# KINGDOM OF LESOTHO

# MINISTRY OF HEALTH

## EXPANDED PROGRAMME ON IMMUNISATION
## COMPREHENSIVE MULT-YEAR PLAN
## (2018-2022)

MASERU, KINGDOM OF LESOTHO

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# Contents



## List of Tables

Lists of Figures

## List of Abbreviations

| | |
|---|---|
| ADI | Addis Deceleration on Immunization |
| AEFI | Adverse Events Following Immunization |
| AFP | Acute Flaccid Paralysis |
| ARCC | African Region Certification Commission |
| BoS | Botswana Office of Statistics |
| CHAI | Clinton Health Access Initative |
| CHAL | Christian Health Association of Lesotho |
| cMYP | Comprehensive Multi Year Plan |
| CRS | Congenital Rubella Syndrome |
| EVMA | Effective vaccine management assessment |
| EPI | Expanded Programme on Immunization |
| Gavi | Global Alliance of Vaccine and Immunization |
| GNI | Gross National Income |
| GOL | Government of Lesotho |
| GVAP | Global Vaccine Action Plan |
| ICC | Inter Agency Coordinating committee |
| IDSR | Integrated Disease Surveillance and Response |
| JRF | Joint Reporting Form |
| HPV | Human Papilloma Virus |
| LRCA | Lesotho Red Cross Association |
| MNT | Maternal Neonatal Tetanus |
| NCC | National Certification Committee |
| NITAG | National Immunization Technical Advisory Group |
| NPEC | National Polio Expert Committee |
| PEI | Polio Eradication Initiative |
| PHC | Primary Health Care |
| RISP | Regional Immunization Strategic Plan |
| RMNCAH&N | Reproductive Maternal Newborn Child Adolescent Health & Nutrition |
| SWOT | Strength Weakness Opportunities and Threats |
| NGOs | Non Governmental Organizations |
| SDGs | Sustainable Development Goals |
| SIAs | Supplemental Immunization Activities |
| NDSP | National Development Strategic Plan |
| NHP | National Health Plan |
| NHSP | National Health Strategic plan |
| UHC | Universal Health Coverage |
| Unicef | United Nations Education children fund |
| WHO | World Health Organization |
| WVI | World Vision International |

# Foreword

Immunization is one of the most cost effective health intervention ever documented. It is a key component to the attainment of Universal Health Coverage and Good Health and Well-being (Sustainable Development Goal G 3). Through immunization small pox was eradicated and the world in now in the era of eradicating polio and eliminating measles.

In Lesotho, provision of immunization services is used an entry point to deliver other important health interventions including maternal health services, HIV/TB services as well as other child survival interventions such as nutrition and this make them a strong pillar of health systems.

A comprehensive review of the immunization programme, effective vaccine management assessment (EVMA), cold chain inventory, GAVI Joint Appraisal (JA) and human resource capacity assessment provided vast information on good practices, gaps and lessons learned over the previous 5 years that formed the basis for development of the current multiyear plan (2018-2022). The new multiyear plan 2018-2022 provides an opportunity to rethink approaches to address the current challenges, to explore avenues for more efficient delivery of services and to devise strategies conforming to the global vaccine action plan (GVAP 2011-2020), Regional Immunization Strategic Plan on Immunization (RISP 2014-2020) as well as Addis Declaration on Immunization (ADI…) as we strive to achieve the Millennium Development Goal (MDGs 4 and 5)/SDG 3 and the national goals as articulated in the National Health Strategic Plan (NHSP, 2018-2022).

The focus over the next 5 years will be; sustaining availability of current vaccines offered by the programme, reintroduction of IPV, improvement of immunization coverage and reaching all un-immunized children through expansion of outreach services, improvement of immunization data quality at all levels maintaining a high quality and sensitive disease surveillance system at all levels.

The Ministry of Health, Lesotho, pledges full implementation of the plan with the support of partners involved in immunization service delivery and look forward to attainment of the set objectives

Signed----------

(Hon Minister of Health)

# 1 INTRODUCTION

## 1.1 Country Profile

The Kingdom of Lesotho is a mountainous country totally enclosed by the Republic of South Africa. The land area of Lesotho is approximately 30, 355 km$^2$ of which less than 10% is arable. The western Lowlands and Foothills, ranging from roughly 1500 to 2000 meters above sea level occupy about one quarter of the total area of Lesotho. Seven of the ten major districts are found in this area and they have the majority of the population and the best agricultural land. The eastern mountains, the highest point of which is almost 3500 meters, are more sparsely populated. The mountainous population has limited access to health services including Immunization.

Lesotho population (2016) is estimated at 2,007,201 million. A review of population growth trend showed that while population growth between 1986 and 1996 was estimated to be 1.5 % rate per annum, the rate between 1996 and 2006 was estimated to be 0.1 % based on the 2006 census. The estimated proportion of under 5 children is 5%, under 15 years is 32% and WCBA is 26% of the total population.

### Table I. Basic Demographic Indicators

| Indicator | Value/source | Indicator | Value/Source |
|---|---|---|---|
| Total population | | Total Fertility rate | 3.23% |
| Inter-censal growth | 0.68%(BoS 2016) | Infant mortality rate | 53/1000 (BoS 2016) |
| Population density | 66/Km$^2$(BoS 2016) | Under five mortality rate | 80.2/1,00 live birth (BoS 2016) |
| %Urban/peri urban | 42% (34,8) | Maternal Mortality rate | 618/100,000 (BoS 2016) |
| % Rural | 58% | Life expectancy male | 51.7 (BoS 2016) |
| Crude Birth rate | 24.3 (2014 DHS) | Life expectancy female | 59.5 (BoS 2016) |
| Crude Death rate | 26.5 (2014 DHS) | Inter censal growth | 0.68%(BoS 2016) |
| HIV prevalence (0-14 yrs) | 2.1% (LEPHIA (2017) | HIV prevalence (15-59 yrs) | 25.6% (LEPHIA 2017) |

Source DHS report 2014, BoS preliminary census report 2016

### Table II. Population by age group

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|
| Births (2.04%) | 40,144 | 40,692 | 40,969 | 41,247 | 41,528 | 41,810 |
| Surviving infants (1.9%) | 38,137 | 38,657 | 38,920 | 39,185 | 39,451 | 39,720 |
| Pregnant women 2%) | 50180 | 50,865 | 51,211 | 51,559 | 51,910 | 52,263 |
| Girls 9 years old | | | | 22,686 | 22,840 | 22,995 |
| Total population | 2,034,592 | 2,048,427 | 2,062,356 | 2,076,380 | 2,090,500 | 2,034,592 |

The country is divided into 10 administrative districts. Coordination of health services delivered including immunization, is done based on Health Service Area concept within a decentralised District Health Management framework

Lesotho has two official languages, Sesotho and English. The Basotho are predominantly Christian with the main churches being the Roman Catholic, Lesotho Evangelical and Anglican Churches. The
religious platform provides a vehicle of opportunity for mobilization of the population for immunization services.

## Figure 1. Administrative Map of Lesotho


### 1.2 Macroeconomic situation

According to the World Bank, Lesotho GNI per capita is $1270 (2016), which puts the country in the low-middle income category. The GNI per capita has been on decline from $1550 (2012). Based on global economic prospect forecast, domestic growth is, however, expected to pick up in 2017 and 2018 3.39%, boosted by an increase in construction and mining. Unemployment remains high at 28%, coupled with high inequality and poverty. As part of the 2017/18 budget framework, the government is committed to measures to redirect public spending, implement reforms to maintain macroeconomic stability and as well as fiscal sustainability (World Bank, 2016). All these should improve the fiscal space, enabling more resources to be allocated to social services including health and immunization.

The integrated money and capital markets of the Common Monetary Area makes it imperative that Lesotho, as a small open economy with a fixed exchange rate regime, maintains a sufficient level of reserves, as measured by the gross foreign assets held by commercial banks and the Central Bank of Lesotho. A favourable reserve position enables Lesotho to honour its foreign

financial obligations including Gavi co-finance obligations as well as procurement of goods and services across borders.

### 1.3 The National Health System

The government of Lesotho through the Ministry of Health is committed to providing all its citizens health care through the adoption of PHC (Primary Health Care) of which EPI (Expanded programme on Immunization) is a key component of the essential service package (essential public health interventions).

The health care system operates at three levels, namely, national, district and health centre with 18 hospitals and 216 health centres. At national level, several vertical support programmes provide leadership to lower levels on ministerial goals and missions. The national level also supports the development and implementation of policies, protocols and guidelines. Government's efforts on health care is supported and complemented by NGOs such as Lesotho Red Cross Association (LRCA), Worlds Vision International (WVI) and Christian Health Association of Lesotho (CHAL) which owns about 48% of the country's health facilities. The government provides a subvention to LRCS and CHAL to cover operational and staff costs.

The Ministry has abolished user-fees in all primary health care facilities while standardised fees are implemented in public hospitals. As a result EPI services are provided free of charge in all facilities. There is a high presence of private practice and community-based care provider network (village health workers, Traditional healers, NGOs, etc) involved in the delivery of health care services in Lesotho. These service delivery categories provide EPI service delivery such as routine immunization, surveillance, SIAs (Supplementary Immunization Activities as well as social mobilisation.

#### 1.3.1 The National Health Strategic Plan

The health sector derives it is focus from the National Development Strategic Plan (NSDP) 2017 – 2022 but specifically driven by the National Health Policy (2011) and strategies outlined in the National Health Strategic Plan (NHSP) 2017-2022, draft document awaiting finalization)

Aligned with the Sustainable Development Goals, the NHP goal is to achieve Universal Health Coverage, including financial risk protection, access to quality essential health care services, safe, effective, quality and affordable essential medicines and vaccines for all people living in Lesotho by 2030. . The overarching objectives being:

- To reduce morbidity, mortality and human suffering among the Basotho
- To reduce inequalities in access to health services
- To strengthen the pillars of the health system

Other key interventions laid out within the NHP are: HIV and AIDS care, treatment and prevention, TB detection and treatment, raising and sustaining immunisation, managing childhood illnesses (neonatal conditions, ARI and diarrhoeal diseases), ensuring safe mother-hood, newborn, child and adolescent health, addressing non-communicable diseases, sanitation and hygiene, disease prevention through health education and promotion, addressing severe health systems weaknesses and managing available strategic information.
In addition, the country has also developed the National Reproductive, Maternal, New-born, Child and Adolescent Health and Nutrition (RMNCAH & N) Strategic Plan 2017- 2027 which has the following vision: To improve the wellbeing of individuals, families and communities by

ensuring universal access to quality comprehensive Reproductive, Maternal, Neonatal, Child and Adolescent Health & Nutrition (RMNCAH & N).
Specific priorities in the RMNCAH & N strategy include:

- Increase immunization coverage to at least as high as 95 %
- Reduce under-five mortality to at least as low as 35 per 1,000 live births
- Reduce infant mortality to at least as low as 10 per 1000 live births

This comprehensive Multi-year plan (cMYP) has been developed taking into consideration strategies indicated in NHP, the RMNCAH & National strategic plan, and it is well aligned with the Global Vaccine Action Plan (GVAP 2014-2020) and the Africa Regional Immunization Strategic Plan for immunization (RISP) goals and targets including Addis Declaration on Immunizations (ADI).

### 1.3. 2. Financing Health Care

#### Financing Health Care

Government of Lesotho (GOL) is the largest funder of the health sector. In 2014/15, 64% of the health budget was contributed by GOL while 36% was financed by external sources (Resource Mapping Report 2014/15). The country is committed to the Abuja Declaration of allocating 15% of the national budget to health sector. However, there has been a consistent decline of allocations to Ministry of Health (MoH) as a percentage of total GOL budget from 14% in FY2012/13 to 11.9% in FY 2017/18. Ministry of health budget comprise of capital and recurrent budget from which immunisation activities are funded. Total expenditure on health as a percentage of GDP was 11.5% in 2013 (Lesotho Fact Sheet of health Statistics, 2016). But Domestic General Government Health Expenditure (GGHE-D) as % Gross Domestic Product (GDP) has been on the increase from 3% (2011) to 5% (2015)

#### Financing of Vaccines and Immunization Activities

Immunization in Lesotho is provided through both public and private sectors. The government has set out to secure domestic financing to support immunization services in order to build a sustainable programme in both the short and medium term. In FY 2017/18, capital financing (specifically, Gavi co-financing commitment) for immunization activities in Lesotho amounted to 13.1% of the MoH total capital budget (MoH 2017/18). Funding routine operational activities for immunization is done through integrated budgetary allocation with other cost centres and programmes.

The Ministry of Health regularly budgets for procurement of traditional vaccines in the recurrent budget. There has been incremental budget allocation each year to cater for increased population need. In addition, the Government of Lesotho through the capital budget has consistently met the co-financing obligations for new vaccines (Pentavalent, PCV13 and rotavirus vaccine) that are currently being provided. Plans are underway to also fund co-financing of IPV, Td and HPV vaccines planned to be introduced in the coming years through the same mechanism. It should be noted however that HPV vaccine was introduced in 2012 and was discontinued from 2014 to date due to high costs. Consequently plans have been made as indicated in the current cMYP to assure its sustainability once re-introduced. IPV was introduced in 2016 but was also interrupted due to global shortage of supply. The plan is to introduce IPV and 2018 while Td and HPV will be introduced once appropriate processes and decisions have been made targeting introduction in 2019019.

Looking at long term sustainability and full funding of Gavi supported vaccines, the country intends to increase co-financing amount to a higher figure than the minimum stipulated by Gavi. Given this background it is expected that the government of Lesotho will assume total financing of all vaccine in the future. GOL has a long standing agreement with UNICEF for procurement of all vaccines, cold chain equipment and injection safety materials. Therefore, similar procedures will be followed in the procurement of newly introduced vaccines in the future.

### Immunization and Universal Health Coverage (UHC)

The global movement towards universal health coverage (UHC) has advanced, however Lesotho still has a long way to go in achieving this goal. UHC means ensuring that everyone has access to quality health services without financial hardship or the risk of being forced into poverty. As one of the most cost-effective and life-saving health interventions, immunization is an important figure in UHC and is provided for free at all levels of health care.

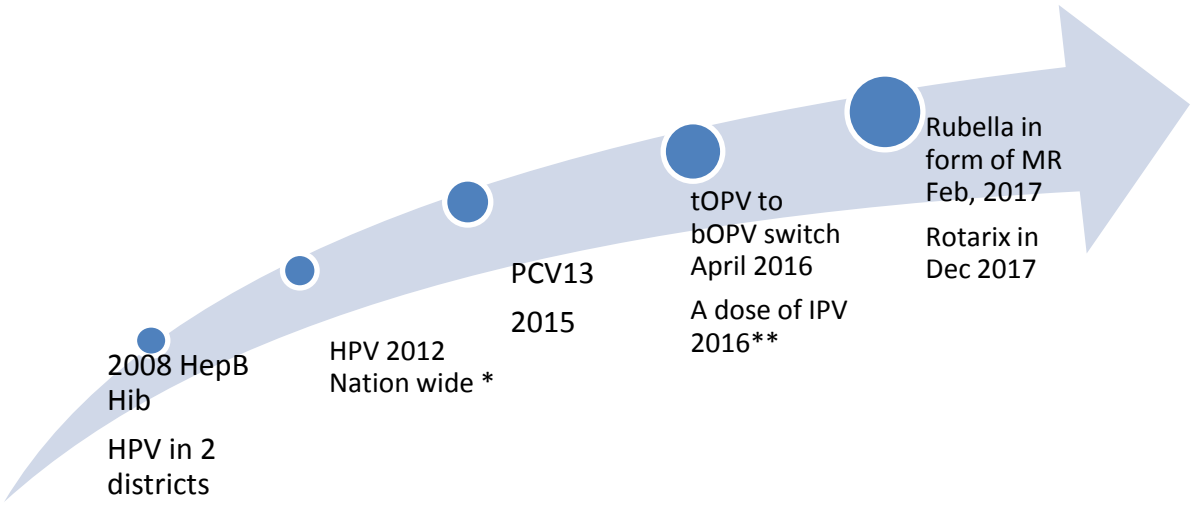
## 1. 4 EPI Programme in Lesotho

The Government of Lesotho (GOL) through the Ministry of Health is committed to providing health care to all citizens through the adoption of PHC of which EPI is a key component. Government's efforts on health care is supported and complemented by partners and NGOs amongst which is the Christian Health Association of Lesotho (CHAL) owning approximately 48% of the country's health facilities.

### 1.4.1 Background on EPI in Lesotho

The Expanded Programme on Immunization in Lesotho was established in 1979 following Alma Ata Declaration of PHC. The programme aims to ensure that vaccines are available to protect population against vaccine preventable diseases notably; Tuberculosis, Diphtheria, Whooping Cough, Tetanus, Polio and Measles. New antigens were introduced from 2008 to 2017 as indicated in figure 2 below.

### Figure 2. Introduction of Antigens, Lesotho 2018-2017



**due to resource limitation vaccination against HPV was discontinued & IPV** due to global supply shortage*

In the coming years, and as stipulated in this plan, the programme is planning to re-introduce HPV vaccine & IPV.

There is strong partnership with private practice and community-based care providers (Traditional Healers, Traditional Birth Attendants, community Health Workers, NGOs, etc) in the delivery of health care services in Lesotho including immunization services and social mobilisation. Currently the country has an established social cluster for health. Furthermore the Ministry of Health of Lesotho is committed to the African Regional Immunization Strategic plan, the Global Vaccine Action plan targets and the Addis Ababa Declaration of immunisation target.

### 1.4.2 Ministry of Health structure

Maternal and Childhood immunizations are provided through EPI programme, which is a unit of the Child Survival Programme of the MOH. There are eight directorates in the MOH namely, Primary Health Care, Health Planning and Statistics, Disease Control, Human Resource, Clinical Services, Laboratory Services, Oral Health, and Nursing Services. The Primary Health Care is composed of three divisions namely; Health Education, Environmental Health, and Family Health. Family Health Division houses all child survival programmes including EPI.

### 1.4.3 Staffing pattern

The current staffing complement is as follows: An EPI Manager as the Programme, four Assistant Cold Chain technicians, two data clerks, National Surveillance Officer and two Logistics Officers. The programme has indicated staff complement expansion is in process in order to meet the increasing demand and programme complexity. The process for approval of the proposed structure is still undergoing discussion at top government management level.

### 1.4.4 Immunization Services

The EPI programme in Lesotho provides a number of antigens using static and minimal outreach strategies because of lack of resources to carry out outreach services. However, it is worth noting that the country is receipt of GAVI to support health systems and some of these funds are aimed at supporting implementation of such outreach services.

The immunization schedule is illustrated in the Table below.

### Table III. Lesotho Immunization Schedule

| Antigen | Age given |
|---|---|
| OPV | At birth |
| BCG | At birth |
| Penta 1, OPV1 and PCV1 | 6 weeks |
| Penta 2, OPV2 and PCV2, ROTA 1 | 10 weeks |
| Penta 3, OPV3 and PCV3, ROTA 2, IPV1* | 14 weeks |
| Measles 1st dose | 9 months |
| Measles 2nd dose | 18months |
| DT | 18 months |
| TT 1,2,3,4.5 | Pregnant and WCBA |
| HPV** | 9-13 yrs (girls) |

*****IPV to restart from March 2018 and **HPV to re-introduce from 2019

## 1.5 SITUATION ANALYSIS OF THE NATIONAL EPI PROGRAMME

### 1.5.1 Service Delivery

Lesotho's DPT3 coverage shows a consistent decline from 73% in 2015, 67% in 2016 and 64% in 2017. Measles coverage also shows a similar trend in the three years, 65% in 2015, 60% in 2016 and 56% in 2017. Projections from the 2016 population census indicate a low denominator compared to what previous projections suggests. However if the current denominator is used to calculate the coverage then a marked increase in coverage is observed. The DPT1-DPT3 drop-out rate has improved from 3% to 1% in the three years. DPT1-MCV1 drop-out rate was 4% in 2015 and increased to 13% in 2016 and 2017 respectively. In order to improve coverage, RED/REC was reintroduced in all districts in 2017. As part of strategies to improve coverage, the programme has embarked on training of health worker in all districts to build capacity for health facility staff to develop and implement micro-plans. The country is in the process of consolidating the facility level plans into a national macro-plan. Catchment area populations were disseminated to districts to aid in setting targets for the immunization service provision. However, for operational purposes, health facilities are encouraged to conduct head count as part of micro planning. It is anticipated that vaccination coverage will be regularly calculated by health facilities and districts; including analysis and use of EPI data so that appropriate interventions could be implemented.
In order to further strengthen service delivery, the EPI program will continue to implement recommendations from the comprehensive EPI review (2014), the 2017 and Joint Appraisal to guide improvement of the system

### 1.5.2. EPI Coverage performance

Routine Immunization administrative data has consistently reflected to be at a lower coverage than household surveys. The EPI cluster survey was conducted in conjunction with post campaign evaluation in 2013. The country DHS was carried out in 2014. Observation from two household surveys is that they both almost reported similar trends for individual vaccine coverage levels where the surveys estimated higher coverage than the reported coverage. Below is a comparison of immunization coverage rates from the LDHS 2014 & EPI cluster survey conducted in 2013:

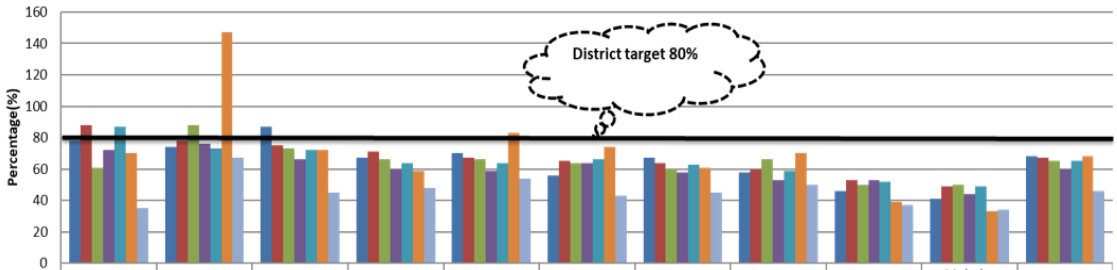
**Table IV. Immunization Coverage performance Trends by Sources**

| Antigen | 2014 LHDS | 2013 coverage | WUENIC 2016 | 2017 Coverage (2016 BoS) |
|---|---|---|---|---|
| BCG | 98% | 85% | 98% | 71% |
| OPV3 | 75.7% | 80.10% | 90% | 80% |
| DPT3 | 85.4% | 81.5% | 93% | 87% |
| Measles1 | 90.1%. | 78.8% | 90% | 76 |
| Measles2 | No data | 69.3% | 80% | 62 |

Reported administrative coverage shows below the target while the WUENIC estimate informs that Lesotho has high coverage and made progress at national level. The DPT3 containing vaccine coverage increased from 83% in 2015 to 93% in 2017 at national level. The proportion of districts with at least 80% 3rd dose of DPT containing vaccine was recorded 10% (2012), 0

(2013), 20% (2014), 0 (2015) and 10 % (2016) that indicates performance fluctuation while it is required to attain at least the minimum 80% of districts expected to reach 80%.

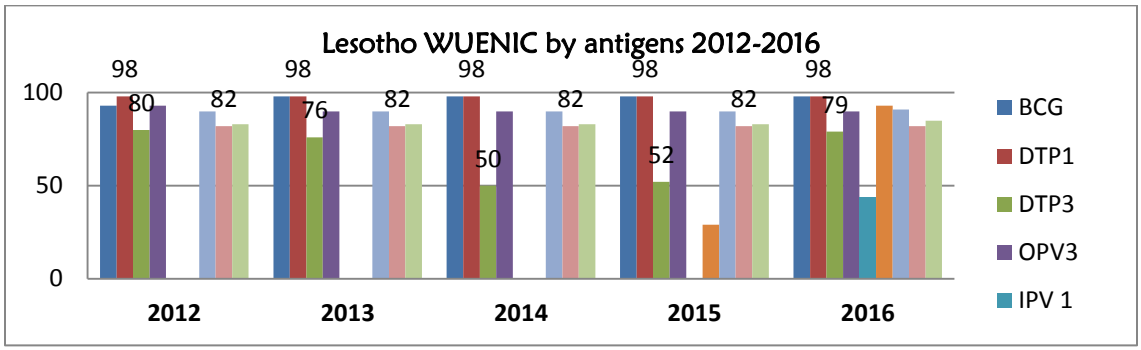
**Figure 3. Lesotho administrative coverage by antigen and by district, 2016**




| | Qachas nek | Butha-Buthe | Maseru | Leribe | Berea | Mafeteng | Mokhotlong | Thaba-Tseka | Quthing | Mohales Hoek | National |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BCG (80%) | 78 | 74 | 87 | 67 | 70 | 56 | 67 | 58 | 46 | 41 | 68 |
| Penta3 (80%) | 88 | 78 | 75 | 71 | 67 | 65 | 64 | 60 | 53 | 49 | 67 |
| Pneumo3 (80%) | 61 | 88 | 73 | 66 | 66 | 64 | 60 | 66 | 50 | 50 | 65 |
| OPV3 (80%) | 72 | 76 | 66 | 60 | 59 | 64 | 58 | 53 | 53 | 44 | 60 |
| MCV1 (80%) | 87 | 73 | 72 | 64 | 64 | 66 | 63 | 59 | 52 | 49 | 65 |
| TT2+80% | 70 | 147 | 72 | 59 | 83 | 74 | 61 | 70 | 39 | 33 | 68 |
| VITA (80%) | 35 | 67 | 45 | 48 | 54 | 43 | 45 | 50 | 37 | 34 | 46 |

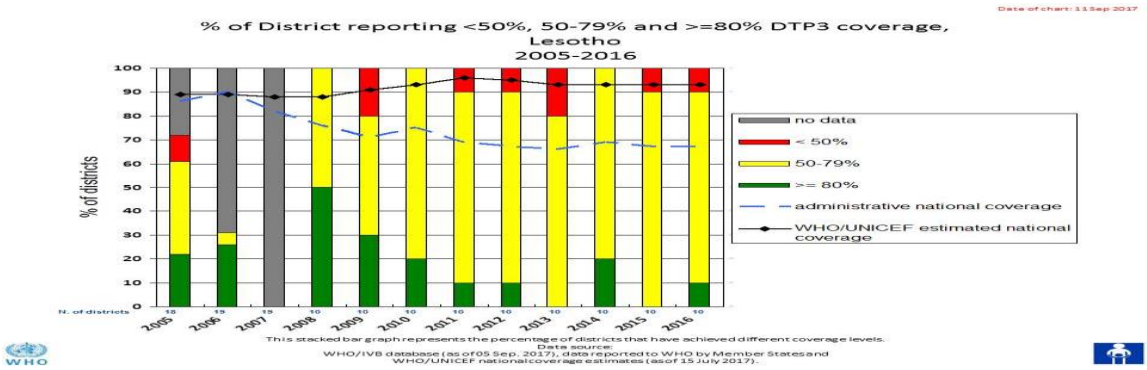
The Penta3 and MCV1coverage indicate that, only Qacha's Nek has achieved the 80% target for both antigens. It is not immediately evident what factors contributed to the differences in the districts' performance. Efforts will be made to further analyse factors influencing coverage discrepancies across districts in order to include such in micro-plan. There are planned interventions namely the DQR and Equity Assessment which will provide additional information on possible drivers behind the performance variability. These drivers will form the basis of strategies within the adaptation of RED framework to be implemented. There is marked discrepancy on the estimated coverage by WUENIC compared to the National reported coverage.

**Figure 4.** Lesotho coverage by antigen by year 2012-2016 WUENIC




The WHO Unicef Estimated coverage is high for all antigens except DTP3 where there was decline from 2013 to 2015. The protection at birth estimated coverage is high enough to sustain the MNT elimination.

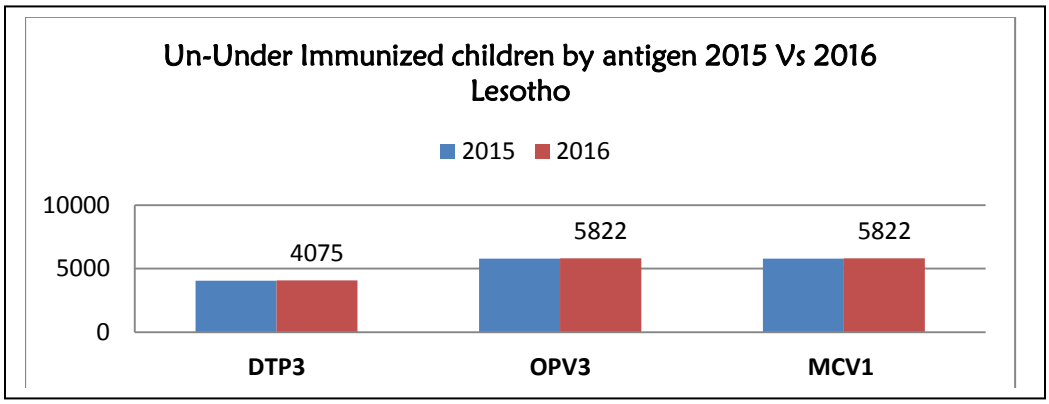
Figure 5. Lesotho; % of districts by category of performance for DTP3 by district




Source, JRF Lesotho 2005-2016

Figure 5 indicates alarming reduction of proportion of districts achieving the target using the reported figures indicating low population immunity based on the administrative reported coverage. Using the same administrative reported coverage the trend of un and under immunized for DTP3, MCV1 and OPV3 is shown below as the situation remains same for both years.

## Figure 6. The number Un and Under immunized children by antigen 2015 Vs 2016




Source JRF, 2015 and 2016, Lesotho

### 1.5.2. Immunization Data reported coverage

The discrepancies in the routine immunization reported data and household surveys point to possible denominator and/or data quality issues. The 2016 Lesotho National Census result has provided a lower denominator estimate of the surviving infants where the MOH Lesotho has made decision to use these denominators as official source. This will mean that the reported coverage will be higher and will be revised using the projection from the census. In addition, there is a planned Data Quality Review in 2018 that will inform data subsequent improvement plans to address any detected quality issues of Routine Immunization.

The 2016 targets show a sharp decline in the number of surviving infants as per the 2016 Official Census (BOS) and MOH is intending to use the new census projected figures to estimate the coverage where coverage is expected to increase in 2017.

### 1.5.3 Linkage of EPI to other child health services

The EPI Programme has a strong linkage with various teams in the Reproductive Maternal Child Health and Nutrition Department, HIV, Health promotion & Communication, Communicable Disease Control and Surveillance among other units. EPI is integrated with these interventions: IMCI, nutrition (Vitamin A supplementation & Nutritional screening), periodic de-worming and growth monitoring.

### 1.5.4 Accelerated Disease Control and Disease Surveillance

#### 1.5.4.1 Polio Eradication

In line with the Global Polio Eradication Initiative of 1988, Lesotho has made significant progress towards set targets. The last confirmed case of wild poliovirus was detected through record review in 1984. AFP surveillance has been in place since 1997. The specimens from AFP cases are shipped using specimen couriers to South Africa NICD for testing.
Lesotho has well-established and functional Polio committees: National Polio Certification Committee, National Polio Expert Committee and a National Task force for Polio Containment. The committees regularly meet with support from the national secretariat composed of MOH EPI and WHO. To strengthen the skill mix there is an inter country Polio Certification Committee between South Africa, Swaziland and Lesotho where on annual and rotation basis the 3 countries polio committees meet to review progress, challenges as well as follow through implementation of recommendations.

In 2005, Lesotho through the National Certification Committee (NCC) presented a country polio free certification document to the Africa Region Certification Commission (ARCC) which was accepted by the ARCC. To sustain high population immunity against polio, the country uses any mass vaccination campaign such as measles to provide OPV to children below the age of 5 years the latest being in 2017.

Through active case based surveillance implementation, the targeted indicators has been achieved throughout the years at national level but fell short in 2017(2.2/100 000 in 2015, 2.4/100 000 in 2016 and 1.4/100 000 in 2017).

The country has adapted IDSR strategy in 2003 and since 2011 the 2nd edition of the IDSR strategy is in use. There are IDSR focal points in the ten district health management teams (DHMTs) as well CHAL hospital to improve the efficiency and quality of the surveillance system. Additionally, processes to appoint Child Health Officers are underway in all districts. The officers will be focused on child health services, including all immunization related responsibilities. The country continues to ensure among other activities the following:

- Monitoring district performance on active AFP surveillance of polio
- Engaging in annual meeting between Lesotho, South Africa and Swaziland where members exchange ideas and experience on the management/implementation of polio surveillance in the three countries
- Sharing polio annual updates with African regional Polio Certification committee
- Supporting implementation integrated SIAs and periodic administration of polio drops forms part of the interventions provided.

In 2016, the country switched from using trivalent Oral Polio Vaccine (tOPV) to bivalent Oral Polio Vaccine (bOPV )and introduced a dose of Inactivated Polio Vaccine (IPV). The stocks of IPV are in country to resume the discontinued administration of IPV due to global supply shortages.

The country has planned a catch up campaign to reach children that were missed during the IPV stock out. The country will join the global move to end the use of oral polio vaccines as per the polio endgame strategy.
Polio Eradication Initiative (PEI) committee membership has been strengthened and the AFP field guidelines have been developed. The WHO support to the AFP surveillance system will be reduced where Lesotho Government needs to ensure the essential assets and functions are maintained to ensure continued functions when support through WHO (financial) reduces from 2019 by mobilizing resources.
Despite the progress made over the years, the country's efforts towards polio eradication still face significant challenges

- The OPV3 administrative coverage remains stagnant at 65% in 2015, 60% in 2016 and 80 in 2017.
- Non-AFP rate per 100,000 also remains below the targeted operational level of 4/100 000 .
- Current couriers towards stool transportation are non-compliant with required standards.

### 1.5.4.2 Progress towards measles elimination

There is significant progress made towards measles control through the programme which provides two opportunities for vaccination against measles at 9 and 18 months of age. The first measles mass campaign was conducted in 1999/2000 and follow up campaigns are conducted every 3-4 years thereafter; (Measles catch up and follow up campaigns were conducted in 2000, 2003, 2007, 2010, 2013 and 2017 respectively) Fig 7.

Case based measles surveillance supported by laboratory confirmation using IgM testing at the National Referral Laboratory was introduced in 2000. All suspected measles cases using the standard case definition are tested by the national laboratory. The laboratory undergoes periodic accreditation to maintain WHO Standards where the latest was conducted in 2015. There have been challenges of kit shortage where the stock out of reagents has limited the timely testing of suspected measles cases.
It is also worth noting that there was a major outbreak of measles (2009/2010) that was mainly due to gaps in population immunity due to accumulated susceptible. This indicates the urgent need for ensuring sustained high measles coverage to achieve the measles elimination goal in the country. The coverage for both 1st and 2nd dose of measles is expected to reach a minimum of 90%. Lesotho is still to achieve that coverage level based on the reported coverage.

The Surveillance data in the past five years indicate that, of the suspected measles cases investigated, all were IgM Negative, and over 90% were Rubella positive (fig 8). As the burden of measles is reduced and guided by the Lesotho Measles elimination plan, the country has switched from monovalent Measles Vaccine use to Measles Rubella (MR) in February 2017 aiming to eliminate congenital Rubella syndrome. The latest Supplemental measles campaigns were combined with polio and targeted 9 months -14 years against measles using MR while for polio it targeted 0-59 months old children. This introduction conducted through wide age group catch up campaign was followed by widespread AEFI rumours. All four reported serious AEFI cases were investigated and confirmed to be unrelated to the MR vaccine.

The 2017 measles campaign coverage was only 89% owing to the AEFI related rumours that could have impacted on the Routine MCV1 and MCV2 coverage as well.

Figure 7. Reported cases of Measles Vs MCV1 & 2 WUNEIC , 1990-2016 with SIAs

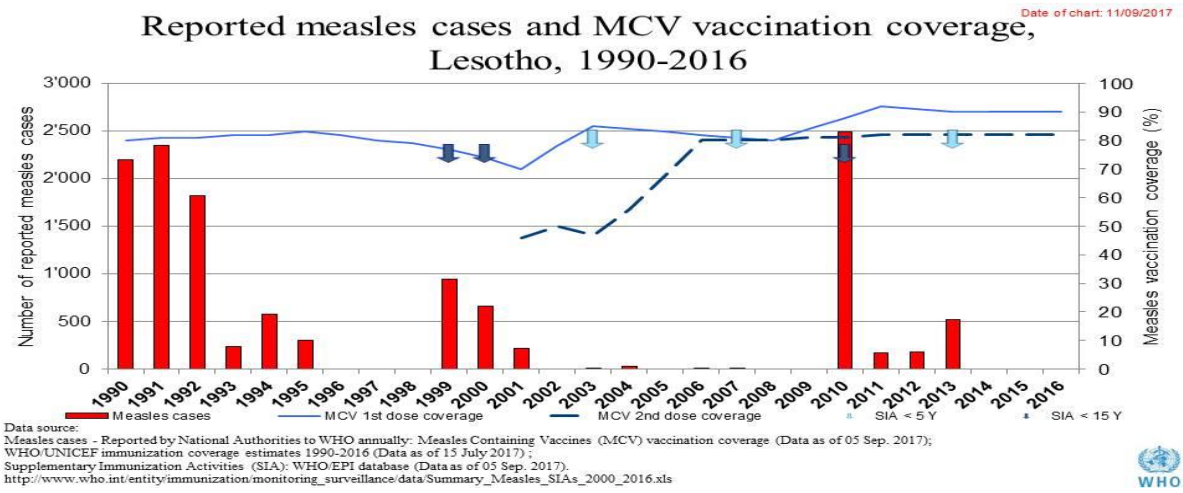
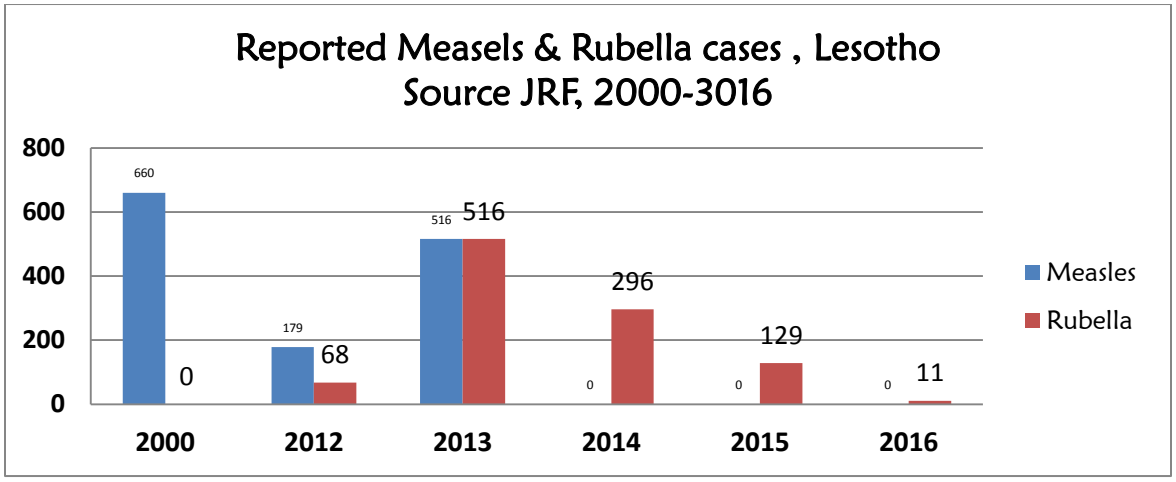



Figure 8. Reported cases of Measles & Rubella, JRF 2000-2016




However, the background burden for Congenital Rubella Syndrome has not been documented locally but significant rise in Rubella while no confirmed case of measles and the WHO AFR guideline has guided the Lesotho EPI to introduce Rubella containing vaccine in 2017 in form of MR vaccine.

### 1.5.4.3 Progress towards Maternal Neonatal Tetanus Elimination

Lesotho has achieved and sustained Maternal Neonatal tetanus elimination since validation by the World Health Organisation in 2000. This was based on desk review conducted that assessed the TT2+ coverage, percentage of clean deliveries and DPT3 coverage in addition to the surveys done to complement the findings. The challenge of maintaining the elimination status remains a priority for the country. There is a current plan to switch to using Td instead of TT and hence revision of the current schedule is needed that will be advised by the NITAG.

### 1.5.4. 4 Laboratory support for Surveillance

At the national public health laboratory within the Department of the microbiology, there is a dedicated measles surveillance focal person, for PBM (6) and Rota (3) sentinel sites a focal person supporting the laboratory activities while the EPI surveillance officer is responsible for shipping of AFP stool specimens to South Africa NICD.

Currently there is a challenge of shipping specimens to South Africa due to the courier service requiring IATA standards of specimen shipment since June 2017 including other biological specimens. The MOH is currently exploring options and opportunities to directly engage the courier services.

### 1.5.6. Vaccines supply quality and Logistics

The government of Lesotho finances all vaccines except Pentavalent and PCV and rota, which are co-financed through GAVI support until 2015. Through co-financing with GAVI it has introduced rotavirus vaccine and MR in 2017. Cold chain and injection equipment are further supplied and distributed by GOL.

The 2012 cold chain assessment and 2014 EVMA noted that vaccine and cold chain management were weak especially at sub-national levels and health facility level. These gaps are in the process of being addressed through cold chain inventory conducted in 2015; unnecessary wastage and lack of wastage monitoring were prominent challenges identified by the assessment. The review also reported the absence of systems to estimate vaccine and logistics needs in many health facilities leading to both overstocking and unnecessary stock outs. Contingency plans were not available for handling vaccines during periods of electricity power failure and shortage of gas. The assessment revealed that preventive maintenance of cold chain equipment was non-existent and this was further s compounded by the shortage of cold chain equipment in some health facilities.

To address these challenges, 2014 EVM improvement plan is being implemented as well as the result of the cold chain assessment and inventory conducted in 2015.

WHO EPI logistics cold chain planning tool was applied to estimate storage capacity required to accommodate new vaccines planned to be introduced. Based on that information, cold chain storage capacity is sufficient (300litres) to accommodate traditional, under-used and new vaccine such as the rotavirus, and IPV due to be introduced; until 2020 at central vaccine store and 2017 at district stores.

### 1.5.7 Advocacy and Social Mobilisation

At the national Ministry of Health the communication Department is responsible to provide integrated support to all programs on Health education, promotion and communication.

The 2014 EPI review noted strong relationship between health education unit and EPI. The country does not have an EPI f communication plan or a risk communication plan. However the public relation office in the ministry arranges slots in TV and radios for messages on EPI and VPD surveillance.

Community health workers continue to provide linkage of services between facilities and communities to promote EPI. Previous experience indicate that social mobilization activities are mostly limited to SIAs and not sustained for routine immunization. Other weakness picked by the review included review included: lack of monitoring of activities, no champions or ambassadors for EPI, no communication focal personnel at district level and this task is carried out by environmental health assistants.

The 2014 DHS has indicated that 97% of women and 85% of men are literate further, 60% of females and 47% of males in the 15-49 age group have at least secondary level education. Radio was the most common means of media exposure for both men and women. In house hold possessions, 83.7% of the population owns mobile phone of which 95.5% living in Urban and 78.1% living in Rural areas own mobile phones. These results indicate targeted communication messages to sustain or increase community demand on immunization services.

In terms of progress there is effort to engage communities with Immunization services through the health facility micro-planning process. In addition the result from the (2016) KAP study of communities in 3 districts on child health Services included Immunization services to guide the improvement of services. Key highlights from the study indicate that 83-85% of the interviewed mothers were knowledgeable on Immunization services; and the absence of EPI materials, guidelines and wall charts was found as compromising the communication and social mobilization. It was recommended, and as detailed in this plan, a communication strategy to address cultural and religious barriers that deter parents from taking their children for immunization will be developed. Such strategy will strengthen routine information dissemination programme, and build on "reaching every community approach" to bring the immunization programme closer to communities

### 1.5.8 Programme Management and Human Resources

The national Health Strategic Plan noted seven major challenges that face the health sector and three of which directly affect EPI:

- Inadequate human resources in skills and number, leading to inefficiencies in health delivery system
- Inefficient human resource management system which is a source of discontent, and high rates of attrition in the country
- Inaccurate and incomplete health information.
- Lack of clarity in the information system constraining evidence-based decision making

Some of these challenges are being addressed through the health sector wide response to human resources challenges in Lesotho, however efforts are made to redress as indicated below.

#### Human Resources

The rapid assessment conducted on human resources of the EPI program in 2016 has identified issues such as: critical EPI vacancies at national level, the need for EPI/RMNCAH functional structure establishment, no systematic training and lack of training plan. It recommended the following to be implemented

- Outcome of Training need analysis (TNA) informs the cMYP 2018-2022 and annual operational plans of MoH and partners.
- Financing of training from MoH funds, complemented by partners who are committed to strengthening EPI.
- Family Health Division appoints a HR Training Manager, tasked with planning and managing training interventions for the Division.
- Collaboration with local training institutions to be explored.

The current cMYP has been developed using the costed training plan as part of the HR retention strategy to manage the programme efficiently at all levels among other newly developed strategies.

The EPI programme currently has EPI manager, a Deputy Manager, Surveillance officer, Data officer, cold chain technician and assistants, a logistics officer although the logistician is not full time assigned. At district level a public health nurse assigned manages the EPI programme integrated with other health service management. The national and District level EPI focal persons have been trained on Mid-Level Managers training in 2016. For the Health facility level, Immunization in Practice training is planned. In line with the Human resources development plan there is a plan to address the strengthening of the EPI management at national and district level that is in process.

### 1.5.8.1 Coordination & support committees

Coordination and general oversight to the programme is assured by the National Inter-Agency Coordination Committee (ICC). Usually chaired by the Minister, the ICC monitors progress, performance and trouble shoot high level policy issues with the Minister for implementation. However meetings have not been sustained on a regular basis, often limited to fulfil the requirements of proposal application process to GAVI. Within the current planning frame, strengthening the functionality of the ICC, through orientation of its members and supporting its planned regular meetings for its optimal functionality has been prioritized.

The ICC has the Immunization Technical Working Group as subcommittee to work from policy translation into operations through planning, supervision, monitoring and evaluation of the programme. To further strengthen technical oversight, the National Immunization Technical Advisory Group (NITAG) is to be established by Ministerial decree to advise the EPI program, At the moment there is a process to identify the members based on the NITAG membership formulation global guide.

The establishment of Lesotho National Medicines Regulatory Authority as the national body with the authority to register all medicines including vaccines intended for public or private use and on issues related to vaccine safety and licensure has been a challenge since 2012. However the AEFI committee was established and is trained in December 2016. Hence it is expected that the reporting and final diagnosis of reported AEFI will improve.

The regular quarterly performance review meetings have not been optimally conducted that needs improvement. The use of the Integrated Supportive supervision tool for the improvement of the quality of the Immunization services will be scaled up using the real time results. There is ad-hoc meeting between EPI and Disease Control that needs improvement to address the performance of the targeted diseases for elimination and eradication.

## Table V. Situation analysis of Lesotho 2012-2017

| Table V . Situation Analysis Lesotho, 2012-2017 | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Disease Control Initiative** | **Suggested indicators** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** |
| Polio | OPV3 coverage | 66% | 66% | 67% | 66% | 65% | 69% |
| Maternal Neonatal Tetanus | Non-polio AFP rate per 100,000 children under 15 years of age | 1.79 | 1.90 | 3.80 | 2.2 | 2.4 | 1.3 |
| | Number of rounds of national and sub national immunization days; Coverage range | 0 | 1(57%) | NA | NA | NA | 1 |
| | TT2+ coverage | 36% | 50% | 47% | 68% | 68% | 60% |
| | % target population protected at birth from neonatal tetanus (WUNEIC) | 83% | 83% | 83% | 83% | 85% | NA |
| | Was there an SIA? (Y/N) | 0 | 0 | 0 | 0 | 0 | 0 |
| | Neonatal deaths reported and investigated | 0 | 0 | 0 | 0 | 0 | 0 |
| Measles & Rubell 1st dosea | Delivery at Facility Rate | 61% | 61% | 77% | 77% | 77% | 77% |
| | Measles / MR vaccination coverage (2 doses) | 60% | 61% | 58% | 66% | 60% | 76% |
| Measles 2nd dose | Measles2/Rubella coverage | NR | 35 | 54% | 55% | 55% | 62% |
| | Number of lab confirmed measles/rubella outbreaks | 0 | 0 | 0 | 0 | 0 | 0 |
| Measles SIAs | Geographic extent National Immunization Day | NA | Nation wide | NA | NA | NA | Nation wide |
| | Age group | NA | Sep-59 | 0 | 0 | 0 | 89% admin coverage |
| | Coverage | 0 | 72% | 0 | 0 | 0 | 92% survey coverage |
| Measles Surveillance | Total Measles Cases (Lab/Clinical/epidemiological) | 0 | 1 | 0 | 0 | 0 | 0 |
| | Total Rubella cases Clinical/epidemiological) | 68 | 166 | 296 | 129 | 11 | 78 |

## Table VI. Situation analysis of routine Immunization by System components

| Table VI: Situational analysis of routine Immunization by immunization system components | | | | |
|---|---|---|---|---|
| **System Components** | **Suggested indicators** | **Performance/Results** | | |
| **1. SERVICE DELIVERY** | | **2015** | **2016** | **2017** |
| Immunization Coverage | Official Coverage Estimates % DTP3 | 67% | 67% | 87% |
| | Official Coverage Estimates % Measles | 66% | 60% | 76% |
| | Other Estimates | WHO/UNICEF best estimates | | |
| | Most Recent Survey Coverage % DTP3 | 85.4% LDHS 2014 | 85.4% LDHS 2014) | 85.4% LDHS 2014) |
| | % Fully Immunized Child | 68.1% | 68.1% | |
| Immunization Demand | % Drop Out DTP1 – DTP3 | 2.9% JRF 2014 | 1.5% (EPI Cluster Survey) | |

| | | | | |
|---|---|---|---|---|
| Immunization Equity | % gap in DTP3 between highest and lowest socio economic quintiles | 21.8 (LDHS 2014) | 21.8% (LDHS 2014) | 21.8%LDHS 2014 |
| | Number of districts with DTP3 coverage > 80% | 1 | 1 | 0 |
| | Number of high risk communities identified for accelerated routine immunization programming (for MCV 2 < 50%) | 0 | 0 | 0 |
| | Number of high risk communities identified for accelerated routine immunization programming | 4 | 6 | 7 |
| Integration | % Integrated Services provided at fixed facilities | 100% | 100% | 100% |
| | Guidelines on Outreach health service package developed | No | No | No |
| New Vaccines Introduction | No. of new vaccines introduced into the routine schedule in the last plan period | 1 | 0 | 2 |
| | Pentavalent - Coverage (Dose 3) | 67% | 67% | 87% |
| | PCV13 Coverage | 62% | 66% | 82% |
| | Rotavirus Coverage (RV2) | N/A | N/A | N/A |
| **System Components** | **Suggested indicators** | **Performance/Results** | | |
| **2 Programme Management** | | **2015** | **2016** | **2017** |
| Law & Regulation | What numbers of functions are conducted by the NRA? | N/A | N/A | N/A |
| | Is there legislation or other administrative order establishing a line item for vaccines? | No | No | No |
| | Is there legislation identifying sources of public revenue for immunization financing? | No | No | No |
| Policy | Has the national immunization policy been updated? | No | No | No |
| Planning | Does the country have an annual work plan for immunization funded through Ministry of Health budgeting processes? | Yes | Yes | Yes |
| | What is the number of districts with an annual micro-plan for immunization? | 0 | 0 | 0 |
| Coordination | What were the Number of ICC (or equivalent) meetings held last year at which routine immunization was discussed? | 4 | 4 | 4 |
| | What were the Number of NITAG (or equivalent) meetings held last year? | 0 | 0 | 0 |
| Advocacy | How many presentations on immunization performance, expenditures, were made to parliament? | 2 | 2 | 0 |
| **System Components** | **Suggested indicators** | **Performance/Results** | | |
| **3.Human Resources management** | | **2015** | **2016** | **2017** |
| HR Numbers | No. of health workers/vaccinators per 10,000 population | 6 | 6 | 6 |
| | % vaccinator posts currently vacant | 0% | 0% | No data |

| | | | | |
|---|---|---|---|---|
| Capacity Building | No. of health workers & managers trained in immunization services through MLM or IIP per year; | 0 | 18 | 0 |
| | % of health workers trained in immunization in the last two years (data from PIE and EPI reviews); | 0% | 0% | 0% |
| | Curriculum review for pre-service medical and nursing immunization education conducted | No | No | No |
| Supervision | Average no. of central supervision visits to each District level Per year | 0 | 0 | 1 |
| **System Components** | **Suggested indicators** | **Performance/Results** | | |
| **4. Costing and Financing** | | **2015** | **2016** | **2017** |
| Financial sustainability | What percentage of total routine vaccine spending was financed using government funds? (including loans and excluding external public financing) | 30% | 54% | 30.2% |
| | Was the line item in the national budget for immunization 100% funded. | Yes | Yes | Yes |
| | What % of immunization resources are being met by the domestic health budget (as identified in the annual budget plan) | 31% | 92% | 36.29% |
| | Government expenditures on routine immunization per surviving infant (JRF 6560) | 4.6 | 13.96 | 12% |
| | Are sub-national immunization budgets and expenditures monitored and reported at national level? | Yes | Yes | Yes |
| **System Components** | **Suggested indicators** | **Performance/Results** | | |
| **5. Vaccine Supply Quality and Logistics** | | **2015** | **2016** | **2017** |
| Transport / Mobility | Percentage of districts with a sufficient number of supervisory/EPI field activity vehicles /motorbikes/bicycles in working condition | 0 | 30% | 60% |
| Vaccine supply | Was there a stock-out at national level during the last year? | Yes | Yes | Yes |
| | If yes, specify duration in months | 1 | 1 | 2 |
| | If yes, specify which antigen(s) | BCG | Measles | BCG |
| Cold chain/Logistics | % of districts with adequate numbers of appropriate and functional cold chain equipment | 70% | 34% | 100% |
| | What was the year of last inventory assessment for all cold chain, transport and waste management equipment (or EVM) | Dec-15 | 0 | 0 |
| | No. PHC facilities with > 80% score for all indicators on the last EVM assessment | 0 | 0 | 0 |
| | % Districts with Availability of a cold chain replacement plan | 100% | 100% | 100% |
| Waste disposal | Availability of a waste management policy and plan | Yes | Yes | Yes |
| **System Components** | **Suggested indicators** | **Performance/Results** | | |
| **6. Surveillance and Reporting** | | **2015** | **2016** | **2017** |

| | | | | |
|---|---|---|---|---|
| Routine surveillance | Percentage of surveillance reports received at national level from districts compared to number of reports expected | 98% | 99% | 100% |
| | AFP detection rate/100,000 population under 15 year of age | 2.2 | 2.4 | 1.4 |
| | % measles positive cases on samples collected from suspected measles cases | 100% (277) | 100% (77) | 0% (73) |
| | Number of neonatal deaths for which a follow up investigation was conducted | 0 | 0 | 0 |
| | Sentinel Surveillance for Rotavirus established | Yes | Yes | Yes |
| | % of suspected meningitis cases tested for Hib/pneumococcal disease according to standard protocol | Yes | Yes | Yes |
| | % of suspected meningitis cases tested for Hib/pneumococcal disease according to standard protocol | 91% | 70% | 38% |
| Coverage Monitoring | % gap in match between DTP3 survey coverage and officially reported figures | 18.4 | 18.4 | 21.40% |
| Immunization safety | % of districts that have been supplied with adequate (equal or more) number of AD syringes for all routine immunizations | 100% | 100% | 100% |
| Adverse Events following Immunization | National AEFI System is Active with a designated national committee | No | YES | YES |
| | Number of serious AEFI cases reported and investigated | 0 | 0 | 4 |
| **System Components** | **Suggested indicators** | **Performance/Results** | | |
| **7. Demand Generation and communication** | | **2015** | **2016** | **2017** |
| Communication Strategy | Availability of a routine immunization communication plan | NO | NO | NO |
| Research | Year of last study on community knowledge, attitudes and practices in relation to immunization | Not done | Not done | YES |
| Demand | % of outreach services held as planned | No data | No data | No data |
| | High risk plan for disadvantaged communities | No plan | No Plan | No Plan |
| **School Immunization Activities** | | **2015** | **2016** | **2017** |
| Age | Antigens provided | No data | No data | No data |
| 9-13 year females | HPV Vaccine | 84% | 22% | **NA** |

## Table VII. Summary of Strengths Weakness of the Immunization Programme

| Table VII. Summary of Strengths, Weakness of the Immunization Programme | | |
|---|---|---|
| **Component** | **Strengths** | **Weaknesses** |
| Service Delivery | Health facilities open Monday through Friday during 0800 – 1630. | 62% of health facilities offer immunization services for one to two days only per week. |
| | EPI guidelines available and known by some facilities. | EPI policies not well followed e.g MDV |
| | Staffs have good knowledge on vaccines & benefits of vaccination. | o Mothers turned away when they visit health facilities on non-immunization days. |
| | Orderly and neat work areas in many facilities. | o Immunizations mainly provided through static facilities and limited outreach services. |
| | EPI policies available | Absence of micro-plans in some facilities |
| | Performance based financing a World Bank initiative, has EPI indicators monitored | o Long distance from Health Centers especially in the rural |
| | | o Immunization coverage not analysed in many facilities |
| Accelerated Disease Control | Availability of adapted IDSR guidelines.<br>o AFP and AEFI surveillance systems in place and Guidelines available | |
| | Availability of posters on case definitions and disease surveillance. | o Surveillance manuals not available in some facilities |
| | Availability of disease notification & investigation forms for vaccine preventable disease surveillance; AFP, Measles, Hib &rotavirus available. | o Some staff not yet trained on new revised/second edition IDSR guidelines |
| | 90% district trained on 2nd edition IDSR guidelines. | Disease trends not monitored in many facilities; Outbreaks not detected early because data are not analysed locally |
| | Surveillance officers are present in DHMTs. | Prioritization of sites and active surveillance is not done. |
| | | o Surveillance data is not well collected and reported ;Data harmonization not done |
| Vaccines , Cold chain & Logistics | Nurses and PHNs assigned to look after vaccine fridges | Shortages of gas in some facilities |
| | Electronic temperature monitor devices (multi log, freeze tag 1,2) available in all facilities. | Lack of incinerators in some facilities |
| | Packing vaccines using the “First In First Out” method | No contingency plans for events of power failures and shortages of gas in other facilities. |
| | Shake test known and practiced by some nurses | Irregular defrosting of freezers; regular maintenance of Fridges not done |
| | Timely delivery of ordered vaccines. | o Irregular monitoring of temperatures in some places. |
| | AD syringes used in routine immunization country wide and safe injection practices in many facilities. | o Stock outs, over-stocks and under-stocks of vaccines in some facilities. |
| | Proper storage of syringes and needles. | o Shake test, MVP and VVM not known in many facilities |
| | Availability of incinerators (in some health facilities) and Safe disposal of injection waste. | o No standard method for estimating vaccines and logistics needs |
| | Waste management plan in place | o Poor record keeping and discrepancies between physical counts and records in ledger books |
| | Non-functional refrigerators replaced following cold chain assessment and inventory | o Vaccine wastage not monitored |
| | Cold chain equipment replacement plan available | o Storing medicines and other items in vaccine fridges |
| Communication, Advocacy and Demand creation | Availability of community health workers | Non-functional health centre committees in many facilities |
| | Participation of CHWs in routine immunization, NIDs and disease surveillance (in some health facilities).Social mobilisation is conducted prior to NIDs. | CHWs do not participate in routine immunization and disease surveillance in some facilities; Unavailability of communication strategy |
| | | Defaulter tracking by CHWs mechanism not in place |
| | | Old and out-dated IEC materials; Inadequate transport for social mobilisation |

| | | |
|---|---|---|
| | | ▯ Myths about vaccines being poisonous and harmful to children's health not countered |
| | | ▯ Health education is centralised |
| | | ▯ Inadequate funds for social mobilisation & Transport for Social mobilization |
| Programme management | ▯ Staffing pattern improved (5 health workers in more than 50% health facilities) | ▯ Inconsistent in-service and refresher training |
| | ▯ Some staff trained on EPI, Cold Chain and Vaccine Management, and Disease Surveillance. | ▯ Inadequate transport and funds |
| | ▯ EPI services are integrated into IMCI in some facilities. | ▯ Lack of EPI micro plans in many facilities |
| | ▯ Immunization sessions include other interventions such as growth monitoring. | ▯ Weak data management in many facilities; |
| | ▯ Post Exposure Prophylaxis (PEP) for needle stick injuries available | ▯ Irregular supportive supervision at all levels. |
| | EPI policy document available in all health facilities | ▯ TWG and ICC meetings not held regularly |
| | | ▪ National Immunisation Technical Advisory Group (NITAG) and National Regulatory Authority (NRA) not available |

*Sources, Lesotho Comprehensive EPI review report 2014, Joint appraisal report of 2017, Equity assessment study report 2017 and KAP study on Maternal Child Health and nutrition 2017 report*

## TABLE VIII NATIONAL IMMUNIZATION MONITORING & EVALUATION FRAMEWORK

| Goal | IMPACT INDICATORS | Baseline | | | Targets | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Result | Year | Source | 2018 | 2019 | 2020 | 2021 | 2022 | Means of verification |
| **Immunization Component - Immunization Services** | | | | | | | | | | |
| To reduce the % gap in DTP3 between highest and lowest socio economic quintiles from 4% to 0% all districts by 2022; | To contribute to the reduction of child mortality to 25/1,000 live birth by 2030 Reduction in Under 5 Child Mortality Rate | 130 / 100,000 | 1990 | DHS Census 2016 | 80/1,000lb | | | | | DHS 2014, census 2016, MICS 2018 |
| **Objective** | **OUTCOME INDICATORS** | **Baseline** | | | **Targets** | | | | | |
| | | **Result** | **Year** | **Source** | **2018** | **2019** | **2020** | **2021** | **2022** | **Means of verification** |
| **Immunization Component - Immunization Services** | | | | | | | | | | |
| Implement Reaching Every Community Strategy in all Districts | Reaching every community guidelines adapted & disseminated for use / HF RED MP | 255% | 2017 | Plan & program Records | 75% | 85% | 100% | 100% | 100% | Guidelines endorsed & disseminated; HF MP validated |
| **Strategies** | **OUTPUT INDICATORS** | **Baseline** | | | **Targets** | | | | | |
| | | **Result** | **Year** | **Source** | **2018** | **2019** | **2020** | **2021** | **2022** | **Means of verification** |
| **Immunization Component - Immunization Services** | | | | | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Adapt Reaching Every Community Strategy and Guidelines | Specific TA and budget resource mobilized for REC strategy | 25% | 2017 | Program Records | 75% | 85% | 100% | 100% | 100% | Programme Records |
| **Inputs & Activities** | **INPUT INDICATORS** | **Baseline** | | | **Targets** | | | | | |
| | | **Result** | **Year** | **Source** | **2018** | **2019** | **2020** | **2021** | **2022** | **Means of verification** |
| **Immunization Component - Immunization Services** | | | | | | | | | | |
| Validated micro-plan, Supportive supervision to verify and support Districts/HFs | No Validated Micro-plans consolidated by district | 0% | 2017 | District plans | 50% | 75% | 100% | 100% | 100% | Feedback records from National level |

## Table VIII. Lesotho 2018 Annual Operational Plan

**LESOTHO ANNUAL IMPLEMENTATION PLAN 2018**

| Year 1- 2018 | | | | | Months of implementation | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Immunization Component** | **Activity** | **Start Month** | **End Month** | **% Compl** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **Expected Output** | **Resources Needed** |
| **Immunization Service delivery to increase Coverage** | National EPI to ensure districts & HF RED micro plan is consolidated and submitted for review and validation by end March 2018<br>Update the list of VHWs, HCC and Community stakeholders to partner for community linkage and document every month the activities conducted (DHMTS ) ( EPI TWG to review the district micro plans) | April | December | 100% | | | | × | × | × | × | × | × | × | × | | 100% micro plans collected from all Districts | Vehicles, airtime, personnel, meals and accommodation; EPI TWG to go to the District/Health facilities to validate the consolidated RED micro plans |
| | Prioritized areas with high number unimmunized and underserved/difficult to reach areas to Implement outreaches<br>Institutionalize Tracking of defaulters in al HFs | January | December | 90%; 50% | × | × | × | × | × | × | × | × | × | × | × | × | Micro plans identify and categorize the risk population ; defaulter tracking initiated in 50% of districts | Vehicles, airtime, personnel, meals and accommodation |
| | National EPI supported by WHO to Adapt the modules for IIP ; national EPI to conduct trainings on Immunization In Practice (IIP)TOT for all districts ( EPI TWG & district for TOT; District EPI child health officers and HF level officers to be trained) as per the National training plan | April | December | 100% | | | | × | × | × | | | | | | | TOT conducted using adapted IIP Modules in all districts ; Training conducted for health facility level using the adapted modules in all districts | Assigned Child health officers by MOH in every district; Printed modules, Vehicles, airtime, personnel, meals and accommodation |
| | Conduct Regular monitoring of Drop out by district & HF conducted for corrective action on monthly basis by National & District level | February | December | 80% | × | × | × | × | × | × | × | × | × | × | × | × | Monthly analysis providing Dropout rate for corrective action if out of range | monthly reports |
| | National EPI to provide quarterly feedback to all districts | March, June, Sept, Dec | | 100% | | | × | | | × | | | × | | | × | Quarterly feedback bulletin sent to districts from national EPI | Printed feedback; or copy by mail |
| Fully immunized to be increased | Conduct Defaulter tracing (using the card and accompaniment to HFs for immunization ) by all districts | February | December | 80% | | × | × | × | × | × | × | × | × | × | × | × | Report on tracked defaulters by respective districts ( quarterly) | Vehicles, personnel, DSA |
| Immunization Equity | Periodic hire of helicopter, equine (horses, donkeys) to strengthen outreach services at least once a year (ensure Micro plan is part of the annual district health budget) ; Tracked defaulters ; linked with VHWs listed; Intense Social mobilization is done prior and provide integrated packaged services (EPI, NUT) | Oct | December | | | | | | | | | | | | | | Targeted and identified unreached children reached ; report on the activity as evidence from district | means of transport, DSA , airtime, personnel, meals and accommodation |
| **New Vaccine Introduction/change of schedule** | National EPI and EPI TWG to prepare re-introduction of HPV proposal ; | April | November | | | | | × | × | × | × | × | × | × | × | | Proposal developed and submitted ; Accepted proposal for support | Technical guidelines; Review of the plans by the EPI TWG |
| | Develop plan for IPV reintroduction, conduction sensitization with the districts for implementation ; monitor preparation; distribute required supplies | April | December | | | | | × | × | × | × | × | × | × | × | × | Districts to have Implementation plan of vaccine re- introduction process that is monitored and implemented | Sensitization of all HF in all districts by national /district supported by EPI TWG |
| | Conduct post introduction evaluation (PIE ) of the Rota virus and MR vaccine | August | December | | | | | | | | | × | × | × | | | PIE Report | External TA, funds |
| **HepB birth dose introduction guidance** | Submit request to NITAG to advise if Hep B Birth dose should be introduced in Lesotho and use | June | December | | | | | | | × | | | | | | × | Guidance from NITAG on Hep B Birth dose if required | conference facilities and DSA / External TA facilitation |

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| | guidance to update future plans | | | | | | | | | | | | | | | | |
| **Switch from TT to Td** | Submit request to NITAG to advise on Schedule change and formulation ; update policy ;monitor preparation at national and district level ; | April | December | | | | | × | × | × | × | × | × | × | × | × | NITAG advise report to guide the switch preparation; Request for Td to be submitted; switch plan to be prepared | conference facilities and DSA /External TA facilitation |
| **Vaccine Supply and Cold Chain** | Submit Cold chain Capacity Expansion and Optimization proposal (National EPI supported by UNICEF) and ensure costing of the cMYP is revised | March | May | | | | × | × | × | × | × | × | × | × | × | | CCEOP application proposal developed ; costing in cMYP revised | Vehicles, airtime, personnel, DSA + Externa TA (UNICEF ESARO ); TA from WHO IST (last week of the CCEOP) |
| | Develop and implement maintenance /rehabilitation plan as part of the CCEOP (National EPI supported by UNICEF) | March | May | | | | | | | | | | | | | | Rehabilitation plan in place as part of the CCEOP | TA and EPI TWG work |
| | Implement the capacity building plan for Cold chain technicians & Vaccine managers & Technicians in the districts (National EPI supported by UNICEF) | March | May | | | | × | | × | | | | | | | | Vaccine management and Cold chain maintenance trained officers ( report) ; Capacity on rehabilitation of CC and improved vaccine management | TA to train the officers, Conference package |
| | Unicef & WHO to support building capacity on IIP, EVMA ( partial) to institutionalize forecasting at HF/district, monthly reporting on stock ; | June | December | | | | | | | | | | | | | | Identified focal persons trained ; training report and follow up of improvement | TA, Conference package and finances |
| | National EPI supported by UNICEF to Quantify and timely place order of bundled vaccines; training on Stock management at district level ; National to summarize and monitor stocks on monthly basis (DVDMT and SMT) | June | December | | | | | | | | | | | | | | Vaccine forecasting plan available; stock management report available ; minimize stock out of vaccines | TA from UNICEF in country |
| Waste management plan/policy guideline | Develop interim plan to guide management of obsolete fridges disposal National EPI supported by Environmental health and Environment Ministry and Unicef | April | December | | | | | | | | | | | | | | Interim plan available | TA from UNICEF in country |
| Transport/Mobility | Unicef & Riders for health to support the rapid transport assessment need for EPI, develop transportation plan, procure vehicles based on the plan (to feed into the GAVI HSIS proposal ) | March | Nov | | | | | × | × | × | × | × | × | × | × | | Harmonized Transport need assessment conducted and report to guide the FPP/CEF available | TA from unicef & Riders for h ealth |
| Polio Endgame strategies implementation | National EPI with support from WHO to conduct intensified active case search and active surveillance for Acute flaccid Paralysis ; | Jan | December | | | × | × | × | × | × | × | × | × | × | × | × | Report on active surveillance and active search available ; ISS tool report | WHO TA and finance |
| Sustaining certification level of AFP surveillance indicators | National EPI with support from WHO to Conduct Quarterly polio risk assessment and develop mitigation plan to address identified risk | Jan | December | | | | | | | | | | | | | | Quarterly risk assessment conducted with mitigation plan to address challenges | WHO TA |

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| Sustaining certification level of AFP surveillance indicators | National EPI TWG supported by WHO to conduct refresher surveillance Training for Health center nurses , clinicians and conduct community sensitizations ; roll-out of the tool; clinician & community regular sensitization | March | December | | | | | | | | | | | | | | Trainings conducted documented with list of participants ; surveillance targets achieved ;, Active case search monitored; | WHO TA and finance |
| | National EPI TWG to adapt and print the new revised WHO Case AFP investigation form (GPS coordinate)and provide sensitization on the new form, print and disseminate for use with support from WHO | March | June | | | | × | × | × | × | × | × | × | × | × | × | New AFP case investigation form in use | WHO TA and finance |
| | National EPI TWG with support from WHO to train and build capacity of national team ( Emergency, IHR and EPI ) on the Polio SOP for outbreak response ; conduct simulation to be discussed | | June | | | | | | | × | | | | | | | National Polio SOP updated, relevant officers sensitized on the National SOP for polio outbreak response | Technical guidelines; meeting |
| | National EPI with support from WHO to conduct EPI/Surveillance quarterly monitoring peer review meetings with all districts | April, July, Oct, Dec | | | | | | × | | | × | | | | × | | × | Report on quarterly review meetings; priority sites visited with evidence / Desk review of performance conducted | WHO TA, Districts peer review comments |
| | National EPI with support of WHO to use alternative accredited and appropriate couriers services for prompt Specimen shipment | February | March | | | × | × | | | | | | | | | | | Identified appropriate courier that is accredited in use | WHO TA and finance |
| Annual progress report on Polio free status documented | National EPI TWG supported by WHO to Coordinate and monitor conduct of meetings for Polio committees; Advocate for inclusion of budget in HSIS as WHO is transiting due to polio ramp down | April | December | | | | | × | | | | | | | | | | Report on Polio committee meetings ( minutes) ; Annual polio progress report availed in April 2018 | WHO TA and finance |
| Measles elimination | National Epi with support from WHO country office and IST, to adapt the measles Surveillance guideline in line with measles elimination, disseminate and train surveillance officers; National EPI to establish Measles national verification committee with support from WHO IST | November | December | | | | | | | | | | | | | | | Updated measles guidelines, verification committee in place | WHO TA and finance |
| | National EPI to ensure laboratory supplies are available ;budgeting to be included in the HSIS for next coming years | March | December | | | | | | | | | | | | | | | FPP to include Surveillance budget as transition from WHO | WHO TA |
| | National EPI supported by WHO to identify appropriate expert for the conduct of the retrospective record review to establish burden of CRS | May | December | | | | | | | | | | | | | | | CRS retrospective record review report | WHO TA |
| New vaccine Sentinel surveillance | National EPI supported by WHO to support the sentinel sites periodic meetings & data management; conduct quarterly supervision to the sites ; conduct quarterly review meetings | Feb | December | | | | × | | | × | | | × | | | × | | minutes on quarterly meetings and supervision reports from sentinel surveillance sites | WHO TA |

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| Law & Regulation | National EPI with support from EPI TWG to Prepare advocacy brief for parliamentarians to endorse the NRA bill | Feb | December | | | | | | | | | | | | | | Advocacy brief for parliamentarians available and used | EPI TWG support |
| | National EPI with support from WHO to Develop the framework to constitute the NITAG; Nominations to be submitted to the Minister ; WHO to support their orientation | Feb | July | | | | | | × | | | | | | | | NITAG functional and guidance report on TT to Td Switch for implementation | NITAG DSA and conference package ; External WHO TA |
| | National EPI with support of WHO and partners to update the EPI Policy | Feb | December | | | | | | | | | | | | | | Updated EPI policy | TA from WHO and partners (Remote support) |
| **Planning & program management improved** | Feedback bulletin to be generated by National EPI to Districts on quarterly (EPI/Surveillance) | March | December | | | | | | | | | | | | | | Quarterly bulletin developed and shared | |
| | National EPI with EPI TWG support to update and revise the RED guideline | June | December | | | | | | | | | | | | | | Revised RED Guideline available with tools in use | TA from EPI TWG ; Remote support from WHO and UNICEF |
| | EPI TWG to review the Micro plans and validate and document and feedback to districts and HFs | March | December | | | | | | | | | | | | | | Validated HF Micro plans consolidated by District | TA from EPI TWG |
| Supervision | National EPI supported by the EPI TWG Adapt the WHO integrated supervisory checklist for implementation using mobile Phones (Innovations); Sensitization of the national team | April | December | | | | | | | | | | | | | | ISS adapted and in use by MOH and partners | TA from WHO and finances |
| | Build capacity ; Secure funding for phase I selected districts to be secured from WHO for institutionalizing the ISS tool (integrated supportive supervision tool) | April | December | | | | | | | | | | | | | | Report on ISS availed | DSA for field mission from WHO ; Identification of districts for phase I scale up |
| **Coordination, Leadership** | National with support from partners to conduct Orientation of the ICC members, develop a regular schedule (quarterly )of ICC meetings and share with members | Feb | December | | | | | × | | | | | | | | | ICC members orientation report ; TOR and meeting reports | TA from partners; Strong Advocay from Partners ; WHO Support |
| | National EPI through the PS to Secure ministerial approval for setting up the EPI LWG; Conduct regular meetings as per the TOR | Feb | June | | | × | × | × | × | × | × | × | × | × | × | × | EPI LWG in place | Advocacy for establishment |
| | National EPI supported by partners to develop a regular EPI TWG meeting schedule and conduct meetings (monthly ) | Feb | December | | | × | × | × | × | × | × | × | × | × | × | × | Monthly EPI TWG meeting minutes | Regular attendance from EPI TWG members |
| **Program monitoring** | National EPI supported by partners to conduct Data quality review ; | Feb | April | | | × | × | × | | | | | | | | | DQR report and plan available | outside TA from WHO; EPI TWG active participation |
| | National EPI supported by Partners to Implement data quality improvement plan; Data team to regularly meet | April | December | | | | | × | × | × | × | × | × | × | × | × | DQI plan in place and implementation report | Monitoring of the plan by the EPI TWG |
| | National EPI and Planning unit to strengthen the Data working team so that EPI data is focused on data and update the EPI TWG regularly (partners, planning department, Disease control, HIV and other programs) | April | December | | | | | | | | | | | | | | The data quality team to work and report to EPI TWG; sub group of the EPI TWG to strengthen data quality ( to be discussed) | Agreement of the MOH team |

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| Programme monitoring | EPI TWG submits EPI performance report to ICC (quarterly) (to present Proportion of planned implemented per quarter and EPI performance per quarter) ; The EPI TWG to review performance on quarterly prior to the ICC meeting ( even if ICC is not meeting) | March | December | | | | | × | | | × | | | × | | | ICC updated on performance of program ( Immunization system annual operational implementation) ; EPI TWG to review on quarterly basis the performance of implementation | Regular ICC meetings & reports from the EPI program |
| | EPI TWG TOR to be reviewed to ensure all Immunizations systems are standing agenda for their monthly meeting ( Service delivery, Communication/social mob, VPD surveillance, Data, Logistics and vaccine , Planning & management); EPI TWG members to be lead in each area supported by partners ; minutes to reflect each component is addressed | | | | | | | | | | | | | | | | Functional EPI TWG; Counter parts to support Social mob ( Unicef C4d to attend monthly meeting with Red cross;) ; Logistics vaccine Unicef and CHAI; Service delivery ( MOH); Data ( MOH); Sur ( WHO); Program planning MOH) | Proactive participation of EPI TWG with review of annual operational plan for better support and implementation |
| Programme reviews/ | National EPI with Stakeholders and EPI TWG + partners to prepare the required documents for Desk review of the CEF Process by March 2018 | Feb | Nov | | | | × | | | | | | | | | | Desk review of the FPP conducted (cMYP, NHSP, NDP, DHS, Census, KAP, Equity assessment, TNA etc… | Stakeholders and partners support |
| | National EPI with Stakeholders and EPI TWG + partners to proactively engage and monitor the preparation of the Full Portfolio planning (FPP)by participating in the scheduled meetings and report on expected work done by each stakeholder | Feb | Nov | | | | × | × | × | × | × | × | × | × | × | | Regular attendance of MOH, Stakeholders and partners | Invitation to partners and stakeholders ; hold regular meetings every 2 weeks until plan is streamlined chaired by FHD |
| | MOH , stakeholders and partners to participation of the In country kick off meeting of the FPP/CEF meeting in April | April | | | | | | × | | | | | | | | | Road map of the FPP developed with responsibility | Participation of all stakeholders supporting MOH |
| | National EPI and partners to Prepare for Annual Joint appraisal | June | | | | | | | | | | | | | | | Well coordinated JA implemented ; report | Full participation of Stakeholders and partners ; senior management leadership |
| | National EPI program to Participate in the annual health sector review meetings | July | | | | | | | | | | | | | | | Visibility of the EPI programme ensured; advocacy done for EPI sustained improvement | |
| Vaccine Safety Surveillance | National EPI with support from partners to conduct Training of Health workers on AEFI reporting (linked with IIP or EPI/Child Health/IDSR trainings) for EPI child health officers | June | | | | | | | | × | | | | | | | AEFI reporting improved | The IIP and Surveillance trainings to be used as opportunity ; National TWG to ensure AEFI is included; External TA required |
| Surveillance Data harmonization | National EPI surveillance officer to ensure the coordination of monthly meetings at national ; data review through quarterly meetings of Districts (between EPI, Measles lab and IDSR; linkage with data quality team to be ensured ) | March | December | | | | × | | | × | | | × | | | × | Outbreaks are tracked on time for prompt response by EPI and Lab meeting monthly ; Data quality in surveillance improved | Data quality team to ensure participation |
| **Advocacy, Communication and Social mobilization** | National EPI to prepare documentation of reports on performance, expenditure and resource mobilization to be shared with Parlimamentatians by holding Two meetings of one day duration workshop | June | December | | | | | | | | | | | | | | Report avaialbe to guide the Parliamentarians engagement | EPI TWG support |

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| Advocacy | National EPI supported by the EPI TWG to hold Stakeholders meeting to develop the framework & document the activities for stakeholders (community , private sectors and MOH | June | December | | | | | | | | | | | | | | Framework used to guide report generation for resources mobilization | EPI TWG support and other stakeholders |
| Communication Strategy (EPI) | National EPI with support from WHO and UNICEF , Red Cross and Stakeholders to Mobilize technical support to develop EPI communication plan/Strategy, Convene stakeholder meetings; monitor use of the Strategy | June | December | | | | | | | | | | | | | | Communication strategic plan developed with participation of the CSOs supported by partners ; Social mobilization resource mapping done | Red Cross and UNICEF TA and Health Education team of the MOH; CSOs involved in SM to be included in the development |
| Communication Strategy (EPI) | National Health Education unit supported by National EPI and Unicef to develop IEC materials, print and distribute in local languages and promote use of local radios for sustained demand creation on EPI on regular basis | March | December | | | | × | | | | | | | | | × | IEC materials on EPI availed in local languages ; airing of messages in local languages on regular monthly using community radios ; report on activities | Support from EPI TWG |
| Communication Strategy | National Health Education unit supported by National EPI and UNICEF to develop Risk communication and Vaccine hesitant group communication strategy developed and capacity built for all districts | March | December | | | | | | | × | | | | | | | Strategy to address vaccine hesitant group developed; Risk communication plan developed | Unicef C4d to support the risk communication ; Online E training on risk communicaiton to be taken by interested TWGs |
| Communication Strategy | National EPI supported by Unicef and CHAI to engage with MOH Education for Defaulter tracing and adolescent immunization | Feb | December | | | × | × | × | × | × | × | × | × | × | × | × | Partnership with MO Education , early learning centers to ensure schools used for defaulter tracing | Advocacy with Ministry of Education and updating of EPI policy, School Health policy |
| | National EPI to celebrate the annual African Vaccination week with support from Health education unit and stakeholders | April | | | | | × | × | | | | | | | | | Mobilization activities reports | Support of Senior MOH and partners |
| School Immunization | Summarize co-financing decision letters and share with relevant departments ( to be incorporated in the School Health policy ) | June | Sept | | | | | | | × | | | × | | | | Co-financing reporting done on time and used for action | Information from Finance and planning of Ministry |
| **Financial Sustainability** | National EPI supported by EPI TWG, ICC and stakeholders to advocate with PS and Minister for the continued mobilization of resources to sustain and increase coverage using the CMYP and annual Operation plan | | | | | | | | | × | | | | | | × | cMYP and Annual operational plan used for resources mobilization to sustain immunization performance | EPI TWG briefing notes and the quarterly performance reports |

# 2. COSTING AND FINANCING OF MULTI-YEAR PLAN 2018 - 2022

## 2.1 Costing and Financing

The Comprehensive Multi-Year Plan for Lesotho for 2018 – 2022 has been prepared with some parameters that also serve to inform the costing and financing projections. The WHO logistics forecasting tool was used for estimation of the vaccines, injection equipment and cold chain capacity requirement while the cMYP costing and financing tool was used to estimate and made projections for the financing requirements.

The population projections as presented in table X below is based on the result of the population census conducted in 2016.

### Table IX. Population projection used for planning

| Population Projections 2017 - 2018 | | | | | | |
|---|---|---|---|---|---|---|
| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| Population figures used | 2,007,201 | 2,034,592 | 2,048,427 | 2,062,356 | 2,076,380 | 2,090,500 |
| Total annual birth cohort: | 40,144 | 40,692 | 40,969 | 41,247 | 41,528 | 41,810 |
| Total annual surviving infants: | 38,137 | 38,657 | 38,920 | 39,185 | 39,451 | 39,720 |
| Total annual pregnent women: | 50,180 | 50,865 | 51,211 | 51,559 | 51,910 | 52,263 |

Further to the programme objective to achieve 90% coverage for all antigens for routine immunization the vaccine requirement has been projected as presented in table XI.

### Table X. Projected vaccine requirement by year

| Annual vaccine Doses Required (including buffer Stock) | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Total 5 Years |
| BCG | 72,400 | 73,500 | 73,900 | 74,400 | 74,900 | 75,400 | 372,100 |
| bOPV | 161,800 | 164,300 | 165,200 | 166,300 | 167,400 | 168,600 | 831,800 |
| PCV-13 | 108,600 | 110,300 | 110,900 | 111,600 | 112,400 | 113,100 | 558,300 |
| DTP-HepB-Hib | 121,400 | 123,300 | 123,900 | 124,700 | 125,600 | 126,400 | 623,900 |
| IPV | 36,200 | 36,800 | 37,000 | 37,200 | 37,500 | 37,700 | 186,200 |
| Rota_liq | 72,400 | 73,500 | 73,900 | 74,400 | 74,900 | 75,400 | 372,100 |
| MR | 98,300 | 99,800 | 100,300 | 101,000 | 101,700 | 102,400 | 505,200 |
| DT | 40,500 | 41,100 | 41,300 | 41,600 | 41,900 | 42,200 | 208,100 |
| TT | 266,200 | 270,200 | | | | | 536,400 |
| Td | | | 103,100 | 83,200 | 83,700 | 84,300 | 354,300 |
| HPV | | | | 53,800 | 43,400 | 43,700 | 140,900 |

The cost by antigen has also been computed as projected in Table XII.

## Table XI. Vaccine cost by antigen by year

| Vaccine Cost by Antigen (including Frieghts) | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Total 5 Years |
| Total | $1,000,983 | $1,016,601 | $1,011,168 | $1,257,431 | $1,217,867 | $1,225,718 | $5,728,785 |
| BCG | $9,919 | $10,070 | $10,124 | $10,193 | $10,261 | $10,330 | $50,978 |
| bOPV | $49,834 | $50,604 | $50,882 | $51,220 | $51,559 | $51,929 | $256,194 |
| PCV-13 | $352,950 | $358,475 | $360,425 | $362,700 | $365,300 | $367,575 | $1,814,475 |
| DTP-HepB | $210,022 | $213,309 | $214,347 | $215,731 | $217,288 | $218,672 | $1,079,347 |
| IPV | $101,360 | $103,040 | $103,600 | $104,160 | $105,000 | $105,560 | $521,360 |
| Rota_liq | $190,557 | $193,452 | $194,505 | $195,821 | $197,137 | $198,453 | $979,367 |
| MR | $59,570 | $60,479 | $60,782 | $61,206 | $61,630 | $62,054 | $306,151 |
| DT | $4,809 | $4,881 | $4,904 | $4,940 | $4,976 | $5,011 | $24,712 |
| TT | $21,962 | $22,292 | $0 | $0 | $0 | $0 | $22,292 |
| Td | $0 | $0 | $11,599 | $9,360 | $9,416 | $9,484 | $39,859 |
| HPV | $0 | $0 | $0 | $242,100 | $195,300 | $196,650 | $634,050 |

From the cost projections, over a 5 year period with a total cost of $5,728,785, PCV 13 takes a high proportion of 32% and Penta vaccine accounts for 19% respectively.
Projections were also made for injection supplies both in quantity requirement as well as the cost in Table XIII and Table XIV.

## Table XII. Injection supplies requirement by year

| Total Annual Safe Injection and Equipment | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Total 5 Years |
| No. of syringes required for ID injections | 40,200 | 40,800 | 41,000 | 41,300 | 41,600 | 41,900 | 206,600 |
| No. of syringes required for SC injections | 76,400 | 77,500 | 77,900 | 78,500 | 79,000 | 79,500 | 392,400 |
| No. of syringes required for IM injections | 251,100 | 255,000 | 33,700 | 135,200 | 124,800 | 125,600 | 674,300 |
| Syringe,RUP-1,2ml,w/fixed ndl/BOX-100 | 3,700 | 3,700 | 3,700 | 3,800 | 3,800 | 3,800 | 18,800 |
| Syringe,RUP-1,5ml,w/fixed ndl/BOX-100 | 9,900 | 10,000 | 10,100 | 10,100 | 10,200 | 10,300 | 50,700 |
| Safety boxes | 3,900 | 3,900 | 1,000 | 2,800 | 2,700 | 2,700 | 13,100 |

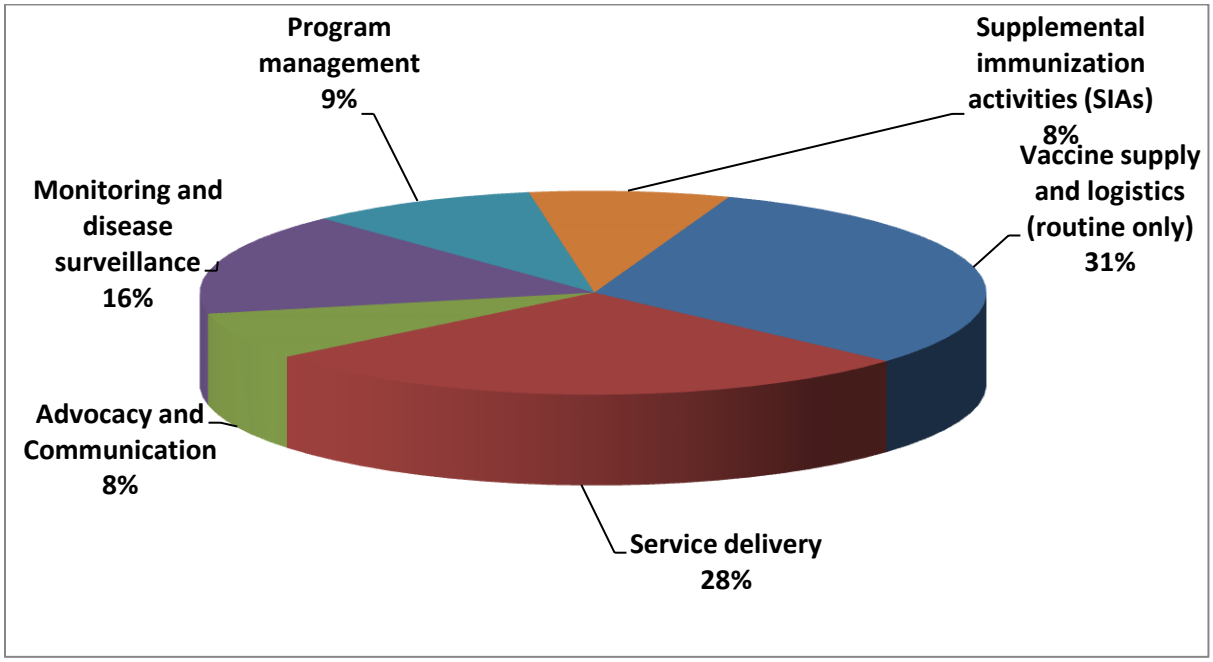
## Table XIII. Cost of Injection safety supplies by year

| Total Cost of Sefe Injection and equipment | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Total 5 Years |
| **Total** | **$24,040** | **$24,360** | **$10,283** | **$17,132** | **$16,546** | **$16,643** | **$84,964** |
| No. of syringes required for ID injections | $2,631 | $2,670 | $2,683 | $2,703 | $2,723 | $2,742 | $13,522 |
| No. of syringes required for SC injections | $4,202 | $4,263 | $4,285 | $4,318 | $4,345 | $4,373 | $21,582 |
| No. of syringes required for IM injections | $13,811 | $14,025 | $1,854 | $7,436 | $6,864 | $6,908 | $37,087 |
| Syringe,RUP-1,2ml,w/fixed ndl/BOX-100 | $209 | $209 | $209 | $214 | $214 | $214 | $1,061 |
| Syringe,RUP-1,5ml,w/fixed ndl/BOX-100 | $571 | $576 | $582 | $582 | $588 | $594 | $2,922 |
| Safety boxes | $2,617 | $2,617 | $671 | $1,879 | $1,812 | $1,812 | $8,790 |

The programme planned to conduct SIAs in 2019 for HPV vaccination for multi age cohort of 9 – 13 years.. This activity is put at a total cost of $1,111,731 with injection safety and supplies estimated to cost $15,081. Other antigens planned for SIA are Td in 2020 once the switch from TT to Td has been made and, MR in 2021. The Td vaccine and supplies will cost $89,752 while the MR will cost $147, 434. The operational cost of the SIAs is computed in a separate table in this plan.

In order to make the projections for the period 2018 - 2022, a review of programme implementation cost for 2017 was conducted. It was observed that apart from SIA for MR which accounted for 35% of the cost, other cost driver was the introduction of new vaccine which accounted for 33% of the total expenditure of $2,631,944. The figure may not have captured all the requisite expenditures due to weakness in tracking and reporting programme expenditure; it however provides indicative figures for projections. The programme has planned to sharpen its immunization expenditure tracking and reporting in order to serve national programme planning and meet regional and global reporting.
The projected resource requirement by category is presented in Figure 9 below.

## Figure 9. Projected resource requirement



## Table XIV. Immunization Expenditure in Baseline year

| Immunization Expenditure in BaseLine year | | |
|---|---|---|
| Cost category | 2017 | |
| | USD | % |
| Traditional Vaccines | 147,049 | 6% |
| New vaccines | 861,029 | 33% |
| Injection supplies | 43,173 | 2% |
| Personnel | 476,280 | 18% |
| Transportation | 2,070 | 0% |
| Other routine recurrent costs | 118,455 | 5% |
| Vehicles | 50,000 | 2% |
| Supplemental immunization activities | 933,888 | 35% |
| Total | 2,631,944 | |

The routine recurrent cost for the period 2018 – 2022 is presented in table XVI below

## Table XV. Routine recurrent cost 2018-2022

| Future Cost projection | | | | | |
|---|---|---|---|---|---|
| Cost category | 2018 | 2019 | 2020 | 2021 | 2022 |
| Routine recurrent costs | | | | | |
| Traditional Vaccines | $148,095 | $138,291 | $136,919 | $137,843 | $138,808 |
| New vaccines | $866,737 | $872,877 | $1,120,512 | $1,080,025 | $1,086,910 |
| Injection supplies | $43,497 | $29,574 | $36,532 | $36,062 | $36,280 |
| Personnel | $709,798 | $780,675 | $796,288 | $812,214 | $828,458 |
| Transportation | $129,611 | $283,600 | $137,594 | $297,298 | $140,867 |
| Other routine recurrent costs | $1,231,476 | $1,386,344 | $1,413,030 | $1,362,774 | $1,514,619 |
| Vehicles | $0 | $72,828 | $53,060 | $0 | $0 |
| Other capital equipment | $0 | $0 | $51,999 | $0 | $0 |
| Supplemental immunization activities | $0 | $1,110,054 | $86,263 | $471,654 | $0 |

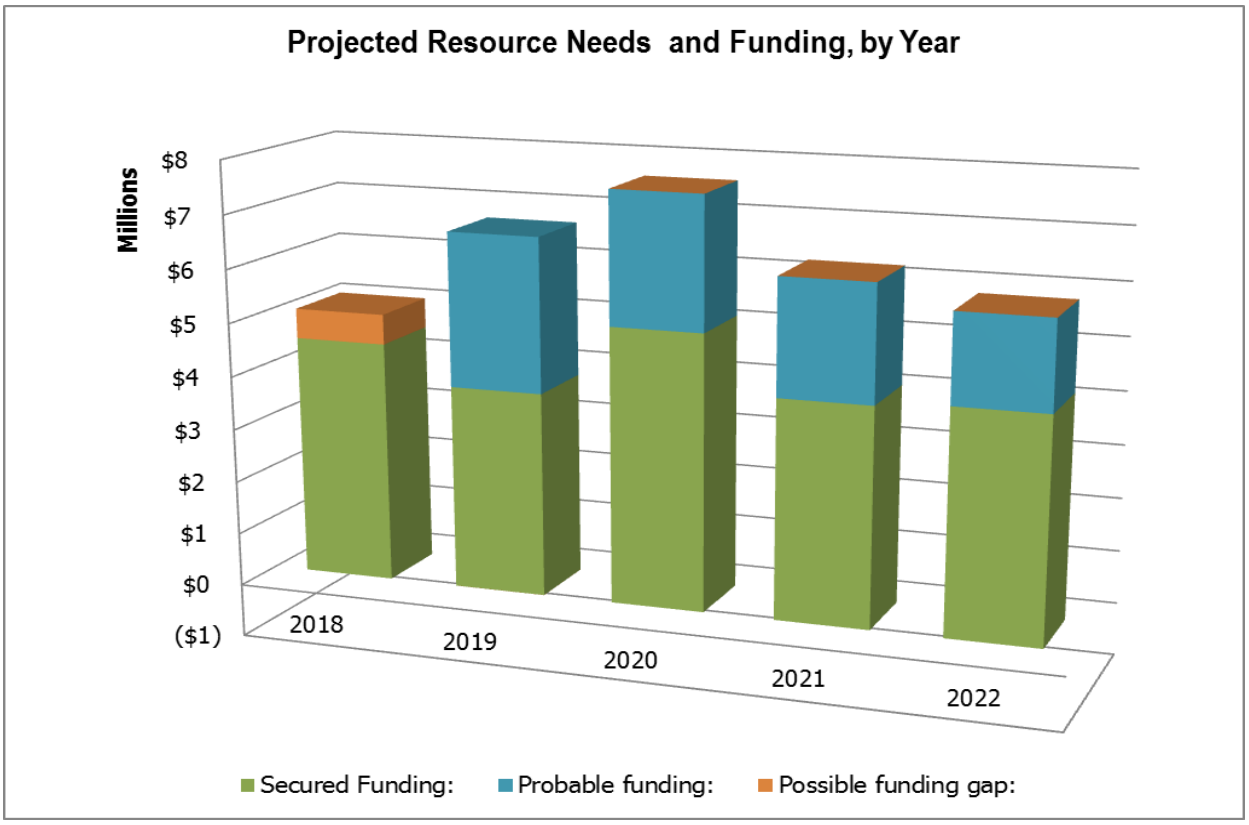
Further to the funding profile from Government and partners, the projected cost of immunization in Lesotho was allocated to the various sources. It is assumed that funding will continue at least at the same trend as was in the previous years.

Table XVII below indicate the secured funding by source.

## Table XVI. Distribution of secured funding by source

| Total secure funding by source | | | | | | |
|---|---|---|---|---|---|---|
| | 2018 | 2019 | 2020 | 2021 | 2022 | Total 5 Years |
| | $ 2,572,315 | $ 1,793,559 | $ 2,068,637 | $ 2,024,026 | $ 2,081,586 | $ 10,540,123 |
| Government | $ 1,235,135 | $ 870,682 | $ 948,125 | $ 944,001 | $ 994,676 | $ 4,992,619 |
| Gov. co-financing of gavi vaccine | $ 65,621 | $ 75,216 | $ 101,079 | $ 113,913 | $ 130,101 | $ 485,930 |
| Gavi Vaccine Support | $ 801,116 | $ 797,661 | $ 1,019,433 | $ 966,112 | $ 956,809 | $ 4,541,131 |
| WHO | $ 30,000 | $ 30,000 | $ - | $ - | $ - | $ 60,000 |
| UNICEF | $ 180,000 | $ 20,000 | $ - | $ - | $ - | $ 200,000 |
| Gavi HSS | $ 260,443 | $ - | $ - | $ - | $ - | $ 260,443 |
| Gavi CCEOP | $ - | $ - | $ - | $ - | $ - | $ - |
| Funding gap (with secured funds only) | $556,899 | $2,880,683 | $2,470,325 | $2,173,844 | $1,664,355 | $9,746,106 |
| Funding gap as% Of Total Needs | **18%** | **62%** | **54%** | **52%** | **44%** | **48%** |

## Figure 10. Projected Resource Needs and funding by year



It is anticipated that Government will continue to fund traditional vaccine and meet the Gavi co-financing requirement at 100% level. It is also anticipated that funding form Gavi support for vaccine support will also continue for the five years in the planned period. The secured funding from UNICEF and WHO could not be projected to extend beyond a period of 2 years based on the agencies funding support cycle. It is observed that 18% of total funds required remain unsecured for 2018. The proportion of unsecured fund increases as projections move from the base year reaching a high rate of 62% in 2019 occasioned by the HPV vaccine introduction cost. The table below XVIII presents the probable funding by agencies.

## Table XVII. Probable funding by agencies

| Probable funding by possible source | | | | | | |
|---|---|---|---|---|---|---|
| | 2018 | 2019 | 2020 | 2021 | 2022 | Total 5 Years |
| Probable funding: | | **$ 2,880,684** | **$ 2,470,324** | **$ 2,173,842** | **$ 1,664,354** | **$ 9,189,204** |
| Gavi Vaccine Support | | $ 1,110,054 | $ - | $ 471,654 | $ - | $ 1,581,708 |
| WHO | | $ - | $ 30,000 | $ 30,000 | $ 30,000 | $ 90,000 |
| UNICEF | | $ 272,828 | $ - | $ 100,000 | $ 120,000 | $ 492,828 |
| Gavi HSS | | $ 1,497,802 | $ 2,069,671 | $ 1,483,699 | $ 1,184,348 | $ 6,235,520 |
| Gavi CCEOP | | $ - | $ 370,653 | $ 88,489 | $ 330,006 | $ 789,148 |
| Funding gap (with secured & probable funds) | **$ 556,899** | | | | | **$ 556,902** |

It remain that 2018 has an unfunded sum of $556,899 which has not been budgeted by any partner and also information indicate that the amount may not have been accommodated in the government budget for 2018/2019. It should be emphasized that for the activities associated with the cost (increased disease surveillance and monitoring), targeted resource mobilization needs to be conducted.
Furthermore, the probable funds (since unsecured) will require that consistent discussions and resource mobilization should be conducted to the agencies concerned. It must be mentioned that the bulk of the funding is premised on the HSS and CCEOP funding platform from Gavi support. To convert the probable funds to secured fund will mean that application for the platform succeeds.

Presented in table XIX is the categories of activities that may be delayed or unimplemented due to lack of funds

## Table XVIII. Categories of activities indicating possible funding gap

| Composition of funding Gap by component | | | | | |
|---|---|---|---|---|---|
| | 2018 | 2019 | 2020 | 2021 | 2022 |
| Personnel | | $ 233,841 | $ 238,517 | $ 243,288 | $ 248,153 |
| Transport | | $ 283,600 | $ 137,594 | $ 297,298 | $ 140,867 |
| Activities and other recurrent costs | $ 556,899 | $ 1,180,361 | $ 1,282,390 | $ 1,161,604 | $ 1,275,336 |
| Logistics (vehicles, cold chain and other equipment) | | $ 72,828 | $ 811,824 | | |
| Supplemental immunization activities | | $ 1,110,054 | | $ 471,654 | |

### 2.1.1 Sustainability of the EPI programme

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|
| Per capita GDP ($) | $1,020 | $1,020 | $1,020 | $1,020 | $1,020 | $1,020 |
| Total Health Expenditures (THE) per capita | $91 | $91 | $91 | $91 | $91 | $91 |
| | | | | | | |
| GDP ($) | $2,047,345,020 | $2,075,283,582 | $2,089,395,510 | $2,103,603,399 | $2,117,907,902 | $2,132,309,676 |
| Total Health Expenditures (THE $) | $182,655,291 | $185,147,849 | $186,406,854 | $187,674,421 | $188,950,607 | $190,235,471 |
| Government Health Expenditures (GHE $) | $104,113,516 | $105,534,274 | $106,251,907 | $106,974,420 | $107,701,846 | $108,434,219 |

The sustainability of funding the EPI programme in Lesotho has been reviewed based on the macro economic projections for the country. The resource requirement per capita in the face of a projected zero growth in GDP for routine immunization (vaccine and operational cost) is expected to stay at a maximum of $1.83 in 2022 from $1.54 in 2018.

## Table XIX. Resources requirement by category of activity

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|
| Resource requirements for immunization per capita | | | | | | |
| Routine and SIAS (Campaigns) includesvaccines and operational costs) | 1.29 | 1.54 | 2.26 | 1.85 | 2.06 | 1.83 |
| Routine only (includes vaccines and operational costs) | 0.83 | 1.54 | 1.72 | 1.81 | 1.83 | 1.83 |
| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| Resource requirements for immunization | | | | | | |
| Routine and SIAS (Campaigns) includesvaccines and operational costs) | $2,591,944 | $3,139,414 | $4,626,384 | $3,808,956 | $4,281,325 | $3,820,026 |
| Routine only (includes vaccines and operational costs) | $1,658,056 | $3,139,414 | $3,516,330 | $3,722,693 | $3,809,671 | $3,820,026 |
| Per DTP3 immunized child | $50.13 | $90.52 | $ 100.70 | $ 105.89 | $ 107.64 | $ 107.20 |
| | | | | | | |
| Resource requirements for immunization as % Of Total Health Expenditures (THE) | | | | | | |
| Routine and SIAS (Campaigns) includesvaccines and operational costs) | 1.42% | 1.70% | 2.48% | 2.03% | 2.27% | 2.01% |
| Routine only (includes vaccines and operational costs) | 0.91% | 1.70% | 1.89% | 1.98% | 2.02% | 2.01% |
| Funding gap (with secured funds only) as % Of Total Health Expenditures (THE) | | 0.31% | 1.52% | 0.93% | 1.19% | 0.91% |
| | | | | | | |
| | | | | | | |
| Resource requirements for immunization as % Government Health Expenditures | | | | | | |
| Routine and SIAS (Campaigns) includesvaccines and operational costs) | 2.49% | 2.97% | 4.35% | 3.56% | 3.98% | 3.52% |
| Routine only (includes vaccines and operational costs) | 1.59% | 2.97% | 3.31% | 3.48% | 3.54% | 3.52% |
| Funding gap (with secured funds only) as % Government Health Expenditures | | 0.54% | 2.67% | 1.63% | 2.10% | 1.60% |
| | | | | | | |
| | | | | | | |
| Resource requirements for immunization as % of GDP | | | | | | |
| Routine and SIAS (Campaigns) includes vaccines and operational costs) | 0.13% | 0.15% | 0.22% | 0.18% | 0.20% | 0.18% |
| Routine only (includes vaccines and operational costs) | 0.08% | 0.15% | 0.17% | 0.18% | 0.18% | 0.18% |

From a slowed economic growth since 2015 from 5.6% to 2.3%, due to modest growth in the services sector and drought, as well as weak regional and global growth, and domestic growth expected to pick up in 2017 and 2018 to a projected 4%, boosted by an increase in construction and mining it is believed that the financing requirement to sustain the EPI programme will be accommodated.

| Table IX. Aligning with GVAP, RISP and ADI, Lesotho 2018 | | | | | |
|---|---|---|---|---|---|
| **GVAP Strategies** | **Key Activities** | **Activity included in cMYP** | | | |
| **Strategic objective 1: All countries commit to immunisation as a priority.** | | **Yes** | **No** | **Not applicable** | **New activity needed/Comment** |
| Establish and sustain commitment to immunization. | Ensure legislation or legal framework in all countries, including provisions for a budget line for immunisation, and for monitoring and reporting. | | No | | Immunization is included in the Health budget of Govt |
| | Develop comprehensive national immunisation plans that are part of overall national health plans through a bottom-up process including all stakeholders. | Yes | | | District annual and HF micro-plan to be consolidated ( peer review meeting) |
| | Set ambitious but attainable country-specific targets within the context of morbidity and mortality reduction goals. | Yes | | | |
| | Scrutinise, defend, and more closely follow immunisation budgets, disbursements and immunisation programme activities. | Yes | | | Dialogue to seek option to do District fund transfer needed |
| | Support local civil society organizations and professional associations to contribute to national discussions of immunizations and health. | Yes | | | CSOs represented in TWG and ICC |
| Inform and engage opinion leaders on the value of immunization. | Explore models to promote collaboration between the stakeholders that generate evidence on immunization and those who use it to set priorities and formulate policies. | Yes | | | Equity study, KAP study ( guiding improvement of priorities) |
| | Develop and disseminate the evidence base on the public health value of vaccines and immunization and the added value of achieving equity in access and use of immunization. | Yes | | | Dissemination of results planned (KAP, Equity study) |

| | | | | | |
|---|---|---|---|---|---|
| | Develop and disseminate the evidence base for the broad economic benefits of immunization for individuals, households, communities, and countries. | Yes | | | Sentinel surveillance data used to justify economic benefit |
| | Include immunization in the agendas of governing body meetings at all levels and in other social, health and economic forums. | Yes | | | Advocacy meeting with parliamentarians planned |
| | Create or strengthen independent bodies that formulate national immunization policies (for example, NITAGs or regional technical advisory groups). | Yes | | | Planned NITAG establishment |
| | Develop more effective ways for National Regulatory Agencies (NRAs), Health Sector Coordination Committees (HSCCs), and Interagency Coordination Committees (ICCs) to support immunization programmes as part of disease control programmes and preventive health care. | Yes | | | Planned NRA establishment ; Regularise ICC meetings |
| | Create regional forums and peer-to-peer exchange of information, best practices and tools. | Yes | | | Included New activity (district performance peer review meetings |
| | Create expanded and more transparent mechanisms for aggregating, sharing, and using information to monitor commitments. | Yes | | | Planned to be monitored through ICC |
| **STRATEGIC OBJECTIVE 2** | | | | | |
| **GVAP Strategies** | **Key Activities** | **Activity included in cMYP** | | | |
| **Strategic objective 2: Individuals and communities understand the value of vaccines and demand immunization as both their right and responsibility.** | | **Yes** | **No** | **Not applicable** | **New activity needed** |
| Engage individuals and communities on the benefits of immunization and hear their concerns. | · Engage in a dialogue which both transmits information and responds to people's concerns and fears. | Yes | | | Through the linkage with community using the HF microplans |
| | · Utilise social media tools and lessons from commercial and social marketing efforts. | Yes | | | To use local radio as it is high coverage |

| | | | | | |
|---|---|---|---|---|---|
| | · Leverage new mobile and Internet-based technologies. | Yes | | | planned SMS reminders in defaulter tracing |
| | · Include immunization in the basic education curriculum. | | No | | Planned to be included |
| | · Conduct communications research. | | No | | KAP conducted plan to implement recommendations |
| Create incentives to stimulate demand. | · Create incentives to households and health workers for immunization, where appropriate and while respecting the autonomy of beneficiaries (for example, cash or in-kind transfers, bundling of services, media recognition). | | NA | | Immunization services are free |
| | · Conduct social research to improve the delivery of immunization services and the ability to meet the needs of diverse communities. | Yes | | | To address the findings of the KAP 2017 (Dissemination planned) |
| Build advocacy capacity. | · Recruit new voices, including those of educators, religious leaders, traditional and social media personalities, family physicians, community health workers, and trained immunization champions (among others). | | No | | |
| | · Train healthcare workers on effective communication techniques, especially to address vaccine hesitancy and to respond to reports of serious adverse events following immunization in order to maintain trust and allay fears. | Yes | | | |
| | · Engage, enable and support in-country CSOs to advocate to local communities and policy-makers and in local and global media regarding the value of vaccines. | Yes | | | they are engaged |
| | · Create national or regional advocacy plans that involve in-country CSOs. | | NA | | |

| | | | | | |
|---|---|---|---|---|---|
| | · Link global, national and community advocacy efforts with professional and academic networks. | | No | | |
| **STRATEGIC OBJECTIVE 3** | | | | | |
| **GVAP Stategies** | **Key Activities** | **Activity included in cMYP** | | | |
| **Strategic objective 3: The benefits of immunization are equitably extended to all people.** | | **Yes** | **No** | **Not applicable** | **New activity needed** |
| Develop and implement new strategies to address inequities. | · Recast "Reaching Every District" to "Reaching Every Community" to address inequities within districts. | Yes | | | |
| | · Engage underserved and marginalised groups to develop locally tailored, targeted strategies for reducing inequities. | Yes | | | Including Urban unreached communities |
| | · Introduce appropriate new vaccines in national immunization programmes (see also Objective 5). | Yes | | | HPV, IPV |
| | · Establish a life course approach to immunization planning and implementation, including new strategies to ensure equity across the life span. | Yes | | | |
| | · Prevent and respond to vaccine-preventable diseases during disease outbreaks, humanitarian crises, and in conflict zones. | Yes | | | |
| Build knowledge base and capacity to enable equitable delivery. | · Track each individual's immunization status, leveraging immunization registries, electronic databases and national identification number systems. | Yes | | | Through the village health workers and register |
| | · Take advantage of community structures to enhance communication and deliver services (for example, traditional birth attendants, birth registries). | Yes | | | |
| | · Involve CSOs in community outreach and planning. | Yes | | | |
| | · Develop new approaches to community engagement for urban and peri-urban areas. | Yes | | | RED HF microplan to focus urban and rural unreached |

| | | | | | |
|---|---|---|---|---|---|
| | · Train health workers and CSOs on how to engage communities, identify influential people who can assist in planning, organizing and monitoring health and immunization programmes, identify community needs and work with communities to meet those needs. | yes | | | Through RED Microplan |
| | · Conduct operational and social science research to identify successful strategies to reduce inequities and improve the quality and delivery of immunization services. | | No | | 2017 KAP and Equity assesment result available |
| **STRATEGIC OBJECTIVE 4** | | | | | |
| **GVAP Stategies** | **Key Activities** | **Activity included in cMYP** | | | |
| **Strategic objective 4: Strong immunization systems that are an integral part of a well functioning health system.** | | **Yes** | **No** | **NA** | **New activity needed** |
| Develop comprehensive and coordinated approaches. | · Ensure that global vaccine programmes focusing on eradication and elimination goals (for example, polio and measles campaigns) are incorporated into national immunization programmes and do not operate independently. | Yes | | | |
| | · Ensure that new vaccine deployment is accompanied by comprehensive plans to control targeted diseases. | Yes | | | |
| | · Ensure coordination between the public and private sectors for new vaccine introduction, reporting of vaccine-preventable diseases and administration of vaccines, and ensure quality of vaccination in the public and private sectors. | Yes | | | Using one standard national reporting form including Private |
| | · Consider the inclusion of vaccines (as appropriate to national priorities) to health programmes across the life course. | Yes | | | |
| Strengthen monitoring and surveillance systems. | · Improve the quality of all immunization administrative data and promote its analysis and use at all administrative levels to improve programme performances. | Yes | | | DQR planned to guide |

| | | | | | |
|---|---|---|---|---|---|
| | · Develop and promote the use of new technologies for collection, transmission and analysis of immunization data. | Yes | | | Integrated Supervisory checklist to be used and use mobile technology |
| | · Further strengthen and expand disease surveillance systems to generate information for decision-making, monitoring the impact of immunization on morbidity and mortality and changes in disease epidemiology. | Yes | | | Surveillance and coverage data used to guide impact monitoring |
| | · Ensure capacity for vaccine safety activities, including capacity to collect and interpret safety data, with enhanced capacity in countries that introduce newly developed vaccines. | Yes | | | AEFI training on notification planned |
| Strengthen capacity of managers and frontline workers. | · Ensure that immunization and other primary health care programmes have adequate human resources to schedule and deliver predictable services of acceptable quality. | Yes | | | Human resources division engaged |
| | · Increase levels of pre-service, in-service and post-service training for human resources, and develop new, relevant curricula that approach immunization as a component of comprehensive disease control. | Yes | | | Curriculum review planned |
| | · Promote coordinated training and supervision of community-based health workers. | Yes | | | EPI to engage with other units to coordinate the planned EPI and VPD surveillance training of CHWs |
| Strengthen infrastructure and logistics. | · Innovate to improve cold chain capacity and logistics, as well as waste management. | Yes | | | Inventory to be used; SOP to be developed |
| | · Minimize the environmental impact of energy, materials and processes used in immunization supply systems, both within countries and globally. | Yes | | | Coordinate with relevant units and develop interim plan |
| | · Staff supply systems with adequate numbers of competent, motivated and empowered personnel at all levels. | Yes | | | They require capacity building and monitoring |
| | · Establish information systems that help staff accurately track the available supply. | Yes | | | Put in place, DVDMT or SMT |
| STRATEGIC OBJECTIVE 5 | | | | | |

| GVAP Strategies | Key Activities | Activity included in cMYP | | | |
|---|---|---|---|---|---|
| **Strategic objective 5: Immunization programmes have sustainable access to predictable funding, quality supply and innovative technologies.** | | **Yes** | **No** | **Not applicable** | **New activity needed** |
| Increase total amount of funding. | · Establish a commitment for governments to invest in immunization according to their ability to pay and the expected benefits. | Yes | | | |
| | · Engage new potential domestic and development partners and diversify sources of funding. | Yes | | | |
| | · Develop the next generation of innovative financing mechanisms. | | | | |
| Increase affordability for middle-income countries. | · Explore differential pricing approaches to define explicit criteria for price tiers and the current and future prices to be made available to lower middle-income and middle-income countries. | | No | | |
| | · Explore pooled negotiation or procurement mechanisms for lower-middle-income and middle income countries. | | No | | |
| Improve allocation of funding in low- and middle-income countries. | · Strengthen budgeting and financial management in-country to better integrate financial and health care planning and priority setting. | Yes | | | |
| | · Coordinate funding support from development partners and other external sources. | | No | | |
| | · Evaluate and improve funding support mechanisms on the basis of their effectiveness in reaching disease goals. | Yes | | | |
| | · Base funding on transparency and objectivity in order to ensure the sustainability of programmes. | Yes | | | |
| | · Promote the use of cost and cost-benefit arguments in fund raising, decision-making, and defence of immunization funding. | | No | | |
| | · Explore pay-for-performance funding systems. | | No | | |
| Secure quality supply. | · Build and support networks of regulators and suppliers to share best practices and to improve quality assurance capabilities and quality control. | | No | | |

| | | | | | |
|---|---|---|---|---|---|
| | · Develop tools to strengthen global standardization of manufacturing and regulatory processes. | Yes | | | |
| | · Strengthen national regulatory systems and develop globally harmonized regulations. | Yes | | | |
| | · Ensure a forum where countries can communicate expected demand for vaccines and technologies and provide guidance to manufacturers on desired product profiles. | Yes | | | |
| **STRATEGIC OBJECTIVE 6** | | | | | |
| **GVAP Strategies** | **Key Activities** | **Activity included in cMYP** | | | |
| **Strategic objective 6: Country, regional and global R&D innovations maximize the benefits of immunization.** | | **Yes** | **No** | **Not applicable** | **New activity needed** |
| Expand capabilities and increase engagement with end-users. | · Engage with end users to prioritise vaccines and innovations according to perceived demand and added value. | | | NA | |
| | · Establish platforms for exchange of information on immunization research and consensus building. | Yes | | | Dissemination of results planned (KAP, Equity study) |
| | · Build more capacity and human resources in low- and middle-income countries to conduct R&D and operational research. | | | NA | |
| | · Increase networking among research centres for efficient building of partnerships among high-, middle- and low-income countries' institutions. | | No | | |
| | · Promote collaboration between traditional research disciplines and scientists from disciplines not previously engaged in vaccine research. | Yes | | | CRS disease burden estimation through university |
| Improve programme efficiencies and increase coverage and impact. | · Research the use of more effective information through modern communication technologies. | | | NA | |
| | · Conduct representative epidemiological, immunological, social and operational studies and investigations of vaccine impact to guide health economics analysis. | | | NA | |

| | | | | | |
|---|---|---|---|---|---|
| | · Perform operational research on improved delivery approaches for life course immunization, and vaccination in humanitarian emergencies, fragile states and countries in and emerging from conflict. | Yes | | | Dissemination of results planned (KAP, Equity study) |
| | · Perform research on interference effects and optimum delivery schedules. | | | NA | |
| | · Perform research to develop improved diagnostic tools for conducting surveillance in low-income countries. | | | NA | |

## Annex 1

## Table XX GVAP ADI Checklist