 85 to 54 deaths per 1000 live births; MMR reduced from 505 to 435 per 100,000 live births (UDHS 2011, UBOS 2012 Statistical abstract).

1.2 The National Health System

The National Health System (NHS) is made up of the public and the private sectors. The public sector includes all GoU health facilities under the MoH, health services of the Ministries of Defense (Army), Education, Internal Affairs (Police and Prisons) and Ministry of Local Government (MoLG). The private health delivery system consists of Private Not for Profit (PNFPs) providers, Private Health Practitioners (PHPs), and the Traditional and Complementary Medicine Practitioners (TCMPs). This section describes the organization and management of the health sector and delivery of health services in Uganda. The provision of health services in Uganda is decentralised with districts and health sub-districts (HSDs) playing a key role in the delivery and management of health services at those levels. The health services are structured into National Referral Hospitals (NRHs) and Regional Referral

Hospitals (RRHs), General Hospitals, Health Centre (HC) IVs, HC IIIs, HC IIs and Village Health Teams (HC Is).

The functions of the National health system are contained in the National Development Plan; the National Development Plan (NDP) 2010/2011-2014/2015) is Uganda's Comprehensive Development Framework which guides the implementation of the second National Health Policy (NHP) 2010/2011-2014/2015 and the National Health Sector Strategic and Investment Plan 2010/2011-2014/2015. The NHP focuses on health promotion, disease prevention, early diagnosis and treatment of diseases. It specifically prioritise the effective delivery of the Uganda National Minimum Health Care Package (UNMHCP), more efficient use of available health resources, strengthening public and private partnerships for health and strengthening of health systems. The HSSIP provides the medium term strategic framework for health, and focus that the government intends to pursue in regard to attaining the health goals for the country.

The HSSIP is implemented through a Sector-Wide Approach (SWAp). A Memorandum of Understanding (MoU) establishing the Health SWAp outlines and contains the modalities for financing the sector plan as well as common working arrangements for managing programmes.

The coordinating structures established under the SWAp include: the Health Policy Advisory Committee (HPAC) that advises both government and partners on the implementation of the second NHP and the HSSIP; working groups for translating the various HSSIP outputs into guidelines, plans and implementation activities; bi-annual GoU/HDP Health Sector Joint Review Missions held to review the implementation of the plan; Health Sector Working Group - a forum for discussion of sector priorities, drafting of the Health Sector Budget Framework Paper and discussion and approval of new donor funded projects.

The Ministry of Health (MoH) has the lead role and responsibility for delivering the outputs of the HSSIP and various other partners have defined roles to play and contributions to make. The MoH initiates policy and coordinates overall sector activities and brings together stakeholders at the central, district and community level. The stewardship function extends to the district level where by the district leadership is responsible for coordinating all the stakeholders within the district.

Uganda is governed through a decentralized system. The districts are autonomous and responsible for the health needs of the populations under their jurisdiction. The health services are also decentralized with Primary Health Care (PHC) concept as the main strategy for service delivery. Districts receive grants directly from the centre without an intervening regional tier.

1.3 EPI within the National Health System

The Uganda National Expanded Programme on Immunization (UNEPI) is located in the Department of National Communicable Disease Control within the Directorate of Clinical and Community Services. The UNEPI has a managerial structure to ensure efficient service delivery; the organogram of the UNEPI is illustrated in Figure 1.

The **vision** of UNEPI is to ensure that the Ugandan population is free of vaccine-preventable diseases.

The **mission** is to contribute to the overall objective of the HSSIP in reducing morbidity, mortality and disability due to vaccine preventable diseases, so that they are no longer of public health importance.

The **goal** of the programme is to ensure that every child and high-risk group is fully vaccinated with high quality and effective vaccines against the target diseases according to recommended strategies.

The targeted diseases for infants, as of 2011, are tuberculosis, poliomyelitis, diphtheria, pertussis, tetanus, measles, hepatitis B and *Haemophilus Influenzae* type b (Hib), the last two diseases were introduced into the programme in June 2002. Vaccination against Human Papilloma Virus (HPV) has been carried out in two districts targeting girls 10 – 12 years since 2007 to date. The programme plans to introduce the Pneumococcal Vaccine, Rotavirus Vaccine and scale up of Human Papilloma Vaccine in the life span of the HSSIP. The immunization schedule for infants is as shown in Table 1.

The programme has two major areas of focus:

1. Strengthening routine immunization;
2. Conducting supplemental immunization activities to achieve global targets of polio eradication, elimination of maternal and neonatal tetanus, and accelerated measles control;
3. Sustaining a sensitive disease surveillance system within the Integrated Disease Surveillance and Response framework.
4. Introduction of new vaccines in the routine schedule and also expand the vaccination beyond the traditional target group

Immunization is a countrywide programme covering all districts of Uganda. The MoH/UNEPI is responsible for policy, standards and priority setting, capacity building, coordinating with other stakeholders and partners, resource mobilisation, procurement of inputs such as vaccines and injection safety materials, monitoring and technical support supervision to the districts. The districts and health sub-districts are responsible for planning, management and delivery of EPI services through the implementation of the overall district health plan. The community is involved in mobilization and bringing the children for immunization. Immunization is part of the PHC and is integrated into the child survival activities at the district and health facility levels.

Figure 1: Functional organizational structure of UNEPI as of FY 2011/2012

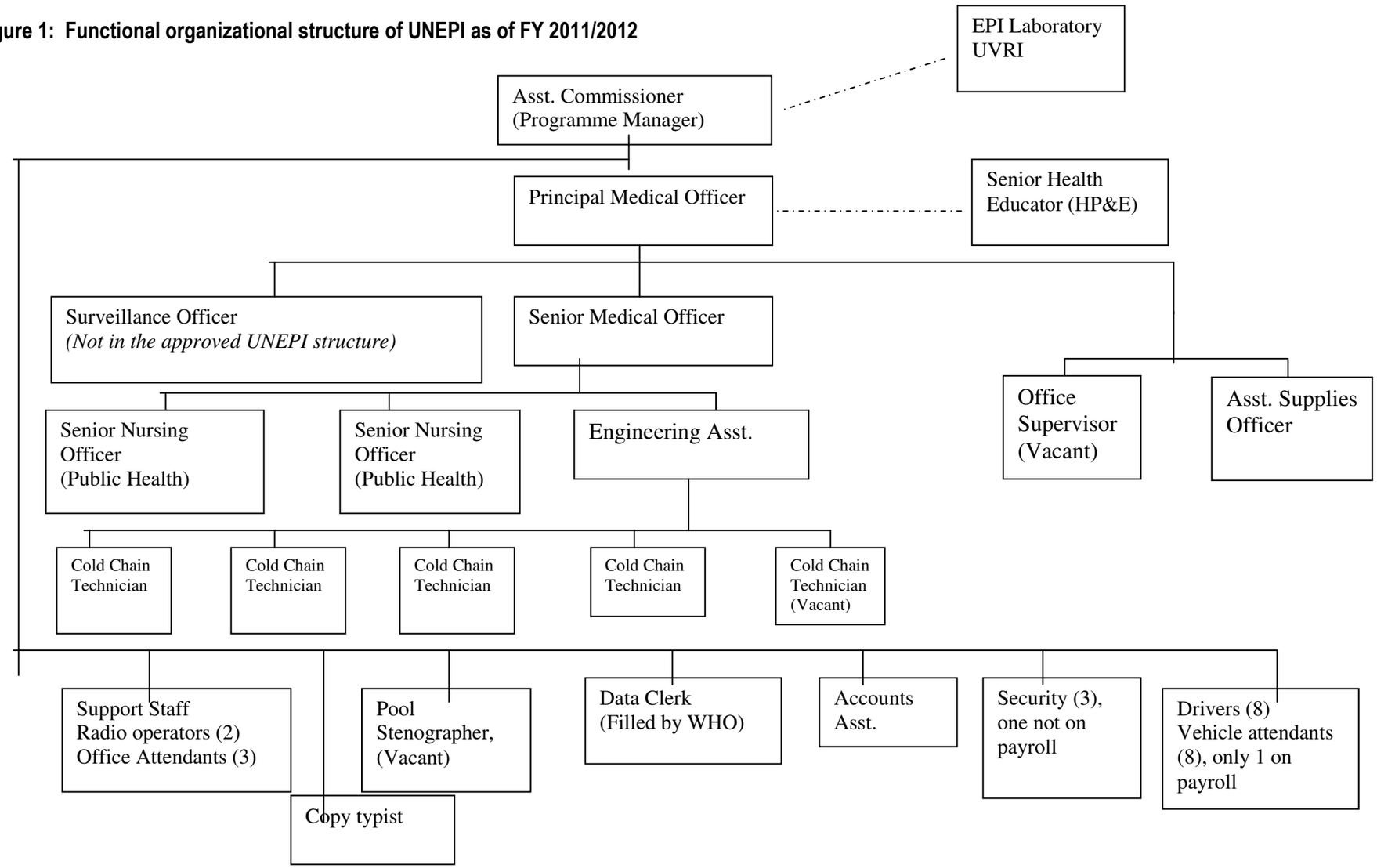


Table 1: Uganda Immunization Schedule

Vaccine/ Antigen	Dosage	Doses Required	Minimum Interval Between Doses	Minimum Age to Start	Mode of Administration	Site of Administration
BCG	0.05ml up to 11 months, 0.10ml after 11 months	1	None	At birth (or first contact)	Intra-dermal	Right Upper Arm
DPT-Hep+Hib	0.5 ml	3	One month (4 weeks)	At 6 weeks (or first contact after that age)	Intra-muscularly	Outer Upper Aspect of Left Thigh
Polio	2 drops	0+3	One month (4 weeks)	At birth or within the first 2 weeks (Polio 0) and six weeks or first contact after 6 weeks (Polio 1)	Orally	Mouth
Measles	0.5 ml	1	None	At 9 months (or first contact after that age)	Subcutaneously	Left Upper Arm
Tetanus Toxoid	0.5 ml	5	First contact TT1; TT2 (4 weeks after TT1);TT3 (Six months after TT2); TT4 (One year after TT3) & TT5 (One year after TT4)	At first contact with a pregnant woman or women of child bearing age (15-45 years)	Intra-muscularly	Upper Arm Deltoid
PCV	0.5ml	3	One month (4 weeks)	At 6 weeks (or first contact after that age)	Intra-muscularly	Outer Upper Aspect of Right Thigh
Rotavirus Vaccine	1ml	2	One month (4 weeks)	At 6 weeks	Orally	Mouth
Human Papilloma Vaccine	0.5mls	3	HPV1 First contact; HPV2 4 weeks after HPV1: HPV3 five months after HPV2	First contact girl aged 10 years	Intra-muscularly	Upper Arm Deltoid

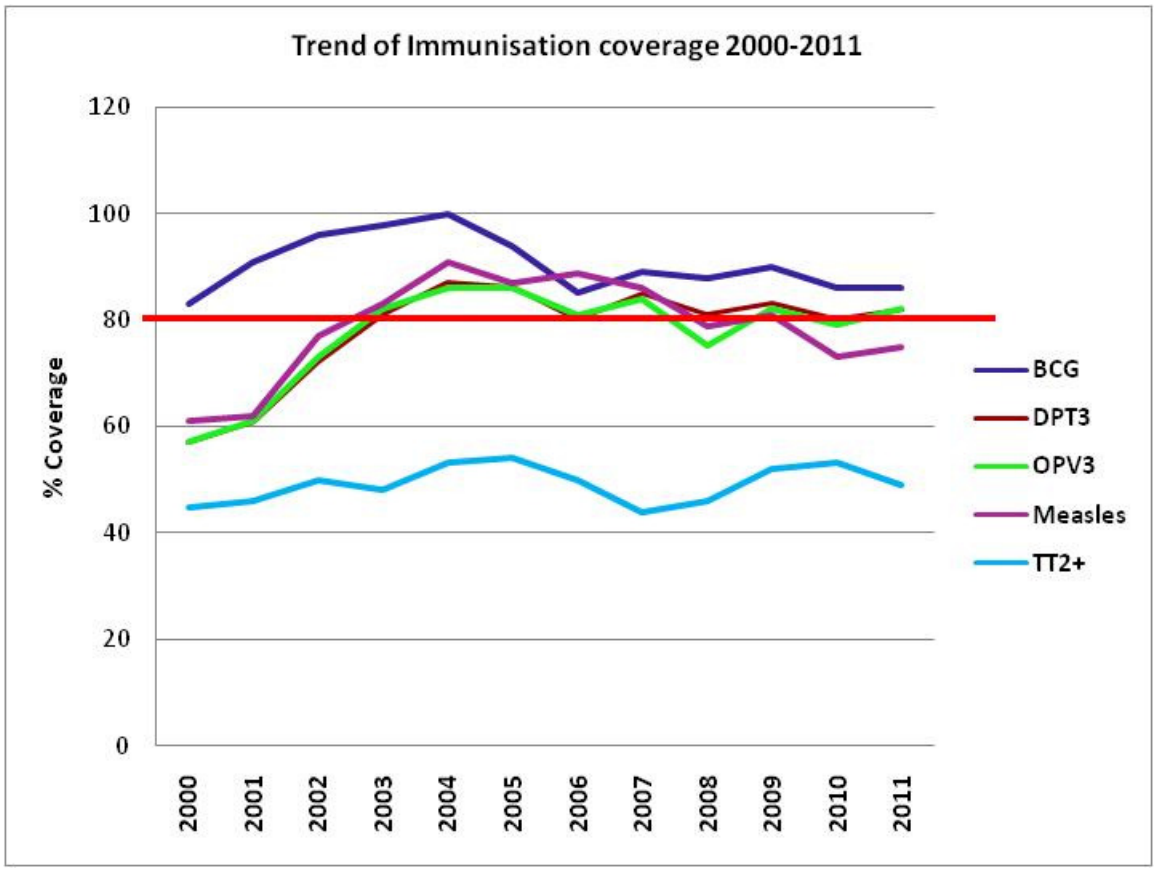
NB: The schedule will be update with introduction of the new vaccines

2. Situation Analysis

2.1: Overview of critical indicators

Routine immunization and surveillance indicators improved between 2000 and 2006, with DPT3 coverage increasing from 56% to 85% (figure 2). The main contributing factors at the time were GAVI ISS support, Sustainable Outreach Services (SOS), the Reaching Every District (RED) approach and EPI/IDSR regional supervision strategy. As a result the country remained polio free, morbidity due to measles declined by over 90% compared to 2000 with no confirmed deaths in 2004 and 2005; the number of meningitis cases due to *Haemophilus Influenzae* type b (Hib) declined by 95% at sentinel sites for Hib surveillance since introduction of Hib vaccine in 2002; the number of reported neonatal tetanus cases declined to less than 1/1,000 per live birth nationally, this led to Uganda being certified for Maternal Neonatal Tetanus Elimination (MNTE).

Figure 2: Immunization coverage trend 2000 – 2011



In the period 2007-2011 there was deterioration in immunisation performance (figure 2) and this led to an increasing numbers of under and unimmunized children. The WPV outbreak in 2009 and 2010 were clear indication of population immunity gap due to un/under immunised children. The EPI Review 2010, Effective Vaccine Management Assessment (EVMA) 2011 and the assessment of Immunisation and External in depth surveillance August 2012 all showed inadequacies in the operational components of immunization and surveillance system as summarised below and detailed in table 2.

1. **Service delivery**: Several challenges exist, including insufficient funding to carry out activities as planned, staff shortages, and many health facilities lacking backup supply of gas cylinders for refrigerators. Child health cards, child registers and tally sheets have not been consistently available from the central level for about two years. Health facilities have innovative solutions to some of the existing problems e.g. they are improvising child health register, child health cards and tally sheets.

   Outreaches: Planned community outreaches were not conducted as planned due to delays in PHC funds, lack of transport, understaffing and inadequate outreach monitoring.

   Supportive supervision: Visits occurred less frequently than planned at all levels; reasons cited included inadequate transport, fuel and staff.

2. **Vaccine supply and quality:**

   Cold chain: The cold chain is well established at central, district and health facility levels. Health facilities have adequate ice packs, vaccine carriers, cold boxes, safety boxes. However many HFs have only one gas cylinder which results from episodes of stock out of gas.

3. **Logistics management:** At central level, there is an organized system for delivery of vaccines and other EPI logistics to districts. Health facilities generally collect supplies from district stores, but transport funds for collecting vaccines or delivering to lower health facilities are insufficient, causing stock outs in some health facilities.

4. **Advocacy and communication:** Many health facilities involve community groups, religious leaders and Village Health Teams. Advocacy/communication/mobilization activities are primarily promoted during periodic immunization events, such as Child Health Days and National Immunisation Days. The routine immunization services are not commonly supported. There is more potential for effective health promotion with expansion of VHTs, radio, print media, TV and nationwide mobile phone coverage.

5. **Surveillance:**

   Reporting and monitoring: Districts and health facilities were not analysing their data or doing evidence-based planning. In addition they were not monitoring their immunization services in a systematic way for early appropriate action.

   VPD surveillance: It is well established in majority of the districts, and most of the district focal persons are aware of the activities. Performance varies between districts, with the proportion of districts achieving the set targets for routine immunization and surveillance not reaching the required certification levels

   The following factors were identified as key hindrances to a good surveillance system: untimely reimbursement for specimen transportation; lack of surveillance guidelines; Poor feedback on samples sent for analysis; private sector not fully involved; Lack of transport at sub-district levels; poor communication in remote areas; Inadequate human resources both in quality and quantity; and the lower level health facility workers not empowered in surveillance activities; Irregular and uncertain donor funding and irregular review meetings.

6. Supportive elements:

Financing: overall, districts had good financial control systems, but GoU funding for UNEPI remained the same for the past five years, and PHC funding remains inadequate and irregular. This affected the implementation of activities.

Planning & Management: Majority of districts (82%) have work plans, but only 62% of the health facilities have updated work plans. Among the health facility work plans, immunisation key activities are left out and there are few micro plans developed for activity implementation at district and health facility levels.

Capacity building: Pre-service training gains made by having the EPI curriculum incorporated in many institutions, but in-service training needs more attention. Since 2004, no major initiatives to provide refresher training for health workers have been carried out.

Over the period 2012 to 2016, the programme will focus on addressing the findings of 2010 EPI review, 2011 EVMA and Immunisation Assessment 2012 findings and global targets (MDG 4 & 5 targets and Global Immunisation Vision and Strategy) to improve routine immunization and surveillance performance at all levels.

2.2: Key strategic activities for improving immunization and surveillance

Key strategic activities planned to improve immunisation and surveillance includes:

1. Development and implementation of a national EPI revitalisation plan;
   a. Service delivery
      - Strengthening capacity of mid-level managers, operational level health workers and pre-service trainees to deliver quality EPI services
      - Strategies such as RED, integration of activities (outreaches, child days, supplemental Immunization activities), and advocacy for the programme using evidence-based data will be used to achieve the set targets
      - New Vaccine Introduction of Pneumococcal, Rotavirus and HPV vaccines
   b. Vaccine quality and logistics
      - The establishment of regional EPI hubs to strengthen logistics and vaccine management at all levels
   c. Surveillance:
      - Achieve and maintain polio free status, maintain neonatal tetanus elimination status and pre-elimination measles targets
      - Expansion of the EPI/IDSR regional supervision strategy
      - Strengthen focused support supervision at all levels
2. Development and Dissemination of a national EPI communication plan
   a. Advocacy and communication
      - Strengthen sustained advocacy, community mobilisation and education for routine immunisation, vaccine safety and surveillance
      - Build capacity for interpersonal communication
      - Advocate for sustainable financing of the programme

Below is a systematic presentation of the Key EPI review findings 2010, EVMA 2010, and WHO/UNICEF assessment of the immunisation and surveillance and external in depth surveillance review 2012 in the situation analysis by system components and accelerated disease control initiative Tables 2 – 5 below.

Table 2 Strengths, weaknesses and recommendations of EPI review 2010, EVMA 2011 and Immunisation Assessment 2012 by system components

Component	Strengths	Weaknesses	Actions
1. Service delivery	**Central level** • Good access to immunization services as reflected by coverage of BCG 86% and DPT1 91% in 2011. • National DPT Dropout Rates (DOR) at 10%	**Central level** • 41% of districts attained DPT3 coverage less than 80% in 2011 • High DPT Dropout Rates (DOR) some districts. 36% (40/112) of the districts had DOR of > 10% in 2011	**Central level** • Partners, MoH, and UNEPI to target resources and mentoring aimed at empowering District Health Teams and health facilities to solve operational problems and to perform self-evaluation of their routine immunisation and health delivery services

Component	Strengths	Weaknesses	Actions
1. Service delivery (continued)	**Districts level** • Integration of EPI with other child survival strategies e.g. vitamin A supplementation, de-worming, growth monitoring through child days plus. • 90% of health facilities conduct daily static immunisation • 78% health facilities have plans for static and outreach service delivery	**Districts level** • Understaffing at health facility level • Qualified staff shun immunisation and delegate to low cadre staff due to other competing activities, other better funded programs and irregular allowances compared to other programs • Failure to implement the planned outreaches due to delayed and inadequate allowances and lack of transport • Poor utilization of data (monitoring) for evidence based planning • Majority of districts have no strategies for hard to reach areas/populations	**Districts level** • District to recruit and fill established position to reduce understaffing and initiate performance based appraisals • UNEPI and DHOs to design and put in action a system for monitoring static and outreach functionality • Scale up implementation of RED/REC strategy to lower levels

Component	Strengths	Weaknesses	Actions
2. Vaccine supply and quality	**(a) <u>Procurement and distribution</u>**	**<u>(a) Procurement and distribution</u>**	**(a) <u>Procurement and distribution</u>**
	• GoU paying 100% for the BCG, OPV, Measles and TT vaccines, and injection safety materials and co-financing for DPT-Hep+Hib vaccine since 2007 • Well established procurement line through UNICEF and coordinated by national medical Stores (NMS) and UNEPI • Distribution line well established from the central stores to the district vaccine stores	• Increasing costs to distribute vaccines and logistics on monthly basis from centre to district due to the increasing districts • Inadequate trucks for supply of vaccines to 112 districts, UNEPI has only 4 insulated trucks out of 6 required trucks • Lack of regional stores for vaccines distribution	• UNEPI and partners to develop a cost effective strategy for distribution of vaccines, gas and supplies to the districts. - Secure transport for districts, - Availability of operational funds (PHC funds and external funds) - Operationalize the regional vaccine stores (hub) so as to ease the distribution in the districts
-	•	•	•

Component	Strengths	Weaknesses	Actions
2. Vaccine supply and quality (continued)	• Adequate storage capacity in the districts for new vaccine introduction	• Distribution to the health facilities from the DVS is compromised by funding, transport and lack of vaccine bundling • Episodes of gas stock outs and inadequate gas tracking and monitoring system • 66% of districts reported stock outs of at least one vaccine during 2010 • Vaccine stock control system not fully functional at operational level	• District to develop monthly vaccine and logistics distribution costed plans and include them in their annual work plans • MoFPED to allocate adequate funding for vaccines and immunization distribution plan to health facilities • UNEPI with the district to develop and implement a gas security and accountability monitoring system
	(b)Vaccine management • There is a stock management tool (SMT) at central level which helps to identify gaps to be addressed • Effective Vaccine Management Assessment conducted 2011	**(b)Vaccine management** • Inadequate staff training on SMT and its use • Inappropriate vaccine storage in the fridges leading to loss of labels and high vaccine wastage	**(b)Vaccine management** • Train all UNEPI staff on SMT and ensure the implementation up to district level • A cold chain monitoring study should be conducted at the NVS • Revise HMIS forms and stock record books to capture all necessary information on vaccines (including damaged vaccines), diluents and consumables; print and distribute. • Procuring aadequate and appropriate transport to the district stores to enable them transport stocks to lower levels.

Component	Strengths	Weaknesses	Actions
Vaccine supply and quality (continued)	• VVM on all vaccines and MVDP practiced in all districts	• Lack of vaccine stock monitoring tools • Mismatching of vaccines and diluents from different manufacturers and batch numbers • Inadequate knowledge and irregular temperature monitoring at health facility level • Only 34% of facilities visited are conversant with procedures for handling damaged vaccines. • Only 11% of HFs either calculate wastage rates or use the HMIS form for reporting the only antigen in the schedule for wastage rate (DPT-Hep+Hib)	• Districts to develop costed logistics supply plan and lobby local partners to supplement PHC funding • On job focused technical supervision and mentoring on vaccine management by the DHT and UNEPI • UNEPI to introduce continuous temperature monitoring at the DVS • Establish a formal system to review temperature records on a monthly basis. • UNEPI to conduct OPL trainings to build capacity of the health workers
Logistics	**<u>Cold Chain</u>** **Central level** • Storage capacity is generally adequate at all levels. • All facilities visited had WHO compliant equipment installed	**Central level** • The national capacity is underutilized with the current shelving arrangement in the four WICRs and the one WIFR. • Dry storage capacity at the national level	**Central level** • There is the need to decongest the NVS complex by disposing off obsolete equipment and decommissioned vehicles

Component	Strengths	Weaknesses	Actions
	• The generator at the NVS is standby with automatic start up facilities. • Cold chain inventory at the NVS is available • Majority of equipment at lower levels HFs use gas which is readily available at the NVS	is however, not satisfactory as the warehouse is rented. • Delays in gas supply were experienced in the past leading to even delays in vaccines delivery to districts. • Inadequate funding and transport at central level for regular support to districts for cold chain maintenance	• Expedite construction of the proposed EPI national stores and provide shelves for proper storage and management of the consumables. This will provide saving of the resources being spent on hiring and be used in other areas that will improve on programme performance.

Component	Strengths	Weaknesses	Actions
	District • Almost all HFs have refrigeration equipment that is WHO compliant. **Injection safety and waste management** • The national policy was revised to include use of ADs for curative services. • Committee in place to coordinate injection safety within MOH (UNISTAF). • All health facilities are using ADs for immunization, both for reconstitution and injecting, and for curative services. • Waste segregation is being applied for curative services	**District** • None of the facilities visited had a written contingency plan in case of equipment failure although most staff know what to do in case of emergency **Injection safety and waste management** - Inadequate waste management at health facility level - Bulkiness of ADs has created shortage of storage space at all levels - Improper use of pits at health facilities. - The available incinerators are not sufficient for the service delivery areas (HSDs) and not all are functioning. - Lack of guidelines for disposal of used vaccine vial waste.	**District** • Develop, print and disseminate SOP which sets out a contingency plan in the event of equipment failure or other emergency • UNEPI to support districts to setup SOPs for equipment

Component	Strengths	Weaknesses	Actions

Component	Strengths	Weaknesses	Actions
Advocacy and communication	• Available environment of modern technology for communication i.e. radios, TV, news print, mobile telephones, • Establishment of VHT for community mobilization • MOH structure (technical working group) exists for routine immunisation advocacy, social mobilisation and communication • Majority of districts have health educators • Health unit management committees are functional in 81% health units and 71 % discuss immunisation • Existence of cost effective communication structure e.g. community leaders, VHT, religious leaders • Local community leaders are aware of importance of immunisation and willing to pass information when requested • Availability of local communication channels e.g. FM radio stations	• Lack of updated EPI advocacy and communication strategic plan • No health promotion strategies for routine immunisation to take advantage of the modern technology • Inadequate funding for advocacy and communication • Lack of evidenced based advocacy and communication decision information • Health promotion activities promoting immunisation are limited to periodic events i.e. CDP days and SIAs • Inadequate inter personal communication (IPC) skills among health workers • Lack updated advocacy and communication plans at districts -Most advocacy focuses on SIAs -Inadequate funding for advocacy and communication -Lack of specific plans to target hard to convince population • Lack of IPC skills among health workers • VHTs have not been fully trained on immunisation and the VHT strategy has not been scaled up to all districts • Lack of health education materials for routine immunisation • Lack of local language translated IEC materials	• Develop a cost-effective communication strategy for a sustained advocacy , community mobilisation and education for routine immunization and vaccine safety • IEC materials to be reviewed, updated , translated, printed and distributed • Plan and implement the African vaccination week • Conduct studies for evidence based decision making • To update and implement advocacy, social mobilisation and communication strategic plan • Training and scale up of the VHT for promotion of routine immunisation

Component	Strengths	Weaknesses	Actions
Surveillance	**(a) <u>VPD surveillance</u>** • Surveillance for VPD is being implemented within the Integrated Disease surveillance System and Response (IDSR) framework • Established pneumococcal and rota virus sentinel sites • GoU financing the AFP case based disease surveillance • An assigned medical officer to support surveillance activities at UNEPI who is supported by a surveillance officer and data manager funded by WHO • Established EPI/IDSR offices in eight regional referral hospitals as coordination, supervision and mentorship sites of EPI/IDSR • A comprehensive guideline for detecting, reporting, investigation and responding to EPI priority diseases • Established and accredited UVRI/EPI laboratory to support	**(b) <u>VPD surveillance</u>** • Case based disease surveillance is expensive to sustain • Measles and new vaccine disease surveillance is dependent on WHO funding • Outdated VPD surveillance field guide, last updated in 2004 and lack of resources to make the necessary surveillance tools available • 35% of districts in 2011 did not achieve the target non polio AFP rate of 2/100,000 • Increasing number of districts for focused disease surveillance support supervision by the national level • Inadequate funding and delays in transfer of funds to district level	**(b) VPD surveillance** The MOH and partners to develop cost effective strategies for sustainable case-based disease surveillance • Advocate for GoU support active surveillance activities at district levels • Expand the EPI/IDSR regional supervision strategy • Revise, print and distribute VPD surveillance guideline • Strengthen the Regional and district surveillance system • Initiate the community based surveillances system

	VPD surveillance • Available sensitive and functional surveillance system, which was able to detect a WPV case • Reduction in morbidity due to VPDs e.g. measles reduced by 93% and Hib meningitis reduced by 99%. • Well established surveillance structure at district level including innovative reporting on a weekly basis using mobile phones • Established surveillance in Kampala • Knowledge of case definitions and performance indicators for AFP and measles • Weekly feedback by the national level on district performance every Monday through the daily New Vision Paper • Reporting sites are defined and categorized with an inclusion of NGOs and faith based health facilities • Majority of health facilities had surveillance focal persons. • Health staff were aware of what to look for in terms of most	• Incomplete filling case investigation forms • Discrepancies between case based data and monthly HMIS reports • Active surveillance is not adequately conducted by the district surveillance focal person and health sub district surveillance focal persons • Limited involvement of private sector in surveillance activities • Failure to decentralize surveillance activities to lower levels by district surveillance officers • Lack of community based surveillance system including involvement of traditional healers in surveillance activities • Inadequate planning for surveillance activities • Poor utilization of data for decision making at point of collection	• Develop annual work plan and include community based and private sector surveillance • DHO to decentralise Case-based surveillance to health facility level • Centre to support the Regional and districts surveillance offices to set up an integrated AEFI detection and reporting system

	conditions under IDS	• Lack of a fully established integrated AEFI surveillance system at district level • Lack of supervisory plans and supervisory reports • Lack of operational IDS operational field guidelines • Inadequate support supervision in surveillance activities at all levels • Irregular surveillance review meetings at all levels • Competing priorities of district level surveillance focal persons	
Component	**Strengths**	**Weaknesses**	**Actions**
Programme management	**(a) <u>Policy, planning and management</u>** • Had costed multiyear plan 2010-2014 • Immunization is prioritized and covered in all MOH and other government planning processes • Draft EPI policy and job Aides • Presence of immunisation policies and guidelines • EPI technical meetings • Policy updated to include new vaccines	**(a) <u>Policy, planning and management</u>** • EPI Policy not yet finalised • Few policy documents at operational level • Lack of adequate infrastructure at UNEPI level • Ageing fleet of transport vehicles to supply logistics in increasing number of districts • Weak management in some of the districts affecting immunisation and health service delivery	**(a) <u>Policy, planning and management</u>** • To finalise, print and disseminate policies to operational level • To build bigger office and storage space closer to the MoH for easier communication by 2015 • Procure and replace the ageing fleet at central and district levels • Strengthen management capacity in districts

	• District work plans available in 80% district health offices • Quarterly DHT planning meetings • Existence of health unit management	• Only 40% health facilities with micro plans updated • Irregular planning meetings and involvement with the HUMC • High attrition of health workers • Inadequate coordination of partners • Inadequate transport and operational funding	• Establish RED implementation at district, health sub district and health facility level • MOH should assist the districts to empower HUMC's to understand and to utilize EPI performance indicators • Establish the regional hubs to reduce on stretching in the supply chain
	(b) <u>Monitoring and Supervision</u> • Immunization data fully integrated into MOH HMIS system • Quarterly feedback is provided to districts • Available reference materials for supervision • RED guideline are available for planning and supervision • UNEPI conducts three types of supervision: (a) technical (b) integrated area team and (c) VPD	**<u>(b) Monitoring and Supervision</u>** • Lack of supply and distribution of immunization tools, child health cards and tally sheets to districts • Late and incomplete monthly HMIS reporting from the districts • Irregular support supervision to the districts due to, Increased number of the districts, Lack of funds and transport for supervision • Inadequate financial and human resources for a full scale sustained	**<u>(b) Monitoring and Supervision</u>** • MOH to designate a line item budget and the unit responsible for ensuring the printing and distribution of monitoring tools including child health cards • Build capacity for districts to perform Data Quality Self Assessment (DQSA) • Empower and consolidate the EPI/IDSR regional offices for scale up and establishing surveillance to lower levels

	surveillance. • Regional supervision strategy is operational in seven regions • Partners available for technical support	supervision of all districts • Ageing transport fleet for support supervision	
	• HMIS reporting in place • Have HMIS focal points • Work plans include supervisions and have supervision check lists • Conduct integrated supervision • DHT members involved in supervision • Documentation of supervision findings	• Inadequate trained staff and infrastructure in new districts • Poor data quality leading to discrepancy and duplication • Immunisation district performance not monitored at district and health facility level • Inadequate data analysis and use (only 71% districts) • Lack of data collection and monitoring tools (Availability of tally sheets 61%, Child Health Cards 16%, Child Health Registers 26%) • Poor utilization of guidelines and checklists for supervision • Lack of focused technical supervision	• Partners and MOH should target resources and training more towards empowering DHTs and Health workers conduct data analysis for action • DHO to maintain adequate supplies for all monitoring tools including charts in health facilities • MOH/UNEPI should regularly support quarterly regional meetings and sustain regular technical EPI supervision. These are important for corrective actions and to share experiences/updates • DHO to ensure regular focused support supervision to lower level health facilities

Component	Strengths	Weaknesses	Actions
Programme management (continued)	**(c) <u>Operational Research</u>** • Operational research for new vaccine introduction at central level	**(c) <u>Operational Research</u>** • Lack of operational research for routine immunisation for action at district level	**(b) <u>Operational Research</u>** • Support districts to conduct operational research targeting strengthening health service delivery
Strengthening human and institutional resources	• TOT, OPL and MLM trainings have been conducted • Training database in place • Pre- and in-service training programmes are in place	• Inadequate training in the districts • Slow scale up of trainings dependant on partner funding • Training Needs Assessment last conducted in 2004 • Pre-service training not well established • Lack of training materials at district level • Few health worker received in-service training in the last 12 months • Under staffing at district level	• UNEPI mobilize resources to train regional and district trainers for a quick scale up of training needs in the district • Local partners in district to mobilize resources for health worker capacity building as a supplement to MOH support • Conduct a national TNA • The MOH together with Partners should work toward developing a comprehensive, decentralised and sustained mechanism for upgrading and maintaining the skills of DHTs and operational health workers
Component	**Strengths**	**Weaknesses**	**Actions**
Sustainable financing	• UNEPI has a budget line • 100% GoU financing for traditional vaccines and Co finances DPT-Hep+Hib vaccines and the PCV • Routine immunisation funding is	• Government funding for health remains relatively static PHC funding to the districts has remained static since 2004/05 • Inadequate GOU allocation for UNEPI operational costs	• The MoH should work towards the Abuja Declaration Goal of 15% of the government's budget for health. • MOH and partners to pursue approaches outside the traditional "EPI" arena, such as the private sector which

	available through the PHC conditional grants to the districts • UNEPI has support from health partners	• Delayed release of PHC funds to the districts for activity implementation • Few partners supporting immunisation at district level	have been successful in strengthening immunization programmes in other countries • MoFPED to release operational funds timely for implementation of activities at national and district level
Introduction of new vaccines	• UNEPI successful introduction of DPT-Hep+Hib in national vaccination schedule in 2002 • Conducted EVMA in preparation for new vaccine introduction • Received additional equipment for expansion and replacement of the vaccine storage at centre and district level • Have national PBM and Rotavirus sentinel sites to asses disease burden • Conducted HPV demonstration study in preparation of introduction of HPV vaccine	• High disease burden due to: - Invasive Pneumococcal Disease (IPD) - Severe diarrhoea disease due to rotavirus. - High direct medical cost of Pneumococcal and Rotavirus diseases • Post introduction evaluation not conducted for pentavalent	• MOH to conduct a detailed assessment of operational and cost implication before introducing any new vaccines, this should be shared with all stake holders • UNEPI to conduct a post introduction evaluation for all new vaccine introduced and make reports available
Component	**Strengths**	**Weaknesses**	**Actions**
Accelerated Disease Control	(a) **Polio Eradication** • National Polio preparedness plan • Conducted Preventive Polio SIAs in 48 high risk districts and WPV outbreak controlled 2010 • Conducted Polio NIDs in 2009 • Have functional National Polio	**(a) Polio Eradication** • Inadequate financing of Government for integrated disease surveillance • Two Polio outbreaks in between 2009 and 2010 • National polio Non AFP rate decreased from 3.4 in 2009 to 2.5 in 2010	**(a) Polio Eradication** • The MoH and WHO should develop a strategy for increasing GOU support to surveillance activities • Districts to work towards the attainment of the new National target for Polio AFP

	Certification committee (NCC), National Polio Expert Committee (NPEC) and National Polio Laboratory Containment Task Force (NTF)	• 40% (32/80) districts have a AFP rate <2/100,000 • 71% monthly timeliness including zero reporting • Inadequate MoH support of polio committees Polio committees felt that they do not have official recognization	rate of 4/100,000 • MOH and WHO to strengthen surveillance at regional IDSR offices for better implementation at the districts and lower levels
	(b) Maternal and Neonatal Tetanus Elimination (MNTE) • Uganda certified for MNTE • Integrated School health delivers TT to school girls • Established Child Health Days Plus as a period for accelerated catch-up actions	**(b) Maternal and Neonatal Tetanus Elimination** • TT2+ coverage at 53% among pregnant women • Irregular school health program due to inadequate PHC funding • Lack of a national plan to sustain MNTE • Lack of global report of TT program for Uganda • Inadequate funding for Child Health Days Plus	**(c) Maternal and Neonatal Tetanus Elimination** • MOH and Districts to strengthen integrated service delivery more so during the Child days plus to improve on catch up immunisation • MoH and MoES to develop a strategic plan to sustain a national MNTE • UNEPI to collaborate with Reproductive Health to promote clean deliveries
	(c) Measles Control • Established case based measles surveillance • Measles control efforts resulted in >90% reduction in measles morbidity and mortality • Have measles control plan • Conducted National Measles SIAs 2009	**Measles Control** • National Measles coverage at 73% • 74% of districts with measles coverage less than 90% in 2010 • Expensive centralized measles laboratory investigation due to increasing districts	**(c) Measles Control** • UNEPI and Districts to strengthen routine immunisation service deliver for improved immunization coverage • To conduct National Measles SIAs in 2012

*Source of data: EPI review 2010, EVMA 2011 and assessment of Immunisation and surveillance 201

Table 3 Situation Analyses by Accelerated Disease Control Initiatives, Uganda, 2006-2011

Component	Suggested indicators	National					
		2006	**2007**	**2008**	**2009**	**2010**	**2011**
Polio Eradication	National OPV3 coverage[1]	80%	85%	79%	83%	80%	82% 63% (UDHS)
	Proportion of districts with OPV3 coverage ≥ 80%	49.3%	62.5%	50%	59%	58%	60%
	Non polio AFP rate per 100,000 children under 15 years of age	2.24	2.07	2.38	3.74	2.49	3.0
	Proportion of districts with non polio AFP rate >2 per 100,000	51%	38%	49%	75%	61%	56%
	Number of confirmed wild polio virus cases	0	0	0	8	4	0
	NIDS/ SNIDS conducted	Integrated NIDs (measles and polio)	No SIAs	Polio SNIDs in 9 districts	Polio SNIDs in 41 districts and NIDs	2 Polio SNIDs in 48 districts and 2 Polio SNIDs in 21 districts	6 Polio SNIDs (2 rounds in 48 districts, 2 rounds in 8 districts and 2 rounds in 22 districts)
Maternal and Neonatal Tetanus Elimination	TT2+ pregnant women coverage	50% 76% (UDHS)	57%	50%	52%	53%	49%
	Number of districts reporting > 1 case per 1,000 live births	0/69 (0%)	0/80 (0%)	0/80 (0%)	0/80 (0%)	0/80 (0%)	0/112 (0%)

[1] Source of data: MOH Health Management Information System

Component	Suggested indicators	National					
		2006	2007	2008	2009	2010	2011
	SIAs conducted	2 rounds in 9 high-risk district	0/80 (0%)	2 rounds in 5 high-risk districts	1 round in 5 high-risk districts	0/80 (0%)	0/112 (0%)
Measles Control	Measles coverage [3]	89%	85%	77%	80%	73%	76% 76% (UDHS)
	Proportion of districts with measles coverage ≥ 90%	38%	36.3%	23.8%	26%	18%	26%
	Number of districts outbreaks of measles reported				0 outbreak (1 lab confirmed)	0 outbreak	2 outbreaks
	Reported suspected measles cases (HMIS)	5,736	3,378	2,927	1,221	1,313	3,312
	Proportion of suspected measles cases with serum investigation	40%	51%	53%	97%	98%	54%
	Proportion of districts that have investigated at least 1 measles case	94.2%	90%	98%	89%	90%	89%
	NIDS/ SNIDS conducted; Age group coverage	NIDS 6-59 month (integrated polio and measles)	0	0	NIDS 9-47 months (integrated polio and measles)	0	0

N.B: The number of districts increased from 56 in 2005 to 80 in 2007 and 112 in 2011

Table 4 Situation analysis of routine EPI by system components, Uganda, 2006-2011

Component	Suggested indicators	National					
		2006	2007	2008	2009	2010	2011
Service delivery							
	National DPT3 coverage[2] (DPT-Hep+Hib) (Administrative)	80%	85%	79%	83%	80%	82%
	Proportion of districts with DPT3 coverage ≥ 80%	49.3%	62.5%	50%	59%	58%	59%
	National DPT1-3 dropout rate	10%	10%	11.6%	12.6%	8%	10%
	Proportion of districts with DPT1-3 dropout rate ≤ 10%	47.8%	48.8%	45%	45%	56%	60%
Vaccine supply, quality and logistics	National stock out of vaccines reported during the last year	No stock out	No stock out	No stock out	No stock out	No stock out	No stock out
	Proportion of districts reporting stock out of the following antigens at DVS at least once a year:	ND	ND	ND	BCG: 65% DPT: 56% OPV: 78% Measles: 36% TT: 0%	BCG: 63% DPT: 65% OPV:78% Measles: 43% TT: 84%	BCG: 12% DPT 12% Polio 18% Measles 5% TT2+ 10%

[2] Source of data: MOH Health Management Information System
[2] Source of data: Uganda Demographic and Health Survey 2006

Component	Suggested indicators	National					
		2006	2007	2008	2009	2010	2011
	Proportion of districts supplied with adequate number of ADs for all routine immunisations	100%	100%	100%	100%	100%	100%
	Percentage of districts with adequate functional cold chain equipment	100%	100%	100%	100%	71%	100%
	Number of districts using AD syringes for immunization	All	All	All	All	All	All
	Percentage of districts supplied with safety boxes	100%	100%	100%	100%	100%	100%
	Percentage of districts with proper sharp waste management disposal						
Advocacy and communication	Availability of a communication plan at national level	N	N	N	N	N	N
	Percentage of districts who have developed a communication plan	N	N	N	N	N	N
	Percentage of caretakers of children <1year understanding the importance of immunisation				No data	No data	No data
Surveillance	Completeness of district reporting to national level	90%	94%	90.7%	99%	96%	92%

Component	Suggested indicators	National					
		2006	2007	2008	2009	2010	2011
	Quality of surveillance sufficient	Y	Y	y	N	N	N
	Timeliness of district reporting to national level	72%	76%	76%	80%	73%	92%
Programme Management	Number of HPAC meetings held	12	12	12	12	12	12
	Percentage of total routine vaccine spending financed using government funds	100% (BCG, Measles, OPV, TT); 0% DPT-HepB +Hib vaccine	100% (BCG, Measles, OPV, TT); 7% DPT-HepB +Hib vaccine	100% (BCG, Measles, OPV, TT); 7% DPT-HepB +Hib vaccine	100% (BCG, Measles, OPV, TT); 6.4 % DPT-HepB +Hib vaccine	100% (BCG, Measles, OPV, TT); 5.5% DPT-HepB +Hib vaccine	100% (BCG, Measles, OPV, TT); 5.5% DPT-HepB +Hib vaccine

Table 5 Baseline, annual population targets and immunisation coverage targets for EPI 2011 – 2016

cMYP years	***Baseline 2011***	**2012**	**2013**	**2014**	**2015**	**2016**
Population	*32,939,800*	33,993,874	35,081,678	36,204,291	37,362,829	38,558,439
Births (4.85%)	*1,597,580*	1,648,703	1,701,461	1,755,908	1,812,097	1,870,084
Surviving Infants (Births-Deaths)	*1,476,164*	1,559,673	1,609,582	1,661,089	1,714,244	1,769,100
IMR per 1000 LB	*76*	54	54	54	54	54
Fully Immunized Children (proxy-DPT3)	*1,210,455*	1,310,125	1,384,241	1,461,758	1,542,820	1,627,572
Pregnant women	*1,597,580*	1,648,703	1,701,461	1,755,908	1,812,097	1,870,084
Child Bearing Age Women (23%)	*7,576,154*	7,818,591	8,068,786	8,326,987	8,593,451	8,868,441
Vit A supplementation 6months -59months (18.5%)	*6,093,863*	6,288,867	6,490,110	6,697,794	6,912,123	7,133,311
Girls 10years old (1.6%)	*527,037*	543,902	561,307	579,269	597,805	616,935
BCG coverage	*86%*	90%	92%	94%	95%	95%
DPT-HepB+Hib1	*91%*	92%	94%	96%	98%	98%
DPT-HepB+Hib3	*82%*	84%	86%	88%	90%	92%
OPV3	*82%*	84%	86%	88%	90%	92%
Measles	*75%*	84%	86%	88%	90%	90%
TT2+ (Pregnant)	*49%*	65%	70%	75%	80%	85%
DPT1-3 dropout	*10%*	9%	9%	8%	8%	6%
PCV 1			94%	96%	98%	98%
PCV3			86%	88%	90%	92%
Rota1				96%	98%	98%
Rota2				88%	90%	90%
HPV	*58%*	60%	70%	75%	80%	80%

3. Problems, Objectives, Mile stones, Global goals, priorities, strategies, activities and timeline by EPI components cMYP 2012-2016

Systematic presentation of problems, objectives, milestones, goals, order of priority, key activities and timeline.

Table 6 Problems, Objectives, Mile stones, Global goals, priorities, strategies, activities and timeline by EPI components cMYP 2012-2015

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
Service delivery	1. Only 59% of districts attained DPT3 coverage above 80% in 2011	To achieve at least 80% coverage for all routine childhood antigens (using DPT-HepB+Hib3 as a measure) in 80 % of districts by 2015	2012: National DPT3 coverage at 84%; 66% districts above 80% coverage; 2013: National DPT3 coverage at 86% ; 73% districts above 80% coverage; 2014: National DPT3 coverage at 88%; 80% districts above 80% coverage; 2015:Attain and Sustain a National DPT3 coverage above 90%; 80% districts above 80% coverage; 2016: Sustain a national coverage of 90%	Meet vaccination coverage targets in every region, country and community, (Reach 90% national coverage and 80% in every district or equivalent administrative unit for DPT containing vaccines)	1	Build capacity at district level and lower levels to implement RED/ REC strategies	I) Conduct micro planning, mapping catchment area per health facility including private practitioners (ii)Identify priority areas (such as hard to reach areas, underserved population, high risk populations) develop and implement plans to reach the populations (iii)Audit performance of outreaches (iv)Establish Community Linkage and mobilization using local structures (VHTs, LC1,Leaders) (v)Conduct data analysis and utilize at district and at health facility (vi)Implement World/ African vaccination Week (vii)Monitor and evaluate Private sector involvement in EPI (vii)Daily Immunization at static units with screening for Immunization status at OPD (vii)Public sensitization on the importance of card retention using print and electronic media	x	x	x	x	x

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
	2. High Dropout Rates (DOR) in many districts 40% (45/112) of the districts had DOR of > 10% in 2011	To achieve at least 90% of districts with a dropout rate of less than 10% by 2015	National DOR 2012: 70% districts with DOR <10% 2013: 80% districts with DOR<10% 2014: 90% districts with DOR <10% 2015-2016 Sustain a drop out rate of <10%		1	Conduct Periodic Intensified Routine Immunization activities	(i)Conduct Accelerated Routine / catch up Immunization Activities using: Child Days Plus, Family Health Days, SIAs & other opportunities in all districts (ii)Collaborate with Ministry of Education to institute a policy on screening for Immunization status at school entry (iii)Conduct tracking mechanism for missed children/drop outs	x	x	x	x	x

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
Vaccine supply and quality	Large number of districts reporting stock outs of routine vaccines 2011: BCG-12%;DPT-12%;OPV-18%;Measles 5%;TT-10%;	To achieve and sustain adequate vaccine stock levels in all the districts and 0% stock out in health facilities	2012:60% of the districts reporting zero vaccine stock outs2013:80% of the districts reporting zero stock outs2014:100% of the districts reporting zero stock outs2015-2016Sustain 100% districts reporting zero stock outs		1	(i)Establish regional hubs for vaccine and logistics distribution (ii)Establish a cost effective and sustainable system for distribution of vaccines and immunisation supplies (including gas cylinders)(iii)Progressively increase alternative sources of energy (electricity and solar) and enhance efficient utilization of gas-	(i)Identify resources, space and personnel for the regional hubs (ii)Train NMS on vaccine handling (iii)Institute alternative and quicker means of procurement, distribution and tracking of gas cylinders (iv)Support districts to set up DVS(v)Construction of the proposed EPI national stores (vi)Build capacity for cold chain maintenance at regional hubs & districts (Training, Procure cold chain equipment, spare parts and workshop consumables)(vii)Support central, regional hubs and district teams to carry out routine and timely maintenance and repair of equipment(viii)Regular replacement, repair and maintenance of old and non functional equipment - Conduct studies on the cost effective energy sources for EPI cold chain- Implement use of the cost effective cold chain energy source- Timely procurement, storage and tracking of vaccines and immunisation logistics for routine immunization (Including gas)- Scale up use of Stock Management Tools (SMT) at central and district levels - Determine the district and regional needs/ gaps	x	x	x	x	x

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
			2012: 80% of the districts with VIMCB 2013: 100% of the districts with VIMCB 2014-2015 Sustain and maintain 100% VIMCB		1	Vaccine monitoring tools included in NMS procurement plan	(i)Update, Print and Distribute the VIMCB	x	x	x	x	x

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
			2012:Establish LMIS at national level2013-2014:Roll out LMIS to 50% districts2015:75% of the districts with LMIS 2016:100% of the districts with LMIS		2	Build capacity at regional hubs and districts for LMIS	Procurement of equipment Train personnel of district and regional hubs on LMIS Post training follow up and evaluation Specialized technical support supervision		x	x	x	x
	Lack of training in vaccine management and quality	100% districts trained and oriented in Vaccine Supply and Quality	2012: 100% of the districts trained and oriented in vaccine management 2013-2015 Sustain 100% districts orientated in the districts		1	Build capacity at districts for vaccine management	Train district personnel on vaccine management	x	x	x	x	x

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
Cold Chain / Logistics	The national capacity for vaccines storage is insufficient for new vaccines	To expand storage capacity at district and facility level	2013-2014: Expand and establish cold chain storage space in the districts 2012-2015: Construction and completion of the National Vaccine stores 2012-2015: • Establish regional vaccine hubs	Meet vaccination coverage targets in every region, country and community	1	(i)Expansion of vaccine & logistics storage space (ii)Establish an effective and efficient storage and distribution system for EPI vaccines and logistics	(i)Procure additional cold rooms at CVS (ii)Equip regional hubs to effectively handle vaccines (iii)Procure gas cylinders for facilities	**x**	**x**	**x**	**x**	
					1		Identify resources and construct and equip vaccine logistics in new districts		**x**	**x**	**x**	**x**

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
	Inadequate vaccine and logistics storage space at district level for HPV and Rota vaccine national introduction				2		(i)Procure additional cold chain storage facilities for district and facilities (ii)Conduct Cold chain assessment and EVMA in plan for NVI; Expand the vaccine and logistics space		x	x	x	x
	10% adequacy in transport for immunisation and community outreaches	2012-2014 To procure and equip the central level and districts with transport	2012-2014 Procure transport for national and district level		1	Provide transport for EPI activities	Procure and maintain 6 field vehicles, 9 trucks, 68 district multi-purpose vehicles, 584 motorcycles and 10,000 bicycles in line with expanding administrative levels and the transport replacement plan		x	x	x	x

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
Injection safety and waste management	Inadequate waste management at health facility level (Insufficient incinerators and lack of guidelines)	To attain 100% safe disposal of open and closed unusable vaccine vials	2012: Incorporate vaccine vial disposal guidelines in waste management policy 2013: Inventory of facilities with waste disposal available 2014: All health facilities with incinerators or safe waste disposal pits 2015: Attain and sustain 100% safe disposal of open and closed unusable vials		3	Collaborate with MOH infrastructure division, and partners to ensure adequate disposal of open and closed unusable vaccine vials	(i)Advocate for MOH to develop appropriate management of waste disposal (ii) Update, pint and disseminate guidelines (iii)Monitoring of guideline implementation (iv)Contribute to regional incineration facilities	x	x	x	x	x

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
Advocacy and Communication	Lack of evidence based Advocacy and communication plan for routine immunization	Finalize and disseminate an evidence based advocacy and communication plan by 2012	2012:Finalize, disseminate and rollout evidence based advocacy and communication plan 2013-2015:Sustain the utilization of the advocacy and communication plan	Individuals and communities understand the value of vaccines and demand immunization both as a right and a responsibility; (Level of public trust in immunization, measured by surveys on knowledge, attitudes, beliefs and practices)	1	Data driven approach to guide messages, communication channels, strategies and evaluation of communication and advocacy	(i)Coordinate, monitor and evaluate communications for Routine immunization, including plans for emergency response and responding to AEFI (ii)Conduct social research to understand the knowledge, attitudes, practices of key stakeholders and establish baseline data (iii)Social mapping of key influencers, resistant groups, key stakeholders, resources at all levels including at risk, mobile,marginalised and hard to reach population	**x**	**x**	**x**	**x**	**x**

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
	Inadequate Inter - personal communication (IPC) skills and materials among health workers leading to low utilization	To train all health workers on IPC in all districts by 2015	2012: Health workers in 20% of districts trained in IPC and disseminate the 5 key messages on EPI during immunization sessions; 2013: Health workers in 50% of districts trained in IPC and disseminate the 5 key messages on EPI during immunization sessions; 2014: Health workers in 80% of districts trained in IPC and disseminate the 5 key messages on EPI during immunization sessions; 2015: Health workers in 100% of districts trained in IPC and disseminate the 5 key messages on EPI during immunization sessions;		1	Establish evidence based advocacy and communication	Develop, print and disseminate evidence based messages; Conduct advocacy meetings with service organizations like lions club, rotary clubs, religious leaders, cultural leaders, parliamentarians, local leaders	x	x	x	x	x

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
	VHTs have not been fully oriented on immunization and the VHT strategy has not been scaled up to all districts	To sensitize village health teams (VHTs) on EPI in 100% of districts by 2015	2012: VHTs sensitized in 20% of districts 2013: VHTs sensitized in 50% of districts 2014: VHTs sensitized in 80% of districts 2015:VHTs sensitized in 100% of districts			Build interest of key stakeholders in routine immunization	(i)Advocate for immunization to be an agenda in the Health unit management committees, Sub County and district local councils and parliament debates (ii)Support districts to orient the VHT on routine immunization	x	x	x	x	x

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
Surveillance	64% of districts did not achieve the target Non Polio AFP rate >=4/100,000	To attain and sustain a NPAFP rate of 4/100,000 in at least 60% districts by end of 2012	Proportion of districts attaining a NPAFP rate of 4/100,000 2012: 60% 2013: 100% 2014: 100% 2015: 100%	Achieve a world free of poliomyelitis(Interrupt wild poliovirus transmission globally)	1	Provide focused technical, logistical and financial support to districts to achieve/maintain polio certification level indicators within the IDSR framework	i) Mobilize, protect and ensure timely availability of surveillance funds at the district level (ii)Regular technical support supervision for surveillance activities in all districts by national and regional surveillance teams (iii)Develop and implement a comprehensive surveillance training/sensitization plan including professional bodies, private sector and training institutions	x	x	x	x	x

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
	2. Stool adequacy is below 80% in 39% districts	To attain and maintain stool adequacy of 80% and above in all districts by the end of 2012	2012: Attain a national stool adequacy of 80% and above		1	- Strengthen community surveillance system -Strengthen collaboration with the national Drug Authority-Establish AEFI committees in all districts	(iv)Capacity building of VHT members in events-based reporting of priority diseases and conditions in low AFP detection districts (v)Computerization of monitoring of AEFIs at national and regional referral hospitals (vigiflow system) (vi)Conduct monthly AEFI district committee meetings	x	x	x	x	x

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
	2% of reported measles cases are not investigated for laboratory confirmation	100% of the reported measles cases are investigated for laboratory confirmation		Meet global and regional elimination targets (Measles eliminated in at least four WHO regions)	1			x	x	x	x	x

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
	Only 60 of reported suspected NNT cases are investigated	100% of the reported NNT suspected cases are investigated	2012: 70% of suspected reported NNT cases investigated2013: 80% of suspected reported NNT cases investigated2014: 90% of suspected reported NNT cases investigated2015: 100% of suspected reported NNT cases investigated	(Neonatal tetanus eliminated in all WHO regions)	1			x	x	x	x	x
	Lack of fully established integrated AEFI and Pharmacovigilance committee in the districts	To achieve fully established AEFI and Pharmacovigilance committee by 2014	2012: 70% of the districts reporting on AEFI, including zero reporting 2013: 80% of the districts reporting on AEFI, including zero reporting		2				x	x	x	x

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
			2014: 90% of the districts reporting on AEFI, including zero reporting 2015: 100% of the districts reporting on AEFI, including zero reporting									

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
Policy, Planning and Management	Immunization not adequately prioritized and covered in all MOH and other government planning	To achieve high visibility and prioritization of EPI in government planning and funding by 2012	2012: EPI Advocacy and communication strategic plan should be fully operationalised	The benefits of immunization are equitably extended to all people (Percentage of districts with less than 80% coverage with 3 doses of DPT containing vaccine)	1	(i) A national EPI Advocacy and communication plan finalized and disseminated (ii) A National Task Force for immunization (NTFI) will be revived with major roles of providing technical support and ensuring that the program implements the set activities and strategies.	(i) Disseminate EPI advocacy and communication strategic plan (ii) Conduct advocacy meetings for immunization funding (iii) Conduct Quarterly Immunization NTF meetings	x	x	x	x	x

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
	EPI policy has been updated but not printed for dissemination	To finalize and disseminate EPI policy by 2012	2012: Final updated EPI policy finalized and presented to technical working group, senior management, HPAC and top management. 2013: EPI policy printed and disseminated to all districts		1	(i) Conduct a stake holders meeting to discuss the updated policy	(i) Print and disseminate the EPI policy to all stake holders	x	x	x	x	x
	Inadequate PPP coordination for immunization resource mobilization	Establish a private public partnership for increased resource mobilization by 2013	2012:Consultative process established2013:PPP framework developed2014:A functional PPP for routine immunization		1	(i)EPI included in the PPP frame work (ii) Establish a working committee including private public partners	(i) Conduct stake holder meetings (ii) Identification of key activities for private partner support (iii) Conduct quarterly assessment meetings	x	x	x	x	x

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
Monitoring and Supervision	Lack of regular support supervision from the national and district levels	To conduct regular supportive supervision: central level quarterly and district level monthly	2012-2013: 4 quarterly visits to the districts and feedback conducted annually; 2012-2013: monthly District Health Team (DHT) supervision visits to the lower level health facilities 2014-2015: Sustain the program for immunisation at all levels	Strong immunization systems are an integral part of a well-functioning health system (Dropout rate between first dose of DPT-containing vaccine and first dose of measles-containing vaccine) (Immunization coverage data assessed as high quality by WHO and UNICEF)	1	(i) National and district costed plans to include support supervision at all levels (ii) Conduct regular quarterly regional meetings to plan and asses supervision priorities	(i) Develop and supply supervision tools (ii) Resource mobilization for support supervision (iii) National and district feedback and follow-up to all levels	x	x	x	x	x

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
		To expand and strengthen the mentorship program in the districts using the Regional EPI/IDSR model and create a cascading structure to the lower level facilities	2013: All regional hospitals implementing EPI/IDSR support supervision strategy			(i) Regional EPI/IDSR supervisors trained and equipped for mentorship program in the districts	(i) Train EPI/IDSR supervisors in mentorship and supervision (ii) Train district health teams in supervisions	x	x	x	x	x

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
	Lack of supply and distribution of immunization tools, child health cards and tally sheets to districts	To achieve 100% HMIS completeness and timeliness by 2015	2012-2014 Adequate quantities of monitoring tools and child Health Cards in the districts		1	(i)MOH to identify and designate a line item budget for HMIS tools (ii)To identify health partners to supplement supplies for HMIS tools (iii) Districts to include monitoring tools in annual budget lines	(i) Printing and distribution of monitoring tools including child health cards	x	x	x	x	x

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
	92% HMIS completeness reporting and poor data utilization for evidence planning		2012: Achieve 96% HMIS reporting and completeness 2013: Achieve 98% HMIS reporting and completeness 2014: Achieve 100% HMIS reporting and completeness 2015: Sustain 100% HMIS reporting and completeness		1	(i) Build capacity for districts to perform Data analysis and Data Quality Self Assessment (DQSA) for action	(i) Train all HMIS focal points in all district and HSD level (ii) Conduct data audits (iii) Explore and expand modern technology for HMIS reporting	x	x	x	x	x

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
Operational Research	Lack of operational research for action and to guide implementation at district level	To institutionalize operational research for strengthening routine immunization service delivery by 2014	2012: Operational research plan involving National and district level developed 2013 - 2014: Operational Research work plan implemented		3	(i) Operational research included in work plans of districts and lower level health facilities (ii) Development of research protocols by national and district personnel (iii) Identify critical programme areas that require research	(i) Train and mentor health workers in conducting operational research for action (ii) Activity plans developed for operational research (iii) Resource mobilization for research		**x**	**x**	**x**	**x**

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
Strengthening human and institutional resources	High numbers of health workers not trained or oriented in EPI	To train and equip health workers on routine immunization and disease surveillance	2012: 20% health workers trained/re-trained in EPI 2013: 40% health workers trained in EPI 2014: 60% health workers trained in EPI 2015:80% health workers trained in EPI		1	(i)Dialogue with key stakeholders at MOH and MOE to implement and update pre-service curriculum to include provide training materials to institutions (ii) Equip pre and in-service health workers and mid-level managers with knowledge, skills and competencies in EPI service delivery	Conduct and scale up EPI MLM and OPL training in the districts	x	x	x	x	x

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
	Immunisation not well articulated in pre-service curriculum	To build capacity for pre and in-service health workers at national and district levels by 2015	2012: Immunisation pre service curriculum established and implemented in the health training institution programs 2015: Institutionalized EPI training in Pre and In-service training		2		(i) Work with the Ministry of Education to update the pre-service health training curriculum (ii) Conduct trainings for health tutors in EPI	x	x	x	x	x
	Training needs assessment only conducted in only 26 districts		2012: Training needs assessments conducted in 50% districts 2013: Training needs assessment conducted in 50% districts		2	(i) Biannual district training needs assessment	(i) Empower district to conduct training needs assessment		x	x	x	x

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
	Lack of training materials at district level and health facility level		2013-2014: Training materials updated and disseminated to all regions and district		1	(i) Update and print training materials by 2013	(i) Identify all materials required to update and for production (ii) Identify and get commitment of resources from partners	x	x	x		

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
Sustainable Financing	PHC funds to the districts have remained static since 2004/2005	To Advocate for increased GOU allocation for PHC operations and UNEPI operational costs by 2013	By 2012: Advocacy for sustainable and proportionate increments of financing for EPI 2013: Increased district PHC allocations for routine immunization activities	Immunization programs have sustainable access to predictable funding, quality supply and innovative technologies (Percentage of routine immunization costs financed through government budgets)	1	(i) Implement the advocacy and communication plan (ii) Make an investment case to justify to Ministry of Finance for increased allocation to the sector and programme	(i) Conduct stake holder meetings (MOH, MOF, Health partners, Political leader (ii) Work through HPAC to look for additional partners to support EPI (iii) Use evidence-based advocacy for resource mobilization from government and partners at national and district levels (iv) Resource mobilization meetings and seminars (v) Advocate for regular, adequate and timely financial flows to the programme	x	x	x	x	x

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
	Inadequate GOU allocation for UNEPI operational costs	To explore alternative sources for EPI funding outside the traditional EPI funding by 2012	2012: Consultative process established 2013:PPP frame work developed 2014: Focus on immunization amplified within PPP 2015: Sustain the established alternative funding sources apart from the traditional sources to bridge the existing gap		1	(i) Advocacy and coordination of the private sector for immunization resource mobilization (ii)Engage the private public partnership for increased resource mobilization for immunization services	(i) Conduct advocacy and awareness / sensitization meetings with Private sector (ii) Active participation of private sector in immunization activities	x	x	x	x	x

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
Introduction of new vaccines and technologies	High disease burden due to Invasive Pneumococcal Disease (IPD)	To introduce pneumococcal vaccine into the routine immunization schedule by 2013	2012: Obtain GOU contribution towards PCV vaccines 2013: To reach 90% of the surviving children having received PCV 32014: To reach 90% of the surviving children having received Rotavirus Vaccine 3 2015: To sustain the achievements of routine immunization coverage	To support vaccination of wider age groups and new target populations as the need arises and resources become available	1	(i) Conduct a cost-benefit and cost effectiveness studies for new and traditional vaccines	(i) Implement new vaccine introduction plan (ii) Resource mobilization (iii) Development of tools and awareness campaign materials for new vaccine introduction (iv) Training of health worker and communities on new vaccine introduction (v) Major launch of new vaccine introduction (vi) conduct supportive supervisions and monitoring (vi) Programmatic evaluation of HPV vaccination (vii) To conduct Post Introduction Evaluation (PEI) and make reports available (xi) Expand and maintain surveillance system for new vaccines	x	x	x	x	
	High infantile diarrhea disease burden due to Rota virus	To introduce rotavirus vaccine into the routine immunization programme by 2014	2012: Obtain GOU commitment towards Rota virus vaccines introduction 2012: Develop proposal for Rota		1	Use evidence based disease burden for informed GAVI proposal application and GOU support		x	x	x	x	x

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
			virus vaccine introduction 2013: Obtain GOU contribution towards Rota virus vaccines 2014: To introduce Rotavirus in the immunization schedule 2015: To reach 90% of the surviving children having received RV									
		2012: Scale up of the HPV to 12 districts 2013: Roll out HPV to 30 new districts 2014:To introduce HPV vaccine into the routine immunization	2015: Develop implementation plan for HPV introduction		1	(i)HPV introduction through a phased approach (ii)Target girls in primary 4 and 10 year old girls (iii)Community engagement and awareness	(i) Conduct planning meetings with stakeholders (ii) Production of training tools (iii) Training of health workers (iv) Conduct a PIE	x	x	x	x	x

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
G) Accelerated disease control activities	OPV coverage at 82% and 45% of the districts have an OPV3 coverage less than 80%	To achieve and sustain polio eradication status by 2012	2012: - National DPT3/OPV3 coverage at 84%; 66% districts above 80% coverage; 2013: - National DPT3/OPV3 coverage at 86% ; 73% districts above 80% coverage; 2014: - National DPT3/OPV3 coverage at 88%; 80% districts above 80% coverage; 2015: - Attain and Sustain a National DPT3/OPV3 coverage above 90%; 80% districts above 80% coverage; 2016: Sustain a national coverage of 90%	Achieve a world free of poliomyelitis (Interrupt wild poliovirus transmission globally)	1	(i) Achieve and maintain high routine immunization coverage for OPV3 (ii) Conduct supplemental immunization activities (iii) Strengthen district disease surveillance for AFP detection (iv) Strengthen involvement of the Polio committees	(i) Implement preventive and response nationwide polio SIAs (ii) Conduct regular risk assessments (iii) Reviewing and updating the national polio preparedness plan (iv) Support NCC, NPEC and NTF (v)Support to the laboratory to maintain accreditation	x	x	x	x	x
	TT2+ national coverage at 49% among pregnant women	To sustain MNT elimination status by 2015	2012: Achieve 65% TT2+ coverage among pregnant	Meet global and regional elimination targets(Neonatal	1	(i) Conduct and document TT Vaccination During antenatal days (ii) Sustain progress towards	(i) Work with Reproductive Health to review strategies for immunizing women during ANC attendance (ii) Scale up TT vaccination in schools	x	x	x	x	x

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
			women2013: Achieve 70% TT2+ coverage among pregnant women 2014: Achieve 75% TT2+ coverage among pregnant women2015: 80 % TT2+ coverage among pregnant women 2016: Achieve and sustain above 80% TT2+ coverage	tetanus eliminated in all WHO regions) (Measles eliminated in at least four WHO regions)		MNT elimination (iii) Scale up Involvement of other Stakeholders in MNTE e.g. Reproductive Health, Ministry of Education, School Health	to sustain elimination					

System Component	Problem/ Priority Issue	UNEPI Objectives	Milestones	Global/ AFRO Goals	Order of priority	Implementation Strategies	Key Activities	2012	2013	2014	2015	2016
	Measles national coverage at 75% and only 26% of the districts have a coverage of greater than 90%	To achieve near zero measles morbidity and mortality by 2015	2012: Conduct a national under-5 measles follow up campaign 2012:Achieve 40% of districts above 90% routine measles coverage 2013: Achieve 50% of districts above 90% routine measles coverage 2014: Achieve 60% of districts above 90% routine measles coverage2015: 70% of districts above 90% routine measles coverage		1	(i)Achieve high routine measles immunization coverage (ii) Provide a 2nd opportunity for measles vaccination	(i) Review and update the Measles Control Plan (ii) Conduct integrated measles follow and up campaign	x	x	x	x	x

5. Costing and Financing, Uganda Multi Year Plan, 2010-2015

5.1 Macro economic background

The Uganda economy experienced varying growth rates when Poverty Eradication Action Plan was being implemented, with an average GDP growth rate of 7.2 percent between 1997/78 and 2000/01 and 2003/04, increasing to 8 percent over the period 2004/05 to 2007/08. Based on economic forecasts, GDP growth rate over the National Development Plan period is projected at an average of 7.2% per annum. At this GDP growth rate, nominal per capita income is projected to increase from USD 506 in 2008/09 to about USD 850 by 2014/15. During the same period, the proportion of people living below the poverty line is expected to decline from the level of 31% in 2005/06 to about 24.5% in 2014/2015, above the MDG target of 28%.

The Health Sector Strategic Investment Plan is implemented though Sector Wide Approaches (SWAPs) where both government and donor funds (including project funds) are pooled together to constitute budget support for the public health services. Other sources of financing for the health sector include local government and parastatal contributions, private not for profit agencies, private firms and households through insurance and out of pocket contributions.

Inadequate financing remains the primary constraint inhibiting the development of the health sector in Uganda. The current level of funding of US$10.4 per capita falls far below the estimated requirements. Attempts have been made to mobilize additional funds for the sector but these have been constrained by macroeconomic concerns and the rigid sector ceilings.

5.2 Costing of the EPI Multiyear plan

This section outlines the costing of the strategic plan over the next five years. Interventions and inputs into the programme have been costed using the WHO tool for costing of multiyear plans[3]. The data used in the costing tool was gathered at national level, mostly from documents of the Ministry of Health, Ministry of Finance and Economic Development; and from other line Ministries, UNEPI and from partners such as WHO and UNICEF.

Procurement of vaccines and injection supplies is done through UNICEF and so UNICEF standard price projections were adapted from the tool. Personnel costs were based on available data from current government salary scales. Interventions at all levels of service delivery have been costed. Operational costs for routine and supplementary activities were based on past expenditures with some adjustments.

[3] Comprehensive Multi-Year Planning (cMYP) Costing and Financing Tool (Version 2.5 – March 2011).

The programme costs may be classified as routine recurrent costs, routine capital costs, supplemental immunization activities and other costs.

- **Routine recurrent costs**
    a) Vaccines
        i. Traditional
        ii. New and underused vaccines
    b) Injection supplies
    c) Personnel
    d) Transport
    e) Maintenance and overhead
    f) Training
    g) Social mobilization
    h) Disease surveillance
    i) Programme management
    j) Other routine recurrent costs

- **Routine capital costs**
    a) Vehicles
    b) Cold chain equipment
    c) Other capital equipment

- **Supplemental immunization activities**
    a) Polio
    b) Measles
    c) Maternal and neonatal tetanus

- **Other costs**
    a) Shared personnel costs
    b) Shared transportation costs
    c) Construction of new buildings

The main cost drivers of the routine programme (excluding shared costs and SIAs) in the baseline year of the plan (2011), as in the previous years, were vaccines (new and underused vaccines) 50% and personnel (9%) figure 3.

Figure 3 Baseline cost profile (routine immunization) Uganda, 2011

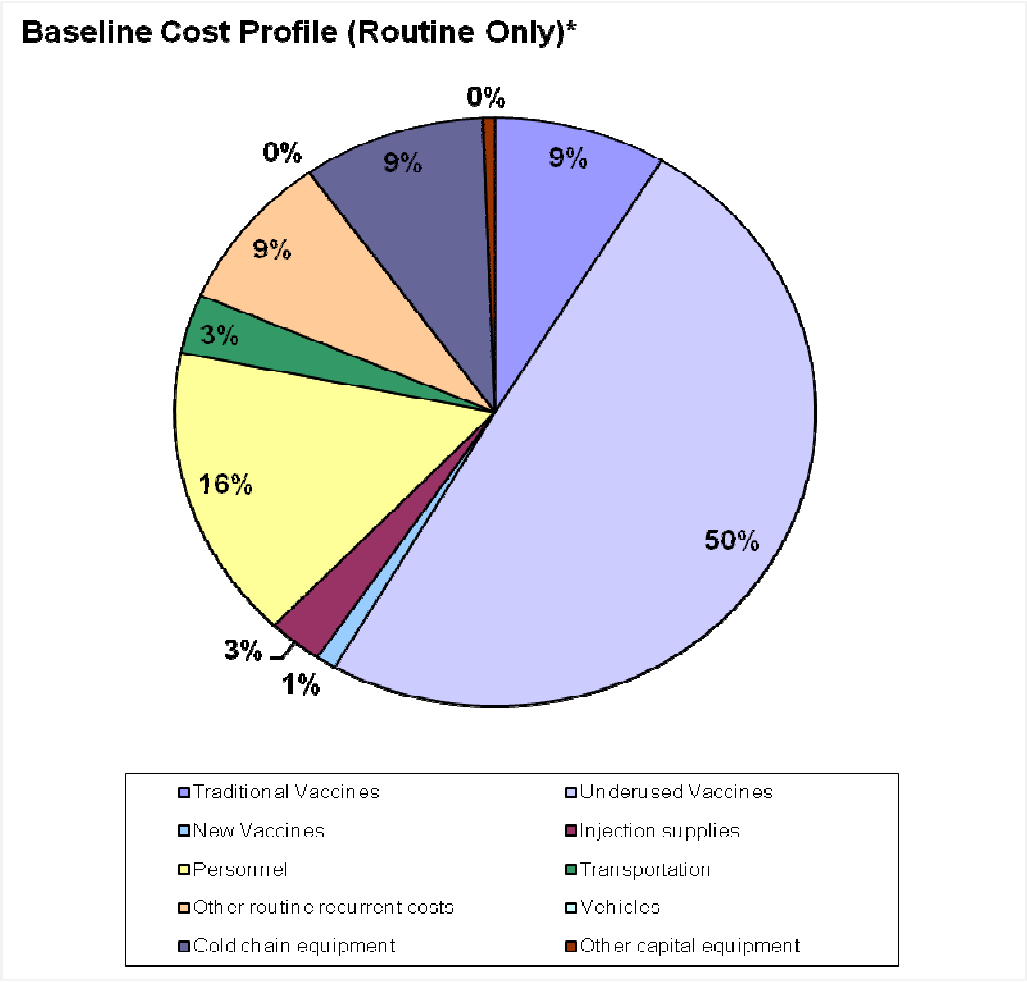


Figure 4 shows the projection of future resource requirements for the next five years, which are further summarized in tables 5 and 6. The total budget for the programme ranges from **USD $31,647,517 in 2011 to USD $91,436,221** in 2016.

The programme costs for the future budgets are largely driven by:

- The costs for vaccines - DPT-Hep+Hib (already introduced in the programme), pneumococcal vaccine, rotavirus vaccines and HPV vaccines to be introduced in 2013 and 2014 respectively.
- Personnel which includes salaries and allowances
- Activities planned in preparation for introduction of the new vaccines in 2013 and 2014 that include cold chain expansion, training, social mobilization, monitoring and evaluation.
- Program Recurrent costs and Injection materials

Figure 4 Projection of Future Resource Requirements

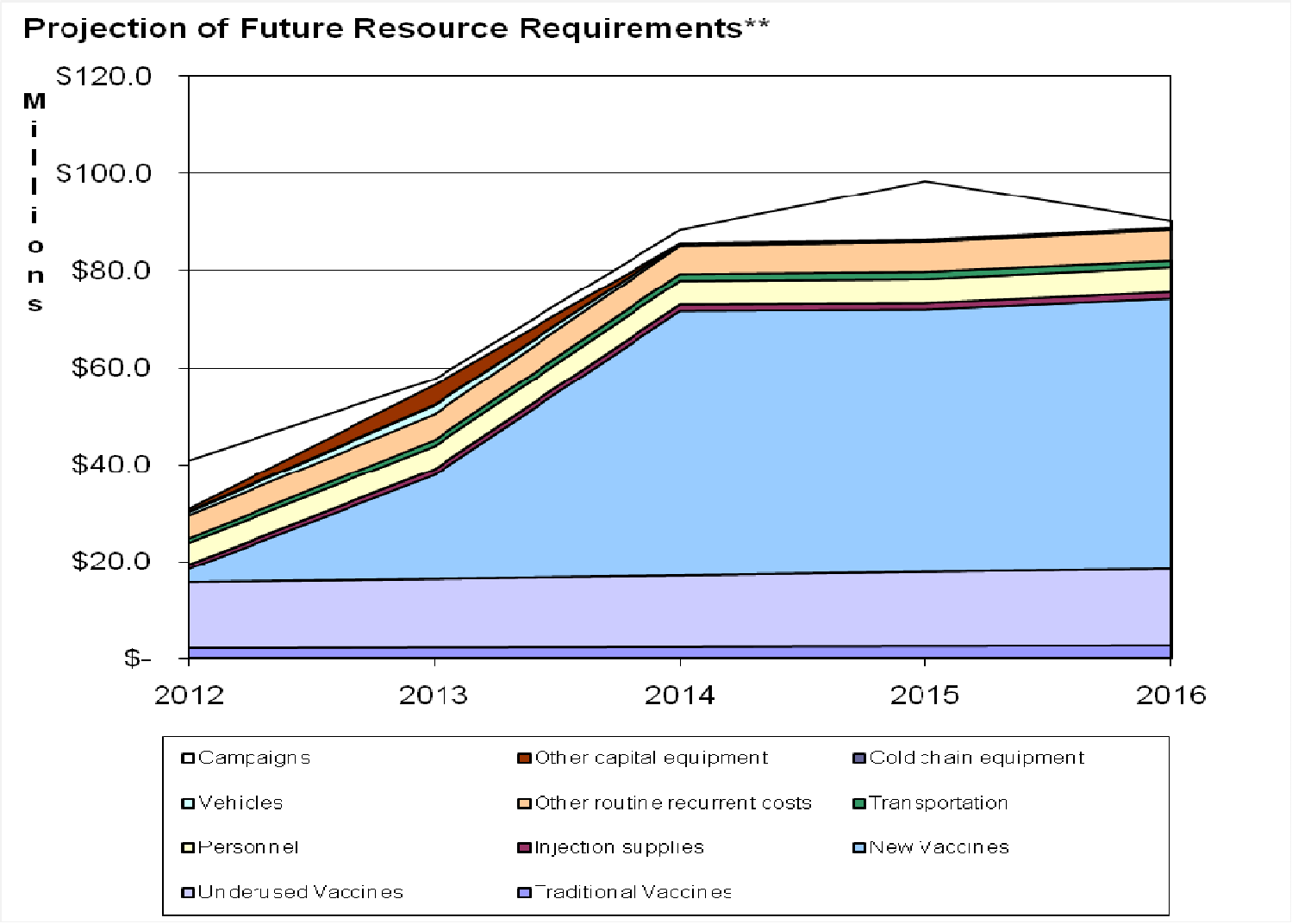


Figure 5 Multiyear Plan costing, Uganda, 2012-2016

	Expenditures	Future Resource Requirements					
Cost Category	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**Total 2012 - 2016**
Routine Recurrent Costs	**US$**	**US$**	**US$**	**US$**	**US$**	**US$**	**US$**
Vaccines (routine vaccines only)	$14,631,754	$17,792,312	$37,220,751	$67,289,277	$69,190,247	$71,276,417	$262,769,005
Traditional	$2,147,748	$2,414,062	$2,540,722	$2,683,708	$2,833,278	$2,950,143	$13,421,913
Underused	$12,302,506	$13,299,250	$13,833,893	$14,425,370	$15,040,267	$15,508,651	$72,107,432
New	$181,500	$2,079,000	$20,846,136	$50,180,199	$51,316,702	$52,817,623	$177,239,660
Injection supplies	$683,002	$801,954	$1,143,152	$1,259,370	$1,323,517	$1,363,388	$5,891,380
Personnel	$4,007,746	$4,528,132	$4,725,790	$4,918,530	$5,035,450	$5,141,564	$24,349,466
Salaries of full-time NIP health workers (immunization specific)	$75,790	$81,389	$91,132	$115,690	$118,004	$120,364	$526,579
Per-diems for outreach vaccinators/mobile teams	$2,048,292	$2,337,742	$2,387,381	$2,438,070	$2,489,832	$2,540,503	$12,193,528
Per-diems for supervision and monitoring	$1,883,664	$2,109,001	$2,247,276	$2,364,770	$2,427,614	$2,480,697	$11,629,359
Transportation	$805,806	$951,791	$1,278,368	$1,393,951	$1,490,405	$1,320,274	$6,434,789
Fix site strategy (incl. vaccine distribution)	$690,111	$815,136	$1,094,824	$1,193,812	$1,276,418	$1,130,713	$5,510,903
Outreach strategy	$81,189	$95,898	$128,803	$140,448	$150,167	$133,025	$648,341
Mobile strategy	$34,506	$40,757	$54,741	$59,691	$63,821	$56,536	$275,545
Maintenance and overhead	$763,284	$863,088	$1,166,751	$1,383,975	$1,445,864	$1,401,273	$6,260,950
Cold chain maintenance and overheads	$719,031	$767,538	$858,713	$1,051,457	$1,106,046	$1,053,997	$4,837,751
Maintenance of other capital equipment	$29,001	$79,993	$292,170	$300,146	$306,799	$313,597	$1,292,705
Building overheads (electricity, water…)	$15,252	$15,557	$15,868	$32,371	$33,019	$33,679	$130,494
Short-term training	$200,000	$337,772	$357,041	$377,360	$398,720	$421,187	$1,892,080
IEC/social mobilization	$155,690	$844,430	$892,604	$943,400	$996,800	$1,052,967	$4,730,200
Disease surveillance	$762,985	$1,688,860	$1,785,207	$1,886,801	$1,993,599	$2,105,933	$9,460,400
Programme management	$56,027	$844,430	$892,604	$943,400	$996,800	$1,052,967	$4,730,200
Other routine recurrent costs	$211,269	$231,269	$231,269	$231,269	$253,269	$231,269	$1,178,345
Subtotal	**$22,277,563**	**$28,884,037**	**$49,693,537**	**$80,627,334**	**$83,124,670**	**$85,367,238**	**$327,696,816**
Routine Capital Costs							
Vehicles		$681,360	$1,859,195	$454,197	$361,532	$368,763	$3,725,047
Cold chain equipment	$2,283,654	$4,997	$2,499	$2,499	$29,579	$42,304	$81,877
Other capital equipment	$150,600	$664,785	$4,186,570	$23,559	$12,989	$13,249	$4,901,152
Subtotal	**$2,434,254**	**$1,351,142**	**$6,048,263**	**$480,254**	**$404,101**	**$424,316**	**$8,708,076**
Campaign Costs							
Polio NIDs	$2,235,802	$4,735,227	$1,233,191	$1,272,689	$1,313,499	$1,355,475	$9,910,081
Vaccines and Injection Supplies	$1,412,172	$1,195,004	$1,233,191	$1,272,689	$1,313,499	$1,355,475	$6,369,858
Operational costs	$823,630	$3,540,223					$3,540,223
Measles NIDs		$4,870,680		$1,482,969	$10,734,702		$17,088,350
Vaccines and Injection Supplies		$2,504,149			$7,468,171		$9,972,320
Operational costs		$2,366,531		$1,482,969	$3,266,531		$7,116,031
Polio SIAs	$1,412,172	$376,090					$376,090
Vaccines and Injection Supplies	$1,412,172	$376,090					$376,090
Operational costs							
Vaccines and Injection Supplies							
Operational costs							
Vaccines and Injection Supplies							
Operational costs							
Vaccines and Injection Supplies							
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Vaccines and Injection Supplies							
Operational costs							
Vaccines and Injection Supplies							
Operational costs							
Vaccines and Injection Supplies							
Operational costs							
Subtotal	**$3,647,974**	**$9,981,997**	**$1,233,191**	**$2,755,658**	**$12,048,201**	**$1,355,475**	**$27,374,521**
Shared Health Systems Costs							
Shared personnel costs	$3,267,170	$3,867,346	$3,967,738	$4,070,599	$4,175,988	$4,266,495	$20,348,167
Shared transportation costs	$20,556	$20,968	$21,387	$21,815	$22,251	$22,696	$109,116
Construction of new buildings				$3,854,988			$3,854,988
Subtotal	**$3,287,727**	**$3,888,313**	**$3,989,125**	**$7,947,402**	**$4,198,239**	**$4,289,191**	**$24,312,271**
GRAND TOTAL	**$31,647,517**	**$44,105,489**	**$60,964,115**	**$91,810,648**	**$99,775,211**	**$91,436,221**	**$388,091,684**

Figure 6 Multiyear plan costing for Uganda by Program Components, 2012 – 2016

		Expenditures	Future Resource Requirements					
cMYP Component		2011	2012	2013	2014	2015	2016	Total 2012 - 201
		US$	US$	US$	US$	US$	US$	US$
	Vaccine Supply and Logistics	$18,497,042	$20,792,938	$45,563,048	$70,380,505	$72,330,710	$74,431,715	$283,498,916
	Service Delivery	$4,813,551	$5,479,923	$6,004,158	$6,312,481	$6,525,855	$6,461,838	$30,784,256
	Advocacy and Communication	$155,690	$844,430	$892,604	$943,400	$996,800	$1,052,967	$4,730,200
	Monitoring and Disease Surveillance	$762,985	$1,688,860	$1,785,207	$1,886,801	$1,993,599	$2,105,933	$9,460,400
	Programme Management	$482,548	$1,429,028	$1,496,782	$1,584,401	$1,681,807	$1,739,101	$7,931,119
	Supplemental Immunization Activities	$3,647,974	$9,981,997	$1,233,191	$2,755,658	$12,048,201	$1,355,475	$27,374,521
	Shared Health Systems Costs	$3,287,727	$3,888,313	$3,989,125	$7,947,402	$4,198,239	$4,289,191	$24,312,271
GRAND TOTAL		$31,647,517	$44,105,489	$60,964,115	$91,810,648	$99,775,211	$91,436,221	$388,091,684

5.3 Financing of the EPI Multi year plan 2012- 2016

The sources of financing of the program include government (central and sub-national) budget and donors. Donor agencies that have supported the program include GAVI, WHO, UNICEF, JICA, USAID, CDC, PATH, DFID, SABIN Inst, and Merck Company.
The majority of funding during the baseline year (2011) was from GAVI (48%) for the DPT-Hep+Hib vaccine (Figure 7). This trend is reflected over the next 5 years even after considering probable funding from the government for co financing of the vaccine costs.

It is expected that support from these agencies will continue during the next five years, although most of the funding can only be regarded as probable funding. JICA is expected to fund capital costs i.e. equipment for cold chain expansion and rehabilitation, and vehicles. Funding classified as secure only represents estimates from government and the 'traditional' donors to the programme based on their past contributions.

Funding from the government is classified as secure based on historical funding patterns. The government has been funding the four traditional antigens (polio, measles, BCG, TT), injection supplies, personnel, transport, maintenance for vehicles, gas for the cold chain and overheads. Funds for these items have therefore been classified as secure.

In addition to the government funds, some donor funds are also classified as secure such as funds from GAVI for Immunization Services Strengthening (ISS) and Health Systems Strengthening (HSS).

Figure 7 Baseline Financing Profile (Routine Only)

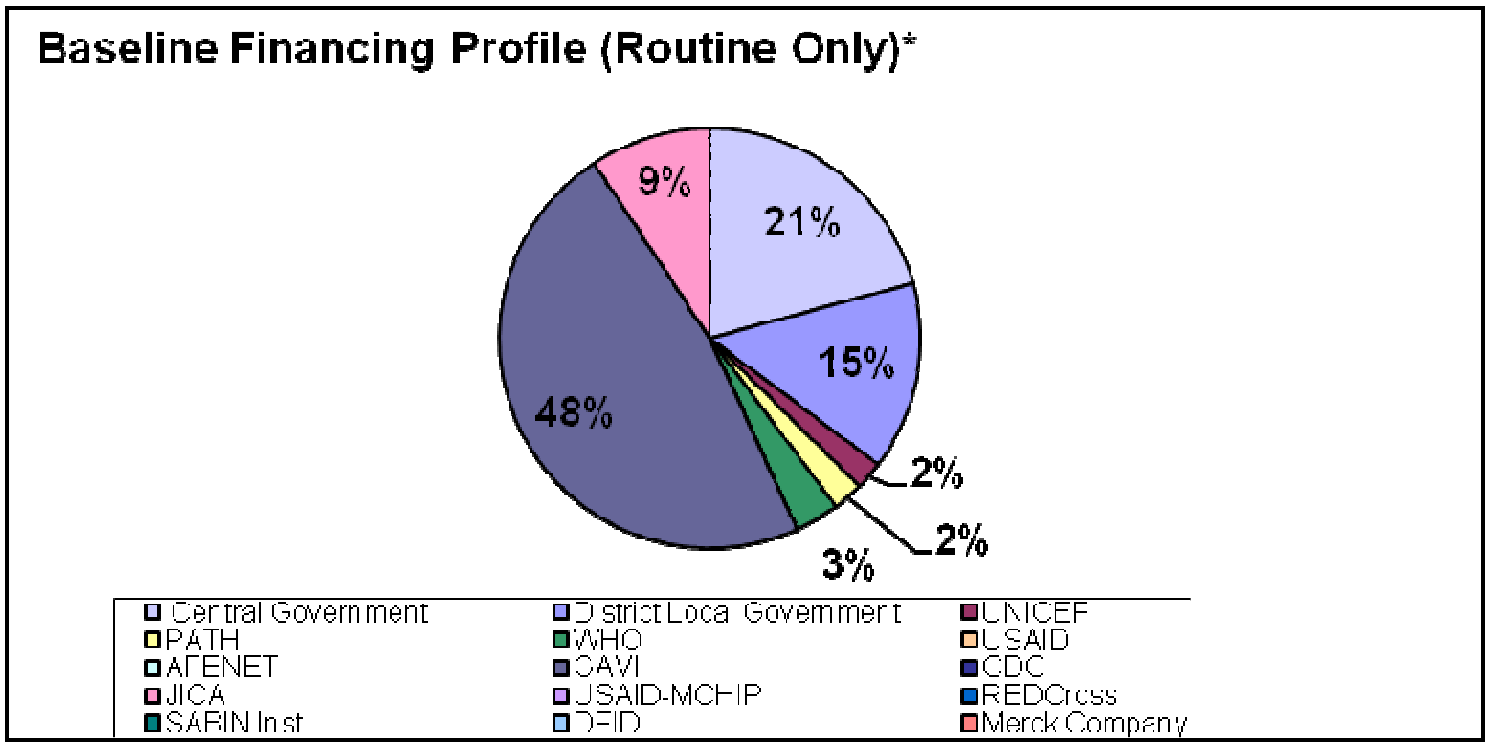
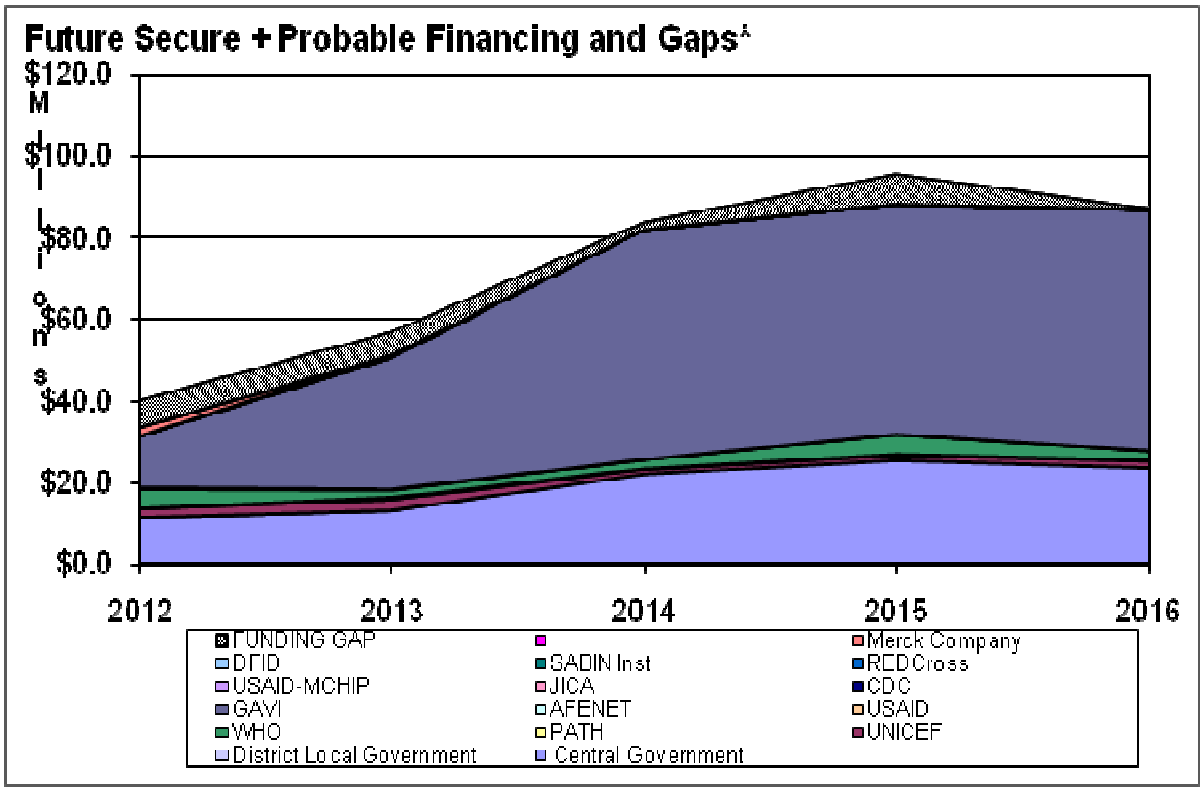


Figure 8 Future Secure + Probable Financing and Gaps



Of the **USD 363,779,413** table 7 required for the programme from 2012-2016 (excluding shared costs), **USD 276,308,645** (76%) is classified as secure funding, **USD 65,587,912** (18%) as probable funding and 6% as unsecured funds. A large total funding gap of **USD 87,470,768** (of secured funding only) exists in the program costs table 8. The funding gap is largely for the new vaccines and injection materials, programme recurrent costs, logistics (vehicles, cold chain equipment and other equipment) and for supplemental immunization activities in 2012 -2016 for both the secure and probable funding (Tables 5-8).

Table 7 Resource requirements, Financing and Financial Gaps, EPI Multiyear Plan 2012-2016[4]

Resource Requirements, Financing and Gaps*	2012	2013	2014	2015	2016	Avg. 2012 - 2016
Total Resource Requirements	**$40,217,176**	**$56,974,990**	**$83,863,246**	**$95,576,971**	**$87,147,029**	**$363,779,413**
Total Resource Requirements (Routine only)	**$30,235,179**	**$55,741,800**	**$81,107,588**	**$83,528,770**	**$85,791,554**	**$336,404,891**
per capita	$0.9	$1.6	$2.2	$2.2	$2.2	$1.9
per DTP targeted child	$23.1	$40.3	$55.5	$54.1	$52.7	$45.9
Total Secured Financing	**$26,384,106**	**$43,559,151**	**$65,559,479**	**$70,622,141**	**$70,183,768**	**$276,308,645**
Central Government	$8,524,678	$11,782,089	$9,506,212	$14,482,932	$12,278,678	$56,574,589
UNICEF	$1,029,640					$1,029,640
PATH		$394,312				$394,312
WHO	$2,353,041					$2,353,041
GAVI	$12,397,747	$31,382,750	$56,053,267	$56,139,209	$57,905,090	$213,878,063
Merck Company	$2,079,000					$2,079,000
Funding Gap (with secured funds only)	**$13,833,070**	**$13,415,839**	**$18,303,767**	**$24,954,830**	**$16,963,261**	**$87,470,768**
% of Total Needs	34%	24%	22%	26%	19%	24%
Total Probable Financing	**$7,153,600**	**$7,683,329**	**$16,477,779**	**$17,622,368**	**$16,650,837**	**$65,587,912**
Central Government	$2,792,246	$1,306,093	$12,545,619	$11,032,698	$11,402,998	$39,079,654
UNICEF	$1,251,891	$2,707,390	$1,186,650	$1,200,684	$1,680,586	$8,027,201
PATH		$50,000	$50,000	$50,000		$150,000
WHO	$2,472,169	$1,886,372	$2,241,313	$4,902,454	$2,318,769	$13,821,077
USAID	$195,595					$195,595
AFENET	$105,283	$148,961				$254,244
GAVI	$286,416	$1,084,513	$454,197	$361,532	$1,198,484	$3,385,142
USAID-MCHIP	$50,000	$500,000		$75,000	$50,000	$675,000
Funding Gap (with secured & probable funds)	**$6,679,470**	**$5,732,511**	**$1,825,988**	**$7,332,462**	**$312,424**	**$21,882,855**
% of Total Needs	17%	10%	2%	8%	0%	6%

[4] Immunization specific resource requirements, financing and gaps. Shared costs not included.

Table 8 Composition of funding gap (Immunization Specific Only)

Show the funding gap with secure funds only	Y					
Composition of the funding gap	**2012**	**2013**	**2014**	**2015**	**2016**	**Avg. 2012 - 2016**
Vaccines and injection equipment			$6,495,031	$8,071,927	$8,208,117	$22,107,575
Personnel	$2,819,493	$2,304,197	$2,381,026	$2,459,750	$2,512,563	$12,477,029
Transport	$815,136	$1,094,824	$1,393,951	$264,601	$0	$3,568,512
Activities and other recurrent costs	$3,316,572	$3,822,147	$4,797,847	$4,602,361	$4,476,039	$21,014,966
Logistics (Vehicles, cold chain and other equipment)	$851,955	$5,628,981	$480,254	$374,522	$411,067	$7,746,779
Campaigns	$6,029,914	$1,233,191	$2,755,658	$9,181,670	$1,355,475	$20,555,907
Total Funding Gap*	**$13,833,070**	**$13,415,839**	**$18,303,767**	**$24,954,830**	**$16,963,261**	**$87,470,768**
* Immunization specific resource requirements, financing and gaps. Shared costs are not included.						

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

The funding gap reflects the difficulty in projecting available resources from donors and government far into the future table 8. The mobilization of resources from GAVI for health systems strengthening, JICA for cold chain rehabilitation has contributed to reduction of the funding gap for logistics, cold chain and transport.

GAVI will be procuring the new vaccines (pneumococcal, Rota vaccine and HPV) and Government will start co-financing the new vaccines in 2014. The amounts are as shown in Table 9.

Table 9 Government Co-Financing for New vaccines

Government Co-Financing Amounts							
GAVI supported Vaccines	Vaccine	Classification	2012	2013	2014	2015	2016
			$	$	$	$	$
1	DTP-HepB+Hib	Underused	$885,386	$935,180	$987,425	$1,042,057	$1,099,173
2	Rota	New			$730,879	$710,946	$713,125
3	Pneumococcal	New		$1,038,181	$888,683	$1,066,419	$1,099,173
4	HPV	New			$456,500	$380,000	$392,000

6. Financial Sustainability Analysis

The options remain open depending on the ability of Government to mobilise the resources it requires for vaccine procurement. We present the strategies to raise resources, whose outcome will determine the option that the Government will adopt in the future. These strategies are based on a mix of:

- Mobilisation of additional resources (local and external),
- Increase in reliability of resources, and
- Strategies to increase programme efficiency.

6.1 Mobilizing additional resources

There are several ways the immunisation programme can obtain additional resources locally. These include:

- Additional resources from the government budget for the health sector;
- Additional resources from the Ministry of Health budget for immunisation;
- Increased resource input from decentralized local governments;
- Resources from local, non-governmental sources; and
- Additional external resources from current and new partners.
- Additional partners from the private sector -

According to the Government Medium and Long Term Expenditure Frameworks (MTEF and LTEF), the expected growth in the health sector budget is minimal. However, the health and agriculture sectors are priority sectors in terms of unfunded priorities of Government, and vaccines are one of the health sector unfunded priorities. As such, immunisation has a high potential to be further funded should Government and the health sector receive resources above what is expected. However, based on present financial realities, it is not possible in the short to medium term for the Government to cover this funding gap from its own resources. As such, the contribution from the Government health sector shall be sought keeping in mind the financial realities in the sector. Resource mobilisation should have minimal or no impact on resources already available to other Ministry of Health programmes. In addition, other strategies to mobilise resources are to be employed.

Additional resources within the sector will be sought within the context of the Government's Vaccine Independence Initiative (VII). In line with the recommendations of the Health Financing Strategy of the Ministry of Health, the programme shall seek, in the short term, to have 4% of the recurrent health sector budget apportioned for vaccine purchases.

Other sources of local resources shall be sought. At present, government immunisation resources are largely from the central government. The programme shall advise and advocate for Local Governments to mobilise resources for their constituencies to cover some selected cost items within their means. These are largely around Information, Education and Communication (IEC) activities, community outreaches and social mobilisation. The strategy will aim to integrate immunisation programme activities within those already being carried out by the local governments for efficiency gains.

Avenues for resource mobilisation from the private sector shall be sought. This has proven successful with preventive strategies in the sector, such as the polio mass immunisation SIAs and use of Insecticide Treated Materials (ITN's). Individuals and companies shall be sought to support immunisation programmes from the private sector to reduce operational costs.

While the Government is pursuing a strong SWAp policy, with implications for the need of common financial disbursement strategies (common basket), it is unlikely that in the short to medium term, all sector activities will be financed through this system. New and ongoing global initiatives make it further unlikely. As such, the programme, while supporting the common SWAp arrangement and seeking more

resources through it, shall also seek additional external resources from donors and incoming projects to supplement what it receives through the government budget.

A number of development partners have at different periods in time supported immunisation activities. Many channel resources through multilateral agencies such as UNICEF, WHO and the World Food Programme (WFP) while some others offer direct support. In addition, resources from donors increase tremendously during supplemental SIAs indicating a high level of belief in the approach, and the health care system ability to deliver vaccines to the communities.

The programme shall seek to mobilise additional resources from these donors that have shown willingness to support immunisation activities in the past, and identify and advocate among potential new donors for more resources. Support sought from these donors shall be in the form of resources, and advocacy for the programme. In addition, the programme shall actively seek further support from GAVI beyond the present arrangement, with the strategy highly dependent on the financial commitment from the Government.

6.2 Increasing reliability of resources

Within this strategy, the sector shall seek to ensure that:

- Financial requirements for immunisation are in the MTEF and LTEF;
- Government contributions for vaccines and EPI are protected;
- Funds allocated for vaccines are reflected within PHC vote to districts, as with drugs;
- GAVI Vaccine Fund support is tapered off beyond phase 1;
- Any unspent resources from donors, or Government are maintained within the programme.

It is difficult to ensure reliability of resource flows. However, there are a number of strategies that will be employed to improve this.

At the national level, the programme shall ensure that the financial forecasts for immunisation should be incorporated into the MTEF and LTEF planning and budgeting cycles of the Government, and updated regularly. The strategy to have an increasing proportion of the vaccine expenditure covered by the Government increases the reliability of the resources required. In line with this, the programme shall stretch out the vaccine fund resources, so that this support is tapered off, and the increasing resources being mobilised by the programme taking over the gap being created. The Ministry of Health shall earmark and protect its contribution to vaccine purchase within its health sector expenditures, in line with the present situation where the vaccine resources are protected within the Programme 9 resources.

6.3 Improving programme efficiency

Improved efficiency of the programme shall also be pursued. Reduction of vaccine wastage offers significant efficiency gains for the programme, more so with the use of the high cost vaccines. It is envisioned that improvement of vaccine wastage to 10% for the new and under-utilized vaccines shall achieve cost savings. This shall primarily be capacity building in vaccine management, putting in place a vaccine wastage monitoring system, ensuring optimal functioning of the cold chain system, and consolidation of the multi-dose vial policy.

In addition to the reduction in wastage, the change from gas only to gas/electric fridges shall reduce operational costs of cold chain operation. At present, the UNEPI programme covers the costs of purchase, and transportation of the gas to the respective districts. Use of electric fridges and/or procurement of gas directly by districts will reduce these operational costs on the EPI programme at the national level.

The programme shall build capacity at the sub national level to enable these take up the responsibility for purchase of gas supplies as required. There are presently little/no cost savings as a result of bulk purchases at the central level, which will not lead to any losses due to the districts purchasing the gas.

Further rationalization of outreach services shall be sought, with integration with other programmes carried out as is feasible. Mobilisation efforts shall be enhanced to increase immunisation at each session, reducing unit costs for immunisation per child.

The programme shall ensure it budgetary outturn is maximised, including use of GAVI ISS reward funds, GAVI HSS funds and all funds available to the immunisation programme.

The Ministry of Health shall continue to advocate at a regional and global level for increasing the availability and reducing the cost of combination vaccines, and for promoting developing country capacity for vaccine production.