

Joint Appraisal report 2018

Country	Malawi
Full JA or JA update	<input checked="" type="checkbox"/> full JA <input type="checkbox"/> JA update
Date and location of Joint Appraisal meeting	23-25 th of October 2018, BICC Lilongwe, Malawi
Participants / affiliation ¹	MoH/EPI, MoH CHSS, MoH/PIU, GAVI, UNICEF, WHO, AMP Health, JSI, PATH, etc
Reporting period	January 2017- mid 2018
Fiscal period ²	July 2017- June 2018
Comprehensive Multi Year Plan (cMYP) duration	2017- 2021
Gavi transition / co-financing group	<i>e.g. initial self-financing or preparatory transition...</i>

1. RENEWAL AND EXTENSION REQUESTS

Renewal requests were submitted on the country portal

Vaccine (NVS) renewal request (by 15 May)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
HSS renewal request	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
CCEOP renewal request	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

Observations on vaccine request

Population				
Birth cohort				
Vaccine	Penta	Rota	PCV	...
Population in the target age cohort	765,030	765,030	765,030	
Target population to be vaccinated (first dose)	724,502	724,502	724,502	-
Target population to be vaccinated (last dose)	724,502	724,502	724,502	
Implied coverage rate	95%	90%	95%	
Last available WUENIC coverage rate	88%	83%	88%	
Last available admin coverage rate	88%	85%	88%	
Wastage rate	15%	5%	5%	
Buffer	25%	25%	25%	
Stock reported	2,583,070	743,300	1,545,800	

Indicative interest to introduce new vaccines or request Health System Strengthening support from Gavi in the future³

Indicative interest to introduce new vaccines or request HSS support from Gavi	Programme	Expected application year	Expected introduction year
	IPV	N/A	2018
HPV	N/A	2019	

¹ If taking too much space, the list of participants may also be provided as an annex.

² If the country reporting period deviates from the fiscal period, please provide a short explanation.

³ Providing this information does not constitute any obligation for either the country or Gavi, it merely serves for information purposes.

2. RECENT CHANGES IN COUNTRY CONTEXT AND POTENTIAL RISKS FOR NEXT YEAR

The Southern African nation of Malawi is landlocked sharing borders with Mozambique, Zambia and Tanzania. The country has an estimated population of 18 million (2016). Malawi has been able to make important economic and structural reforms and sustain its economic growth rates over the last decade. Nevertheless, poverty remains widespread, and the economy undiversified and vulnerable to external shocks.

Encouraging progress has been made in human development in recent years. Life expectancy is up to 63.9 years in 2017 from 62.8 in 2016. The total fertility rate is down to 4.4 children per woman from 6.7 between 1992-2015/16. Self-reported literacy (reading and writing in any language) is 81% percent for males and 66% for females (15+ years of age). However, poverty and inequality remain stubbornly high. One in two people in rural areas are poor (note that the official poverty estimation for 2016/17 is being prepared using the Fourth Integrated Household Survey). Poverty is driven by poor performance of the agriculture sector, volatile economic growth, population growth, and limited opportunities in non-farm activities.

The Malawi health sector is probably one of the most donor supported in the world. Donor support provides 80% of development expenditure. Donor support to the Health sector has been steadily increasing over time but has become more fragmented and is increasingly focused on treating specific diseases. The Health Sector Wide Approach (SWAp) once directed a significant amount of resources to areas of greatest need in support of the Government's strategic plan. Insufficient and inequitable health financing has been identified as one of the main barriers for all people in Malawi to have access to affordable and quality health care. In nearly all of the 28 districts, especially those hardest to reach, there is insufficient health infrastructure to ensure quality health service delivery.

3. PERFORMANCE OF THE IMMUNISATION PROGRAMME

3.1. Coverage and equity of immunisation

The Malawi EPI program operates with the objectives to reduce child morbidity and mortality due to vaccine preventable diseases (VPD) through the provision of quality and safe vaccines to all children of Malawi without discrimination based on gender, geographic access, sect or geographic regions. The Malawi Health Sector Strategic Plan (HSSPII) and the EPI cMYP aims to have 95% of children under one year of age immunized by 2021. Along with this strategy, the Ministry of Health has rolled out the Measles- Rubella (MR) vaccine nationwide and the new formulation of Pneumococcal Conjugate Vaccine (PCV) in 2017. The Ministry of Health plans to introduce several new vaccines in the country's immunization schedule, including Inactivated Polio Vaccine (IPV) in 2018 and Human Papilloma Virus (HPV) and Malaria Vaccines Implementation Program (MVIP) in selected districts in 2019.

Malawi was known to have one of the most successful EPI programs in the Africa Region in the 80's. For several years, the program sustained a high coverage of immunization above 80%.

However, there has been a significant decline and stagnation of fully immunized children since 1992 as shown in Figure 1 below.

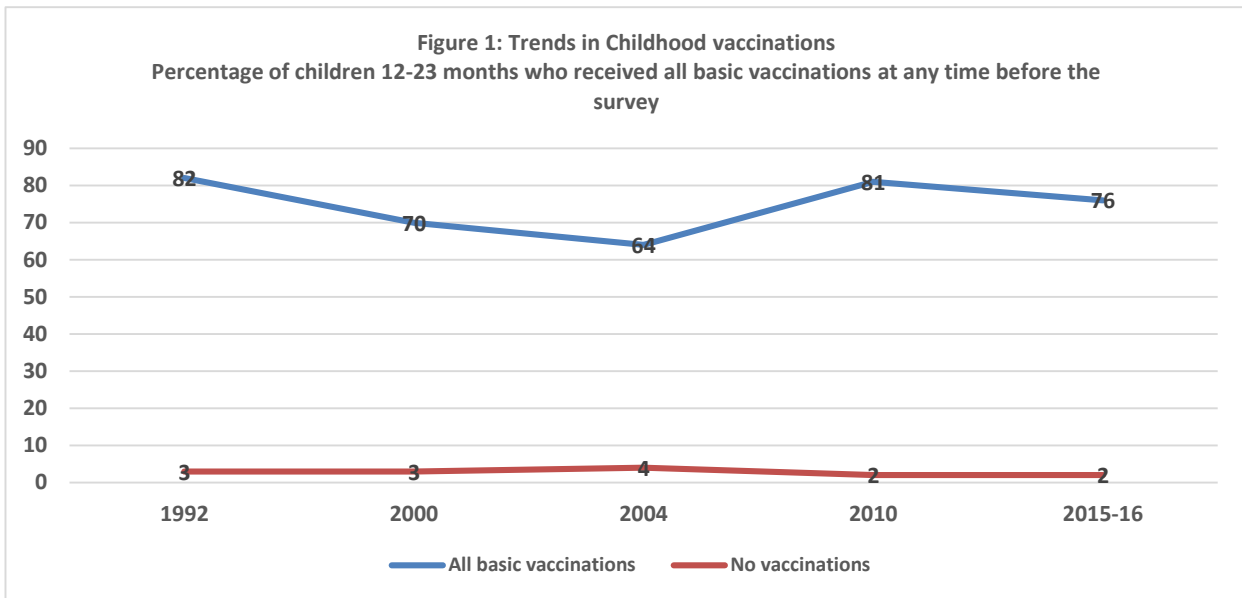


Figure 1 Coverage Trends in Childhood Vaccinations 1992-2016. Source: MDHS.

Administrative data shows improvements in vaccine coverage in 2018 compared to 2017 and 2016, however performance remains consistently lower than the cMYP target of 95%. BCG and Rota 2 vaccine coverage are consistently slightly lower than the PCV and Penta. Consequently, Malawi is one of the top 10 countries with highest number of unimmunized children in the Eastern & Southern African region.

Joint Appraisal (full JA)

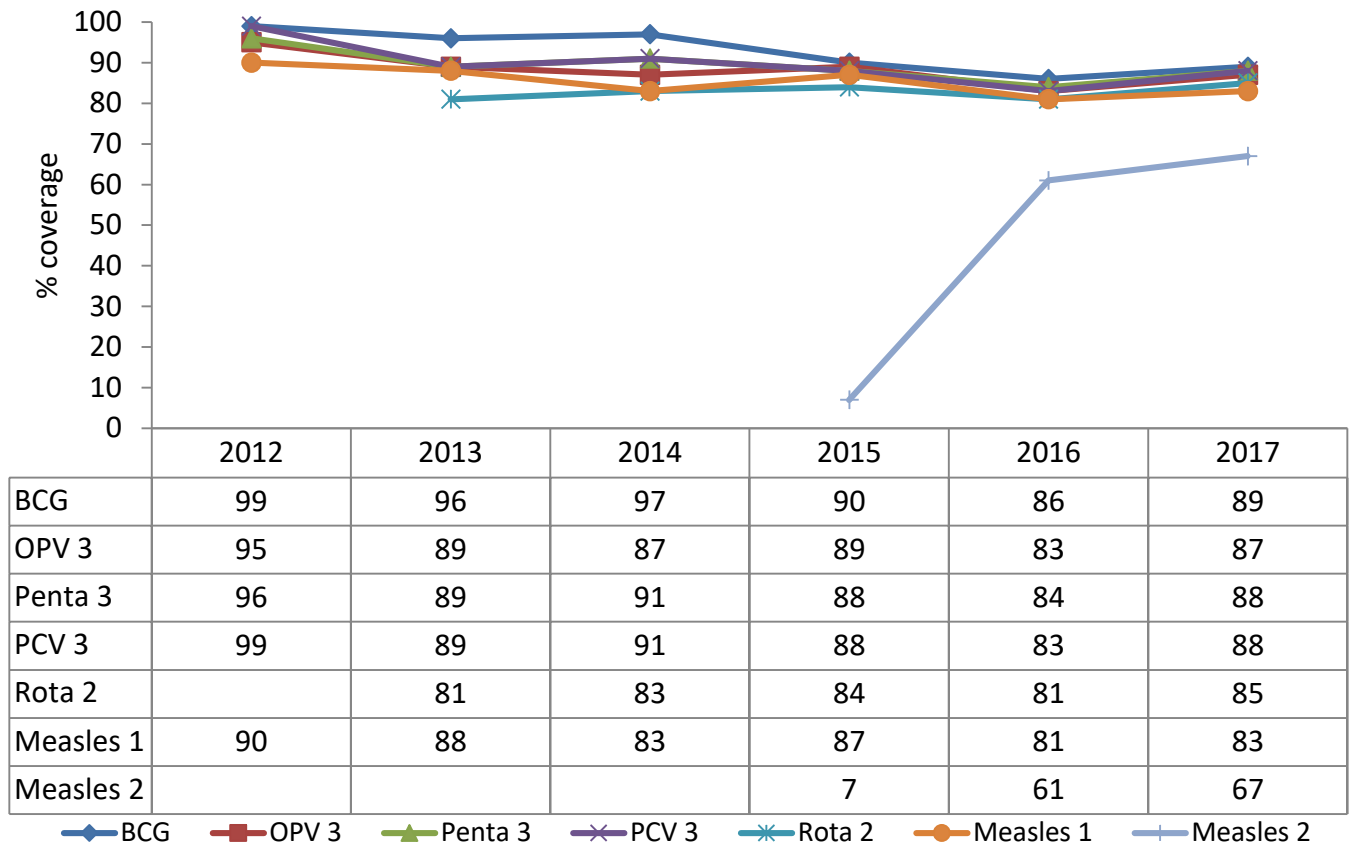


Figure 2 Trends in Childhood Vaccinations 1992-2016, Source: MDHS 2015-16

Administrative data on routine immunization shows an improvement of national immunization coverage of all antigens except Measles Rubella in 2018 compared to the coverage in 2017. For instance, comparing data from January-August, the coverage of Penta3 increased to 92% in 2018 from 86% in 2017. See figure 3 below

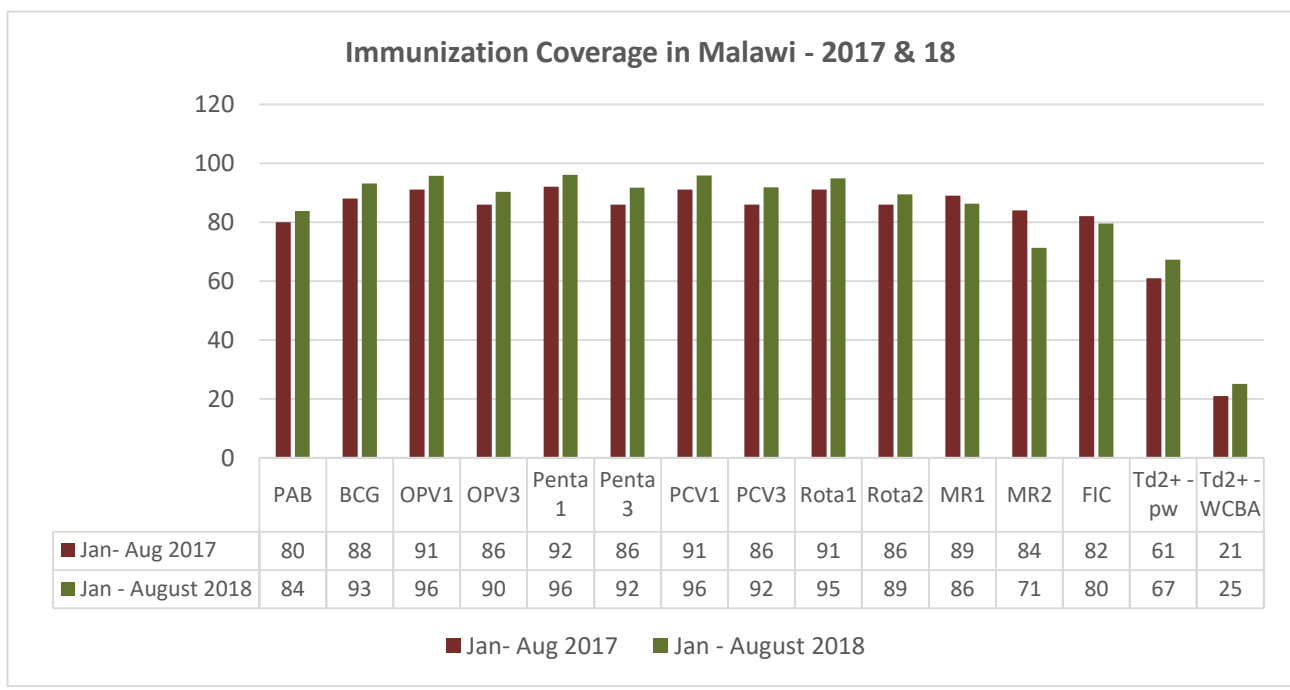


Figure 3 Routine Immunization Coverage in Malawi 2017-2018 Source: January – August 2017 & 18 EPI Admin data

Equity

Geographical Coverage:

Despite the overall improvements in coverage registered in 2018, there are variations across geographical areas. For instance, as shown in figures 4 and 5 below, while number of districts with Penta3 coverage of less than 80% has dropped from 8 in 2017 to only 4 in 2018, Penta 3 coverage remain high in districts in the South East and South West zones, and low in districts in the Central East and North Zones.

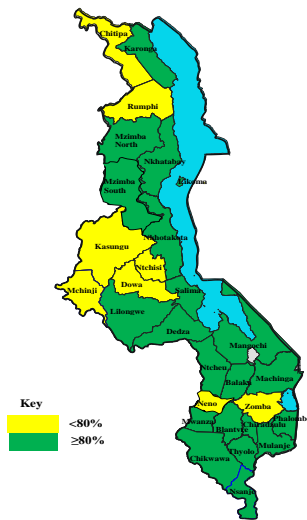


Figure 4 Penta 3 Jan- Aug 2017

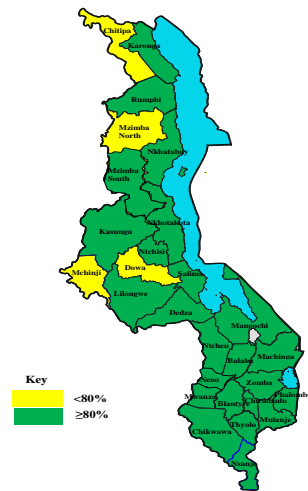


Figure 5 Penta 3 Jan-Aug 2018

In 2018, the highest number of unimmunized children are in the Central East Zone (13,519), followed by the Northern Zone (12,803). For the same period, the highest number of children unimmunized with Penta3 are in Lilongwe district (7,169) followed by Dowa district (7,168).

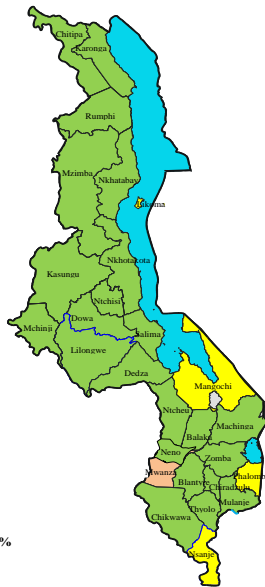


Figure 8 Penta 3-Penta 1 drop out 2016

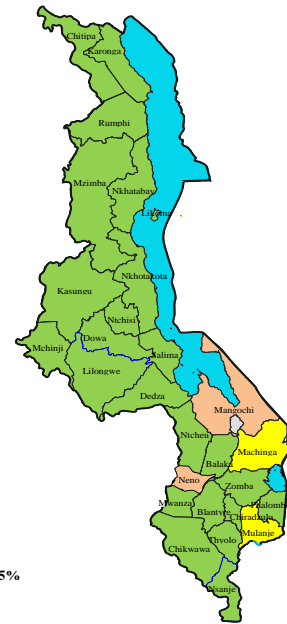


Figure 9 Penta 3-Penta 1 drop out 2017

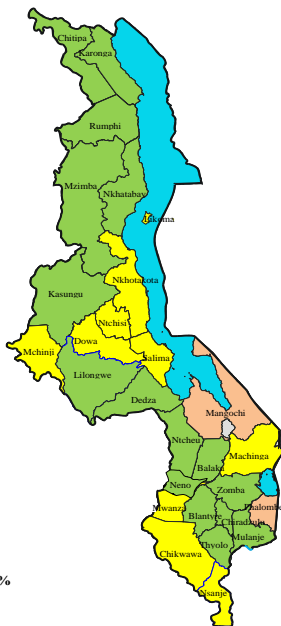


Figure 10 Penta 1- MR1 drop out 2016

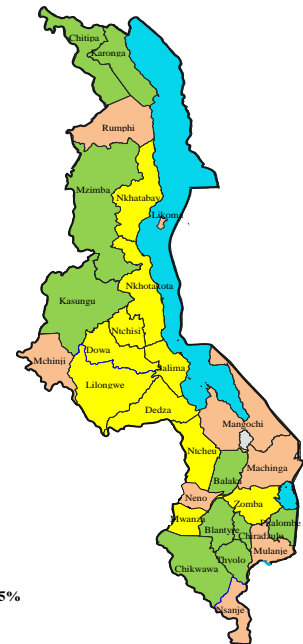


Figure 11 Penta 1- MR1 drop out 2017

Vaccine Preventable Disease Surveillance:

Malawi is committed to eradicate polio and eliminate measles and neonatal tetanus (NNT). The strategies to achieve the above goals include sustaining high routine immunization coverage, strengthening disease surveillance and conducting periodic supplemental immunization activities.

In 2017, the country achieved its target for the two main indicators for AFP surveillance- non-polio AFP rate and stool adequacy rate performing at 3.9 and 85% respectively. There was also a

decrease in the number of reported AFP compatible cases from 2016 to 2017 from fifteen cases to twelve respectively. Despite good performance in AFP surveillance at the national level, there are two districts-Likoma and Nkhosakota with challenges in reporting AFP cases.

In Measles surveillance there has been a large number of Rubella positive cases as compared to Measles positive cases as shown in figures 12 and 13 below. In 2016 and 2017, 33 and 37 Rubella positive cases had been reported respectively as compared to no measles case in 2016 and 4 positive measles cases in 2017. The country has not reported any measles outbreaks over the past five years. Both indicators for Measles surveillance-annualised non-measles rash illness and percentage of reporting districts were not achieved in 2017, with performance at 2.0 and 96% respectively. Likoma district is also silent on Measles Surveillance reporting, however Likoma is a small island district with a population of only 10,493 (2017).

Distribution of Measles IgM Results

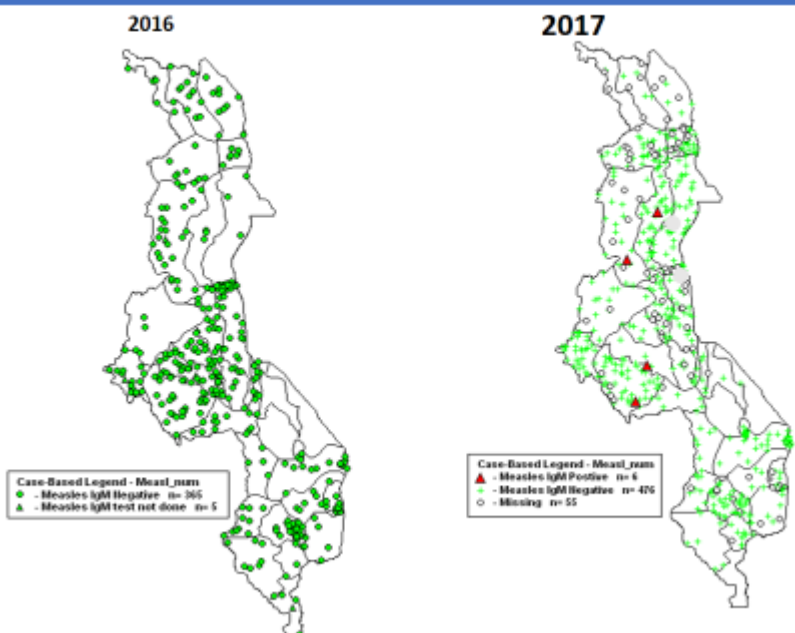


Figure 12 Distribution of Measles IgM results

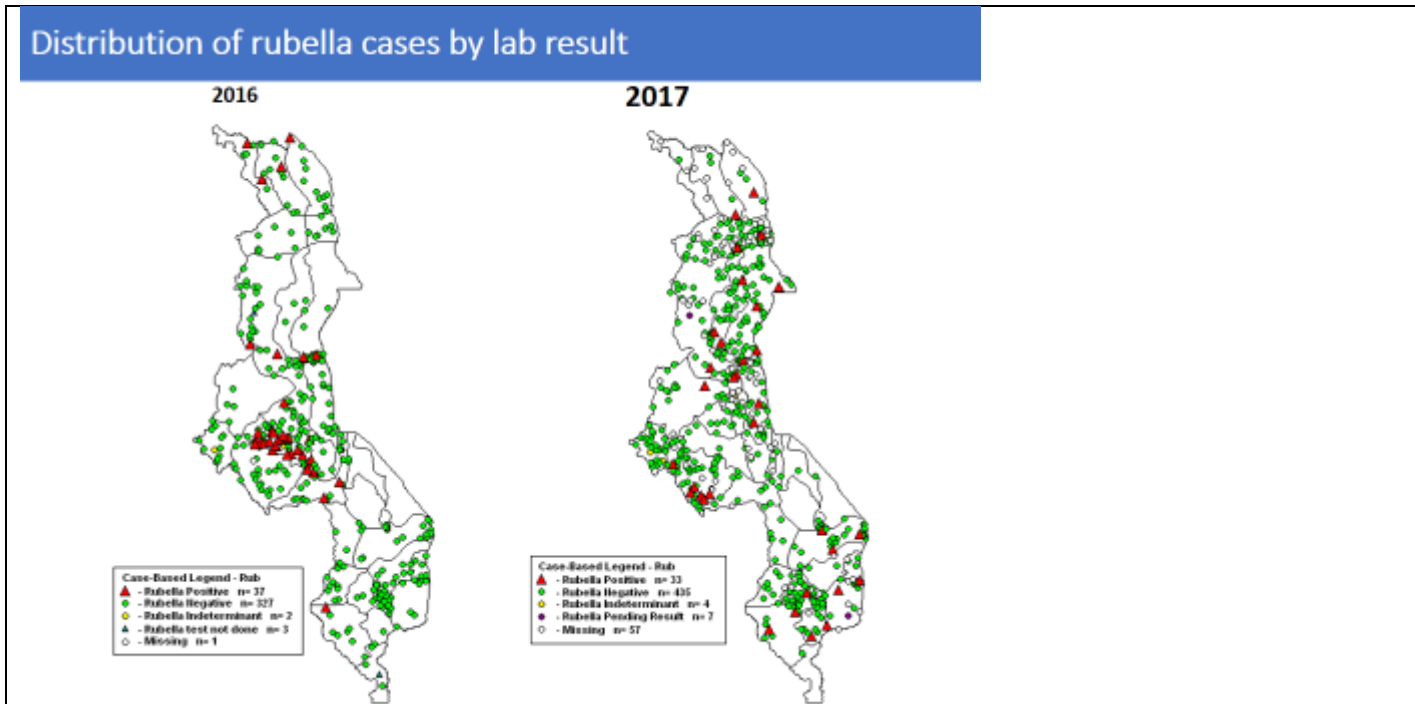


Figure 13 Distribution of Rubella Cases by Lab result

A total of four NNT cases were reported in 2017, three cases from Thyolo and one from Mulanje as compared to two cases in 2016 both reported by Zomba district.

In 2017, 5 districts had challenges in achieving targets for AFP surveillance and 15 districts had challenges in achieving targets for Measles surveillance. The main challenges experienced by these districts are high staff turnover, inadequate staff, poor documentation practices, which leads to knowledge gaps, missing of cases identified, late detection of cases.

Measures have been put in place to address some of the challenges related to surveillance, these include training staff on disease surveillance and deployment of STOP officers to medium and high priority facilities. MoH officers alongside WHO/STOP officers support in conducting active case search and mentorship.

AEFI Surveillance:

AEFI surveillance is on-going as part of EPI routine monitoring and reporting. MOH/EPI and Pharmacy, Medicine and Poisons Board (PMPB) receive reports from the districts on AEFIs. Serious AEFI cases are investigated and referred to AEFI expert committee for causality assessment. AEFI Expert committee in Malawi was established in February 2017.

In 2017, 64 AEFI cases were reported out of which seven were serious. 44 of the 64 cases occurred during Measles Rubella campaign and 20 were reported on routine immunization

In 2018, 24 cases were reported out of which two cases were serious. Out of the seven serious AEFI cases reported in 2017 and 2018, seven cases underwent causality assessment by AEFI committee. The assessment revealed no causality relationship between the antigens administered and the AEFI detected.

Some of the successes include the establishment of the AEFI committee, training of its members and assessment of serious AEFI cases has commenced. Districts have also commenced investigation of serious AEFI cases. Reporting of AEFI cases by districts has improved in 2017 and 2018 when compared to previous years, AEFI reporting forms and AEFI manuals have been developed with support from WHO.

However, some challenges still exist such as vague description of AEFI cases on some reporting forms, AEFIs reporting forms not consistently available in some Health facilities, AEFI reporting forms not filled completely, not all serious cases were investigated within 24 hours and some of the districts are silent.

In order to address these challenges some measures have been put in place such as mentorship of EPI Coordinators to support health workers on standard case definitions and descriptions of AEFIs, coaching health facility staff on proper completion of AEFI forms, AEFI trainings are integrated into existing EPI trainings, Health workers encouraged to investigate serious AEFI as soon as it occurs and ensure availability of AEFI reporting forms and AEFI manuals at all health facilities.

3.2. Key drivers of sustainable coverage and equity

A. Health Work Force:

Health Surveillance assistants are a critical cadre in the Ministry of health, they serve as community health workers in different programs including the Immunization programme. HSAs are the main vaccinators in Malawi.

The country's target is to have 1 HSA for every 1,000 population and one Senior HSA to serve 10,000 population. Malawi has a total population of 17,931,637 (2017) which is served by a total of 9,775 HSA's, this puts the HSA to population ratio to 1: > 1,700. However, there is also challenge of shortage of housing for Health workers in their catchment areas which leads to a reduction in number of HSA's residing in their catchment area. This further increase the HSA to population ratio from the expected 1: 1000 to 1:>2000. In districts with cities like Blantyre, Lilongwe, Mzimba and Zomba, more HSAs are concentrated in the cities/urban areas. In 2017 and 2018, the country did not recruit any new HSAs or conduct any trainings in basic Immunization in Practice (IIP).

This shortage of Human Resource in the health sector remains a key challenge to the goals of achieving quality universal health coverage in Malawi and is impacting service delivery across most health programs including EPI. Shortage of, and maldistribution of HSAs is a key bottleneck to the immunization program and contributes to lower coverage through cancellation of outreach clinics and poor capturing of data.

To address this the MoH/National Community Health Services section has developed a Community Health Strategy 2017-22 which aims to build a sufficient, equitably distributed, well-trained community health workforce. Key interventions to achieve this goal include recruiting 7000 additional CHWs; promoting equitable geographical distribution of CHWs; and providing high-quality, integrated pre-service and in-service training to all CHWs. The target for 2022 is that Malawi reaches 74% of its policy recommendation for the ratio of trained HSAs to members of the population (~15K HSAs and ~1.5K SHSAs) and that 75% of HSAs and SHSAs are residing in their catchment areas.

B. Supply chain:

Effective Vaccine Management (EVM)

The Effective Vaccine Management Assessment (EVMA) was conducted in June 2016. The overall score of the EVMA 2016 was above 80% of recommended minimum scores at

all levels of the supply chain. The EVM assessment findings indicated the need for developing an improvement plan to advance effective vaccine management activities covering the entire country vaccine supply chain.

An improvement plan was developed based on the EVM assessment findings and recommendations made by the assessment teams. The improvement plan also takes into consideration the findings from other EPI comprehensive reviews and assessments that have been conducted between 2015 and 2016.

The EVM improvement plan (2017-2021) listed key actionable activities to be prioritized, and listed below are updates on the same:

1. Temperature monitoring:

- Temperature monitoring study was conducted in 2016, results disseminated, and action items listed.
- Monthly review of temperature records not yet implemented
- Installation of alarms and auto dialers temperature monitoring systems in cold and freezer rooms completed
- Freeze tags and Fridge tags procured
- Temperature mapping of cold and freezer rooms not completed

2. Upgrade and expand immunization supply chain infrastructure (Capacity building, cold chain equipment expansion)

- The improvement plan was updated in 2017 based on the learnings from the review of the Cold Chain Equipment Optimization Platform (CCEOP) plan
- CCEOP plan approved in 2017, procurement and deployment on going in 2018
- Report on implementation status was prepared in January 2018.
- Provision of fire extinguishers and training of staff on how to use not yet done
- Auto start system for standby generators not yet done
- Protective clothing for cold chain staff procured
- 3 phased voltage regulators for cold rooms procured
- Cold chain inventory system updated offline
- Functioning incinerators at central and regional levels not yet procured.

3. Provision of tool kits and monitoring tools for cold chain maintained

- Basic tool kits for cold chain technicians provided in some districts
- Provision of supplementary accessories-refrigerant, oxygen cylinders etc not done
- Air blowing equipment for cleaning not done

4. Establishment of improved distribution system

- Procurement of cold boxes and vaccine carrier not done,
- Distribution monitoring study not done

5. Creating an enabling environment to improve the efficiency and effectiveness of cold chain and supply chain staff.

- Intensified supportive supervision with on the job training- on going
- Training of cold chain technicians and PAM technicians on repairs and maintenance-planned for next year
- Professional logistics management- ongoing, national level supply chain manager undergoing training.
- Refresher vaccine management training- Done

6. Development of an improved stock management system

- Updates of distribution of stock books, bin cards, and other job aids to districts and health facilities SOPs. Not done

- Provision of official computes, ups and printers for all stores for SMT and immunization activities. Not done
- Capacity building on SMT, IMT- Done but SMT not being used at the district level due to software challenges

WAY FORWARD ON EVM RECOMMENDATIONS WITH UNFINISHED TASKS

AREA	EVM RECOMMENDATIONS	WAY FORWARD
Temperature monitoring:	Monthly review of temperature records not yet implemented.	Through HSIS funding, Ministry of Health conducted a temperature review exercise in several health facilities in December 2018. Data is currently being analyzed pending a report that will widely be shared. Similar exercises will be undertaken in 2019 biannually to build capacity among health workers in health facilities to undertake the exercise monthly.
	Temperature mapping of cold and freezer rooms not completed	EPI is soliciting financial support from partners to undertake the exercise in 2019, targeting cold rooms in Mzuzu. Temperature mapping for the rest of the new cold rooms will be conducted in the coming year pending finalization of constructions and availability of funds.
Upgrade and expand immunization supply chain infrastructure (Capacity building, cold chain equipment expansion)	Provision of fire extinguishers and training of staff on how to use not yet done	EPI is soliciting financial support from partners to procure fire extinguishers and train staff in 2020.
	Auto start system for standby generators not yet done	
	Protective clothing for cold chain staff not procured	EPI is planning to include procurement of protective clothing in year three of the GAVI HSIS.
	Functioning incinerators at central and regional levels not yet procured	There activity is budgeted in year two of the GAVI HSIS grant.
Provision of tool kits and monitoring tools for cold chain maintained	<ul style="list-style-type: none"> ● Provision of supplementary accessories-refrigerant, oxygen cylinders etc not done ● Air blowing equipment for cleaning not done 	EPI is planning to include procurement of accessories like refrigerant, oxygen cylinders in year three of the GAVI HSIS.
	Procurement of cold boxes and vaccine carrier not done	In HSIS. Procurement in progress

Establishment of improved distribution system	Distribution monitoring study not done	EPI is soliciting financial support from partners to procure fire extinguishers and train staff in 2020.
Development of an improved stock management system	Update of distribution of stock books, bin cards, and other job aids to districts and health facilities SOPs. Not done	EPI logistics subcommittee planning to develop a system to track all the tools used in Immunization supply chain system. This will include the use of these tools.
	Provision of official computers, ups and printers for all stores for SMT and immunization activities. Not done	Planned in HSIS. To be procured in year two of the implementation of HSIS
	Capacity building on SMT, IMT- Done but SMT not being used at the district level due to software challenges	EPI logistics subcommittee planning to develop a system to track all the tools used in Immunization supply chain system. This will include the use of SMT.

Supply Chain Strategy Fundamentals:

1. **Supply Chain leadership:** In 2018, a National Immunization Supply Chain (NISC) working group was established. The ISC working group currently operates to coordinate quantification, forecasting, stock analysis, stock control, identify gaps, develop corrective action points and advise on preventive corrective measures. It also serves as a forum for information and knowledge sharing, and problem identification and problem solving.
2. **Continuous improvement and planning:** Through the creation of the newly developed NISC working group there will be continuous review, planning and execution of prioritized activities in the current continuous effective vaccine improvement plan. Amongst other things the national supply chain working group intends to extend its operation beyond national level.
3. **Supply Chain Data:** Data of the Immunization supply chain is managed through the viva (Visibility for Vaccines) SMT at National level, and at lower levels, SMT and DVDMT is used to support supplies and stock management. There are also a number of tools that support inventory management and temperature monitoring as detailed in table 1 below.

Districts utilization of different stock management tools- DVDMT and SMT varies, and data input on these tools also varies. Challenges with use of SMT at district levels include non-user friendliness of tool. SMT is an excel based tool with formulas and macros included, challenges around stability of user files as well as maintenance of configured formulas in version being used have been reported by different users.

In order to address these challenges, plans are underway to strengthen supply chain data by exploring methods of improving stock visibility at lower levels. Plans are also underway to revamp monthly reporting forms for supplies, enhance supportive supervision at all levels as a means of improving vaccine and injection material management and utilization at all levels as well as improve the use of the available SOPs.

3.3. Data

Level	Data Management Tools
National Level	ViVa(Visibility for Vaccines), SMT (Stock Management tool), Bin cards, Stock cards, Stock books, VAR (Vaccine Arrival Reports), Dispatch Notes, National Vaccine Store SOP, Beyond Wireless Temperature monitoring tool, Fridge Tag 2, Freeze Tag
Regional Level	SMT (Stock Management tool), Bin cards, Stock cards, Stock books, VAR (Vaccine Arrival Reports), Dispatch Notes, Regional Vaccine Store SOP, Fridge Tag 2, Freeze Tag, Vaccine Order Books
District Level	SMT (Stock Management tool), Stock books, VAR (Vaccine Arrival Reports), Dispatch Notes, District Vaccine Store SOP, Fridge Tag 2, Freeze Tag, Vaccine Order Books
Facility Level	SMT (Stock Management tool), Stock books, VAR (Vaccine Arrival Reports), Health Facility Vaccine Store SOP, Fridge Tag 2, Freeze Tag, Vaccine Order Books

Table 1 Data Management Tools- Immunization Supply Chain Function

- 4. Cold Chain Equipment Management:** Challenges in cold chain equipment management include- unavailability of spare parts which impacts corrective maintenance of cold chain equipment, frequent breakdown of certain VLS refrigerators, challenges with contractual responsibilities and processes to support the maintenance of cold chain equipment and generators, and challenges tracking maintenance records for cold chain equipment

In response to some of the challenges listed, in 2018, there was a root cause analysis on the failure assessment for VLS equipment. Key findings of this analysis revealed a manufacturer error on thermostat placement in the equipment. This finding led to modification of the equipment by the manufacturer and refresher training was also conducted by VLS. Furthermore, the program is currently exploring measures to enable tracking of maintenances done on equipment. Plans and discussions are also on making spare parts available in country through local representatives of the manufacturing companies.

- 5. Supply Chain System design:** The EPI program has one National vaccine store, 3 regional vaccine stores and 29 district vaccine stores. It applies a push and pull system in distributing vaccines. From the national level to the regional level, and from regional to district level a pull system is applied. From the district level to service delivery points both a pull or push system can be applied. The push approach is also

applied during new vaccine introductions and during supplementary immunization activities.

Currently vaccine and injection material supplies are bundled, and distribution is conducted periodically as shown in the figure 14 below. The program primarily utilizes vehicles for distribution, however boats, bicycles and motorbikes are used for distribution in geographically hard to reach areas.

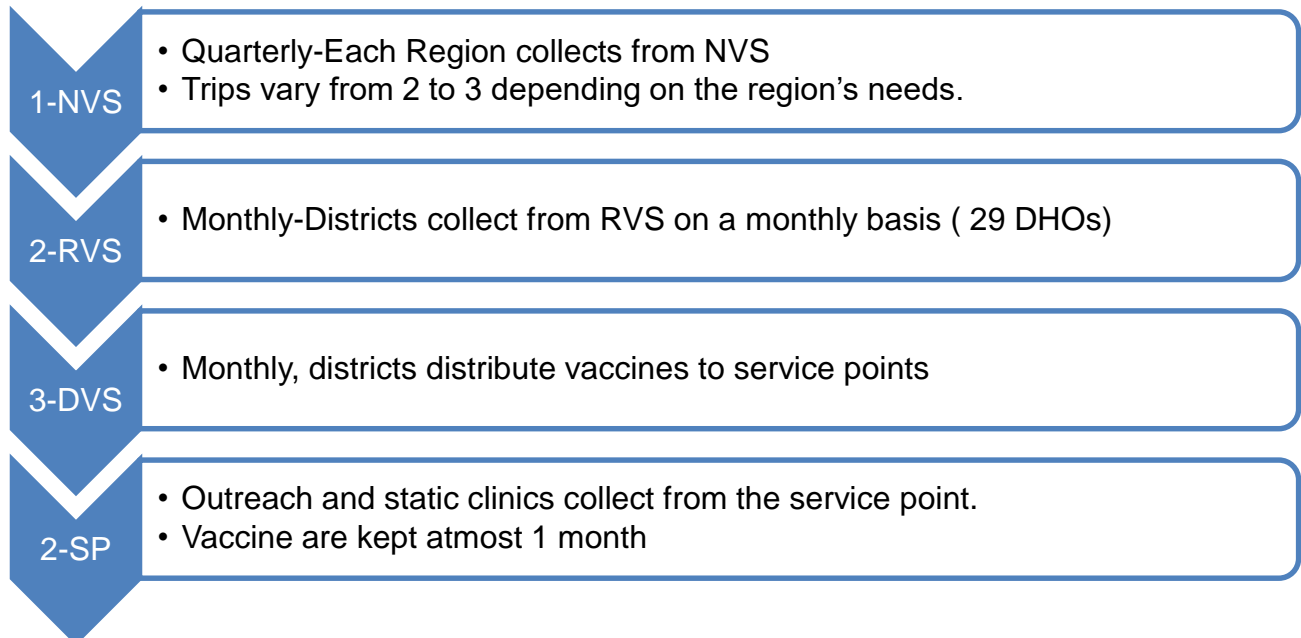


Figure 14 Supply Chain Distribution System

The challenges around the current design of the supply chain is mainly around the pull mechanisms applied by the districts in collecting vaccines. Currently some districts are not able to collect supplies from the regional level according to their planned schedules, as this is dependent on availability of fuel and vehicles which is a challenge at the district level. Another challenge with the design of the system is that stock documentation on vaccine and injection material stock books is not adequately done in some districts and health facilities, and this impact ordering of supplies, visibility of vaccines and decision making.

C. Service delivery and demand generation:

Service Delivery:

Immunization service delivery is provided through 752 static sites and 5,146 outreach sites covering both rural and urban areas in 29 health administrative districts. Both public and private health facilities are used as static sites for vaccination services. Vaccinations at these sites are intended to be conducted daily but is not the case in some sites.

Outreach clinics are held away from health centers and may be conducted in classrooms, churches, mosques, health posts, under a tree, or at designated well known and accessible locations monthly. The major purpose of establishing outreach vaccination sites is to bring immunization services as close as possible to the beneficiaries of these services so that distance should not be the reason for the non-immunization of children. However, the outreach clinics are not always conducted as planned, some reasons for outreach clinic cancellation includes challenges around transport, attending funerals, bad weather, impassable roads, and competing staff priorities e.g. staff attending meetings and trainings.

Malawi adapted the new Reaching Every Child (REC) Strategy in 2017 and in 2018, trainings in (REC) have been conducted in some districts with low immunization coverage to improve health worker knowledge, skills and related capacities to effectively plan for, and deliver immunization services. Implementation of the REC has led to establishment of more outreach clinics in several districts with low coverage such as Ntchisi, Dowa, Mzimba South and Rumphi with support from partners. Four districts implemented all the five components of REC with support from UNICEF and MCSP/USAID, and 5 districts only did microplanning with support from Malaria Alert Centre (MAC). However, there are a few districts that are implementing REC strategy and the level of implementation has varied across districts.

Malawi Health Equity Network (MHEN) has established mother care groups in 12 districts. These mother care groups assist in defaulter tracing, after immunization sessions they follow up with defaulters with a door to door approach to encourage them to go for immunization sessions. There is a need for defaulter tracing to be expanded to other districts as this could play a key role in decreasing drop-out across various vaccines and could specifically be used to support an increase in uptake of MR2.

There is lower immunization coverage in urban settings when compared with rural settings. This could be attributed to frequent movement of caregivers especially in peri-urban areas, challenges with data collection in urban private clinics where most urban residents access services, clinic times not convenient to urban socioeconomic activities. Given that the urban areas have significantly higher numbers of HSAs, the lower immunisation coverage in these areas can be attributed to service delivery issues as w Although the cities have more HSAs, the coverage is lower probably due to sub-optimal performance. There is also low BCG coverage which could be attributable to non-involvement of other cadres e.g. nurses and clinicians, because of task shifting, and non-availability of data collection tools in the maternity units.

Using PEF/TA funds, a bottleneck analysis facilitated by UNICEF is currently on going to take a deep dive into the drivers of low immunization coverage and identify measures to address these barriers.

Demand Generation:

Between 2017-2018, the country has developed the EPI communication strategy and vaccine specific communication strategies (HPV and Malaria), and communication materials for the three upcoming vaccines – HPV, IPV and malaria. The goal of EPI Communication and Social Mobilization Strategy is to empower individuals and communities to adopt positive and sustainable health-seeking behaviors that will help the country achieve high immunization coverage, thereby improving child survival. All communication strategies and materials are developed based on thorough situation analyses to identify general and vaccine specific communication barriers to uptake and have identified various communication channels and strategies to improve immunization uptake. The strategies will use a combination of communication approaches including advocacy, social mobilization and behavior change communication. A crisis communication plan is developed to address the challenges with introduction of HPV vaccine for adolescent girls. However, the EPI program communication policy although in final draft stages has not yet been endorsed.

Mass communication is another mode of demand creation which is applied in the country. There are radio slots being aired in most radio stations, which has contributed to increase in demand for immunization services. In addition, the Ministry of Health, with support from Village Reach, has launched “Chipatala cha pa fon”i”, where community members call in for information and advice, EPI information is also available through this medium.

In addition to mass communication activities, health workers are responsible for interpersonal communication to caretakers during vaccinations to children, however, there is a challenge in implementing inter personal communication to caretakers when they come for immunization services. There are also a few EPI specific social mobilization sessions taking place in communities.

D. Leadership, management and coordination:

Achieving the goals of improving and sustaining coverage and equity requires strong leadership, management and coordination of immunisation programmes. The EPI program is under the Directorate of Preventive Health Services of the Ministry of Health and Population, and is managed by the EPI Program Manager who oversees a team of national and subnational officers responsible for a number of areas including routine immunization, data management, supply chain and cold chain management, disease and AEFI surveillance. In July 2018, the incumbent acting EPI program manager retired from service and the program manager position is currently filled in an acting capacity.

The program also benefits from leadership and management support from Aspen Management Partnerships for Health (AMP Health) through an in-country management partner embedded within the EPI team.

Through the GAVI HSIS grant, the EPI program benefits from strengthened leadership and management of program activities at central, zonal and district levels through periodic meetings aimed at improving coordination with stakeholder and partners as well as improving sustainability, availability, capacity and motivation of human resources for health to deliver quality immunization services at all levels among other objectives.

The implementation of monthly EPI team meetings supports the coordination and management of activities at central level, quarterly meetings supports the coordination of activities across the subnational zonal level and biannual meetings support the coordination of activities at the district level.

Coordination of activities across external partners and stakeholders is enabled through quarterly held EPI sub technical working group meetings. The EPI program also participates in sub-technical working group meetings of the Environmental Health program, Community Health program and broadly the health sector working group meetings. The bilateral coordination meetings between EPI and community health department supported to leverage resources for strengthening of community health system for immunization services

The EPI program has a functional National Immunization Technical Advisory committee which is called the Malawi Immunization Technical Advisory Group (MAITAG). With financial support from WHO, the members met in August 2018 for their biannual meeting and met again in September 2018 for capacity building training with technical support from WHO. Amongst notable issues were the lifting of Rota age restriction.

The program implements supportive supervision activities to support implementation of program activities at all levels. The supervisory visits are planned for national and zonal levels to visit the districts quarterly, and the district level to visit the health facilities monthly. At district level, the districts have been demarcated into district supervisory cluster areas which fall under the responsibility of designated health facilities, these cluster area supervisory visits are performed by their respective health facilities using a motor cycles. The EPI programme reviews have shown that in Malawi supervision at all levels is conducted irregularly- due to limited financial resources and transport (fuel and vehicle), supervision has been irregular, and in most cases written feedback after supervision is also not made. District integrated supportive supervisory visits is often time limited and does not allow for a detailed supervision of EPI program activities which are more detail oriented. These are areas that should be strengthened.

A. Health and Immunization Information System:

Routine Immunization Data Systems:

Malawi has adopted DHIS2 as the Health Information system in use across all health programs. The EPI program currently uses both DVDMT and DHIS2 as parallel systems for routine Immunization data capture. The program is now in the process of migrating routine EPI data into DHIS2.

To support this migration, the DHIS2 was customised to capture EPI data elements and indicators as reflected in DVDMT, district HMIS officers and EPI coordinators were trained on data entry into DHIS2, and computers were also provided to HMIS officers.

Following discussions between EPI and CMED it was mutually agreed that the migration of EPI district level data into DHIS2 will commence gradually with parallel reporting on new data and back data entry will be supported annually until all EPI data is migrated into DHIS2.

There are multiple challenges with data reporting in these parallel systems, some of which includes work overload and suboptimal data capture. The reporting rate, frequency of use, and the information generated from these two parallel systems also varies. DHIS2 is primarily a web-based platform that relies on the availability of good internet connection as compared to DVDMT which is an offline system. Hence low reporting rate of EPI data on DHIS 2 by some districts is attributed to poor network connectivity, challenges with access to, and availability of internet as well as inadequate computers to capture, process and store EPI data.

The program is planning to migrate completely to DHIS 2 in the coming year, with complete Back Data entry from DVDMT to DHIS2 supported with funding through the Gavi HSIS III grant. Also accommodated in the HSIS III grant is funding to cover the Design/modification of DHIS2 to address identified software/system design issues, some of which include: Multiple EPI dashboards that exist on the DHIS2 platform, multiple indicators groups for the EPI program, multiple definitions of indicators with different denominator definition, numerator definition and different data sources. Modifications on DHIS2 would also cover the review and inclusion of indicators for Diseases Surveillance, Stock outs of vaccines, Vit A & deworming on dashboard,

AEFI and VPD Surveillance Systems:

VPD surveillance data (measles case based, AFP and NNT) is managed by MOH/ EPI using the epi Info system, Kamuzu Central Hospital which is the National Measles Lab manages the measles lab data using epi Info system as well.

As part of strengthening AEFI surveillance, reporting and data quality, in 2018, WHO has supported the MoH to introduce the Vaccine Adverse Event Monitoring Information System (VEMIS), developed to support reporting of Adverse Event Following Immunization (AEFI) in all health facilities. In April 2018, Training of trainers (TOT) was conducted by MOH/EPI and PMPB with support from WHO and participants were from EPI Unit, EPI Zones, PMPB and CMED. In August 2018, second training was conducted for district level participants, 5 participants were trained in each district totalling to 145 participants.

Challenge common to both Routine immunization, VPD and AEFI surveillance is incompleteness of data elements in reporting forms.

B. Denominator:

The EPI program has over the years consistently reported challenges with denominators that has affected target setting and coverage performance. An analysis of population estimates reveal differences in denominators between the projections derived from the National Statistics Office (NSO) and head count figures- see figure 15 below:

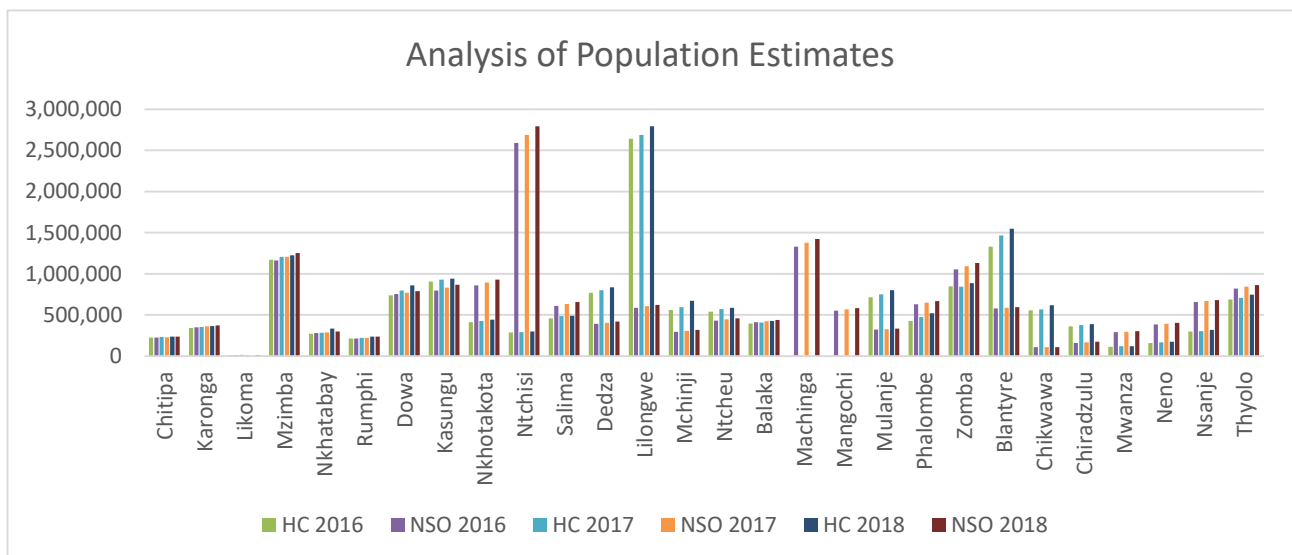


Figure 15 Analysis of Population Estimates. Source: District level headcount figures 2016, 2017 and 2018; National Statistics Office- populations and projections 2016, 2017 and 2018.

As shown in the figure 15 above, 8 districts have insignificant differences between NSO projections and head count figures, and an equal number of districts have either higher NSO or lower NSO projections when compared with head count.

The program recently concluded a MoH/WHO stakeholder workshop on the analysis and use of health facility data, wherein discussions ensued on the quality of denominators used by the program. Insights made to better articulate what these denominator Issues for the program and some root causes identified were:

- i. Targets are too high as Crude Birth Rate set by NSO is too high (i.e. NSO=43/1,000, UN estimates=37/1,000 and Demographic Health Survey 2015/2016=32/1,000)
- ii. NSO Assumptions for calculating pregnant women and surviving infants are the same in DHIS2 i.e. the assumption of 5% is applied to both targets.
- iii. Seven districts had no population figures entered in DHIS2

As an action point following the workshop to address these issues around denominators in the EPI program, an action point for CMED and NSO to discuss on assumption made in CBR and surviving infants projections.

C. Data Quality, Availability and Use:

Timeliness and Completeness of Reports:

In the year under review 2017, efforts have been made to improve timeliness and completeness of data especially from district to national level. Data completeness is currently sustained at 100% across all districts, however challenges still exist with timeliness. In 2017, three district achieved timeliness of reporting at 100%, 19 reported between 80% and 99 % and seven (7) districts reported below 80% as shown in figure 16 below.

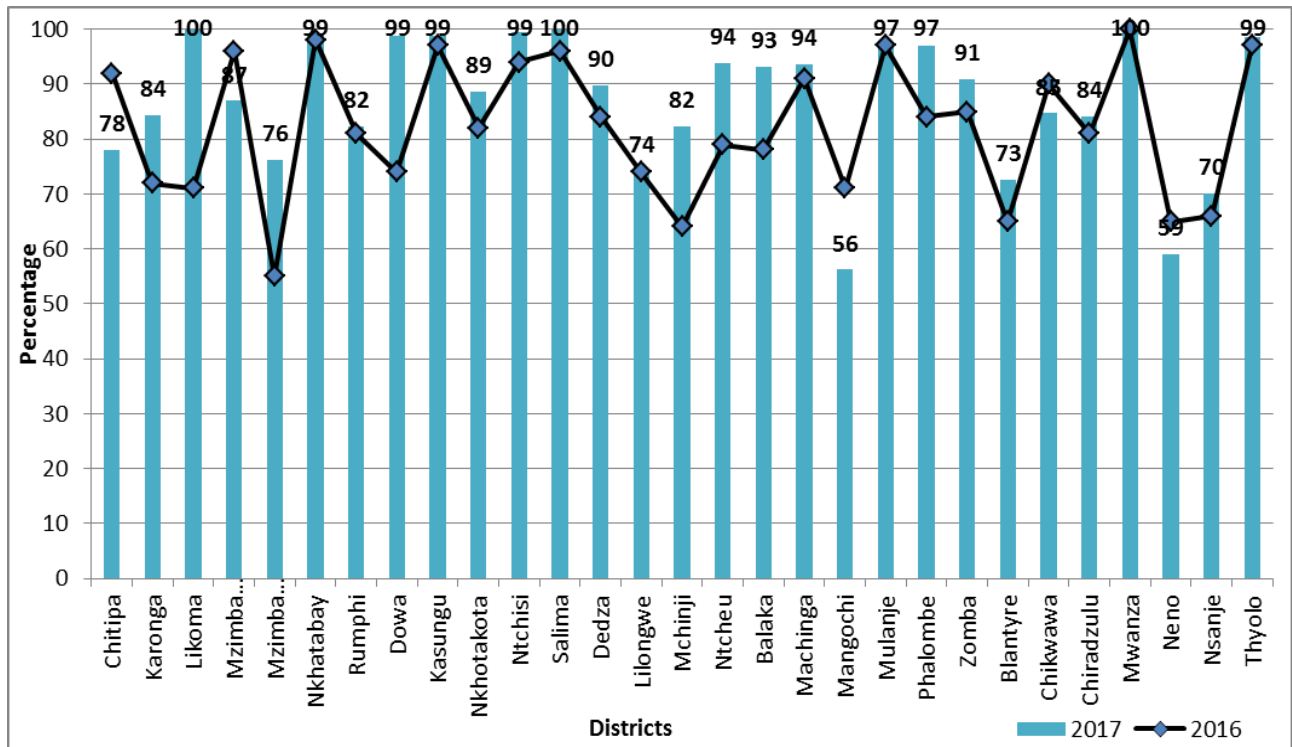


Figure 16 Timeliness of Health Facility Report Submission-Analysis by district - 2016 & 2017

Data Quality:

Analysis of both internal and external consistency of the EPI data reveal discrepancies in data quality. Coverage estimates for Admin data, Malawi Demographic Health Survey and Wuenic estimates show differences amongst target performance as shown below.

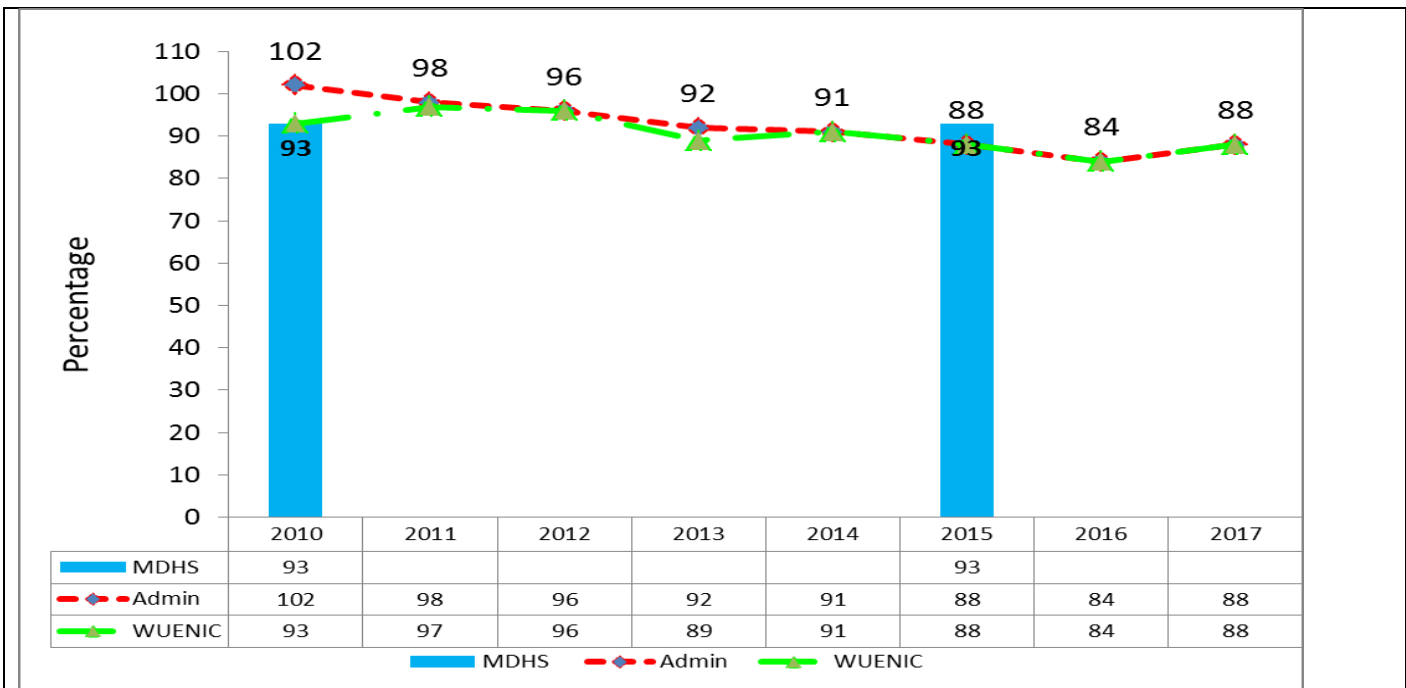


Figure 17 External Consistency Analysis- Coverage Estimates Across MDHS, Admin and WUENIC Data.

Discrepancies in coverage target performance across Admin data, Malawi Demographic Health Survey and Wuenic estimates can be attributed to suboptimal data capture from immunization sites-both static and outreach-at all levels.

The EPI program uses the under 2 registers at immunization sites to help track immunized and unimmunised children. The challenges surrounding data capture and reporting was attributed to non-user friendliness of the Under-2 registers which lead to poor data entry practices and data omission after vaccinations by health workers. To address these issues around data capture and aggregation, the program in March 2018, re-introduced the use of tally sheets. With the re-introduction of tally sheets came issues surrounding use of both reporting tools. These issues are that the tally sheets sometimes replace the under-2 register, or both are used interchangeably, this has further compounded the data capture challenges and has led to data loss after immunization.

Analysis on internal consistency comparing coverage across antigens given at the same time at district level- across both static and outreach clinics, show an agreement in data quality trends across antigens given at the same time as shown in figure 18 below.

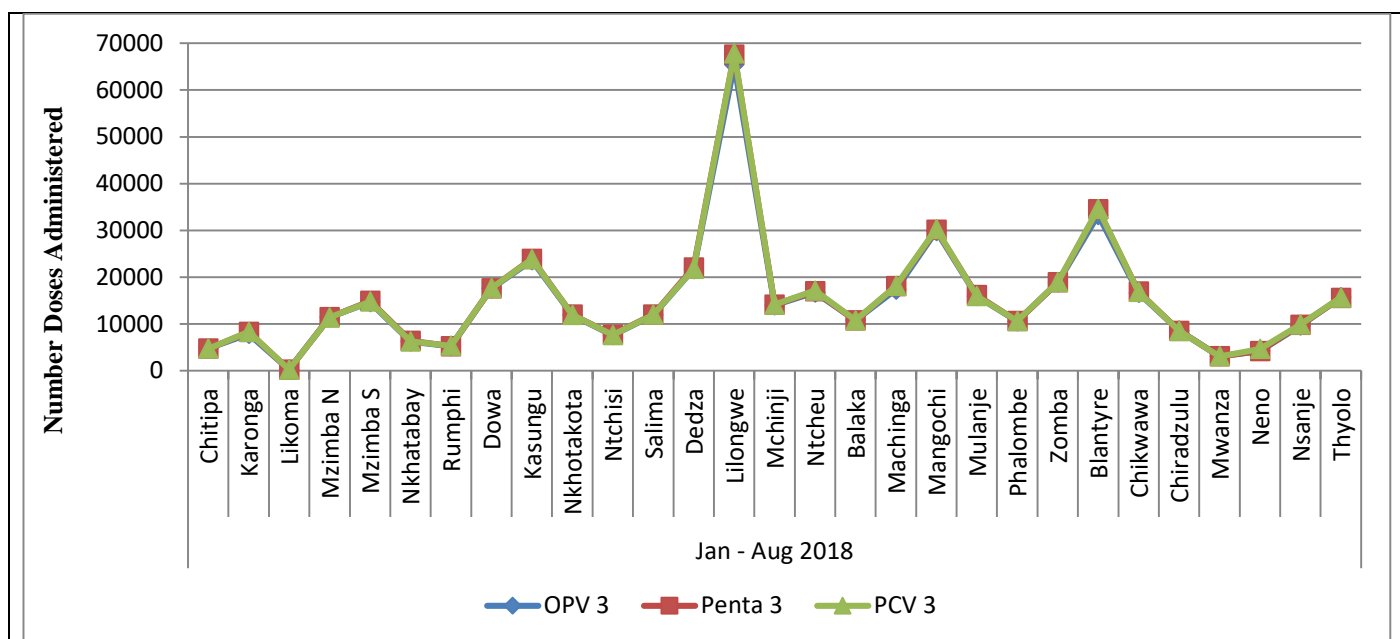


Figure 18 Coverage across antigens given at the same time OPV3, Penta 3, PCV3. Source MDHS 2018

Data Use:

In August 2017, leveraging on resources from the measles rubella SIA funds, a module on data management was added and all health workers in the all districts were re-orientated on data management. However, there are challenges with data use in the EPI program at all levels. These challenges are attributable to lack of guiding documents/SOPs on EPI data management areas such as SOP’s on Data Analysis and Use, and SOP’s on Data Quality Assessment. There is also a need for capacity building and skills development across all levels in the following areas: use of recently added DHIS2 dashboards and immunization modules, interpretation of Data Analytics and Use of data decision making, Data Quality Assessments and Reviews.

D. Data Quality Assessment:

The last EPI DQS was conducted in 2014 funded by USAID/ MCSP. The Centre for Monitoring and Evaluation Division (CMED) conducted a broader data quality review across MoH programs in 2017 with support from Global fund, and EPI indicators were among the indicators that were assessed. Findings from this assessment concur with the findings from the EPI DQS and were in similar themes around: Non-user friendliness of the under two registers, Inadequate data use and unrealistic target setting due to denominator issues.

An EPI data quality review which was planned to be conducted in second half of 2018 could not take place. Discussion were however initiated with WHO AFRO to conduct DQR in Quarter 1 of 2019 and this will be followed by development of a data quality improvement plan.

3.4 Immunisation financing

- The national health financing framework and medium-term and annual immunisation operational plans and budgets are available and integrated into the national health plan and budget. There is relationship with inconsistencies with microplanning processes due to delayed disbursement issues. But the short-term plans are guided by the Comprehensive Multi Year Plans (Cmyp).

- In the fiscal year 2017/2018, the EPI program had an approved 1.25% (MK904,405,741.00) of the total health budget (K72,099,045,972.00). However, in the fiscal year 2018/2019, there was a reduction of the EPI approved budget down to 0.35% (MK263,881,280.00) of the total health budget (MK75,133,813,498.00).
- Malawi has never defaulted on co-financing and has received 2 awards from GAVI towards co-financing
- Sufficient resources are allocated with support from Health Sector Joint Fund and other donors i.e. DFID, NORAD, KfW and other local partners. However, funding is limited for supplies only and not much to address other building blocks of health system (e.g. Service delivery in hard-to-reach areas, demand generation).
- There is timely allocation of resources at National level but mostly insufficient while there is both un timely and insufficient allocation of resources at Zonal and District levels
- To support adequate reporting on immunization financing at the district level, the program introduced an excel based reporting tool to support immunisation financing. However, some Districts have not yet mastered the use tool leading to delays and failures to report, but useful information is flowing from Districts which are reporting.

4. PERFORMANCE OF GAVI SUPPORT

4.1. Performance of vaccine support

The program is planning to introduce HPV vaccine in the single routine age cohort for 9-year-old girls. The country is planning to adopt the school-based approach for in-school girls, and for out-of-school girls, the vaccines would be delivered through the routine static and outreach vaccination sites. The launch date for the vaccine is scheduled for the 10th of January 2019. Administration of the first dose in schools will run from the 14-19th of January 2019 and second done from the 21st to 26th of July 2019, vaccination would be ongoing at routine vaccination sites from the launch date.

The MoH is planning implementation of the vaccine introduction in close collaboration with MoEST, and other relevant stakeholders and partners. A National Task Force was instituted to support planning and coordination amongst key partners, stakeholders and players whose involvement is critical to the introduction of HPV, IPV and Malaria vaccines. NTF meetings have been conducted on schedule every month from May 2018 till date. The NTF members have formed subcommittees who plan and coordinate activities around key thematic areas Protocol and Transport, Publicity and Social Mobilization, Training and Logistics, as well as data management, monitoring and evaluation.

In readiness for new vaccine introduction (IPV, HPV, Malaria), data collection and monitoring tools have been reviewed and updated, these including under 2 registers, HPV register, HPV ID cards, tally sheets/books, monthly EPI reporting forms. Training materials, operational guides and filed manuals have also been developed. All materials are scheduled to be printed in quarter 4 of 2018 and be distributed to health facilities. Training of Trainers, orientation of district stakeholders and spokespersons have been conducted. Also developed are the communication strategy, communication and social mobilisation materials as well as the crisis communication strategy.

Major activities outstanding before introduction in January 2019 include district level trainings for teachers and health workers, girls mapping, microplanning, distribution of vaccines, social mobilisation activities (both IPC and mass activities), readiness assessment and national launch.

Some key gaps and challenges identified include: funding gaps for implementing vaccine introduction activities, community mobilization activities- there are no interactive activities planned to be conducted in the communities and girls mapping.

To ensure sustainability of the routinisation of HPV, there is a need for the program to identify and engage CSOs that can support in reaching this age-cohort. And also, for the program to ensure alignment with the adolescent strategy, reproductive health strategy and school health programs. The program has also identified the need to commence early preparations for multi age cohort (MAC) vaccination campaign planned for 2020.

4.2. Performance of Gavi HSS support (if country is receiving Gavi HSS support)

The Gavi HSIS-III (2018-2022) grant was developed following an intensive bottleneck assessment of the Malawi immunization and health service delivery system. A detailed grant implementation plan was developed for the first 2 years, and a preliminary summary plan developed for years 3-5, all with the intent to holistically address the health system gaps and needs required to improve immunization coverage and equity.

The GAVI HSIS III budget implementation plan developed proposes to impact immunization coverage and equity goals through the execution of activities across 6 objectives targeting to improve access, quality and utilisation of immunization services; improve supply, quality and utilisation of data at all levels; improve cold chain infrastructure and capacity, strengthen leadership and management of EPI at central, zonal and district levels and improve coordination and sustainability of program performance; improve and sustain the availability, capacity and motivation of human resources for health to deliver quality EHP services including immunisation services at all levels; and support overall programme management.

Strategic activities planned by the program to support improved access, quality and utilisation of health and immunization services are targeted to reach populations systematically missed due to geographical, socio-economic and cultural barriers. These activities include the mapping of hard to reach, and never reached populations, and the implementation of PIRI (Periodic Intensified Routine Immunization) services to reach the unreached. These activities are targeted to address gaps in immunization coverage in the identified 8 districts with sub-optimal coverage of less than 80% coverage, and 2 districts with greatest number of under-immunised children. Also planned for these districts are Microplanning activities to strengthen the management of service delivery at health facility levels, and the engagement of civil society organizations in reducing drop outs through the creation of mother care groups, who assist with defaulter tracing and interpersonal communication and advocacy at the community levels.

The program has planned for a number of targeted infrastructure investments with the HSIS III to support in improving access and utilisation of health services. Such investments include the placement of under-five clinic shelters/village clinics in identified areas with poor/with no infrastructures to support health service delivery. It was revealed that 41% of outreach clinics were conducted under trees, and immunisation services are not conducted as regularly according to plan due to several factors such as stock-outs of vaccines and outreach clinic cancellations due to transport challenges. Thus, there are budget allocations for procurement of utility vehicles, boats, motorbikes and bicycles to support the supply chain system and the delivery of immunization services in outreach and static sites.

The program has also prioritized capacity strengthening activities with the HSIS III grant to improve, and sustain the availability, capacity and motivation of human resources for

health to deliver quality EHP services including immunisation services at all levels. Building Health workers capacity and closing the skills gaps is critical to improving immunization service delivery and motivating health workers to delivering quality immunization services which will contribute to strengthen immunization coverage and equity.

Activities planned to support this include institutionalised health worker capacity building/in-service training designed, planned, and to be implemented in conjunction with the Malawi College of Medicine to address skill gaps in data management and analysis, surveillance and immunization service delivery as identified with the bottle neck analysis.

The EPI program has also prioritized the improvement of the cold chain infrastructure, capacity and ISCM system. Trainings and exchange visits are incorporated to the HSIS III grant to support capacity strengthening of the supply chain staff and cold chain technicians. These activities are planned to sustain gains made with the programs EVM, and to support the implementation of continuous improvement plans to maintain the programs' performance in vaccine management considering ongoing investments in cold chain equipment expansion and planned new vaccine introductions.

Implementation Progress:

The GAVI HSIS Grant III is planned to be implemented across a number of programs including- National Community Health Services Section(NCHSS), Central Monitoring and Evaluation Departments (CMED) of the Ministry of Health and Population Services, The Malawi Health Equity Network (MHEN), and the Malawi College of Medicine (CoM). The financial component of the grant is managed by the Program Implementation Unit (PIU) of the Ministry of Health.

Implementation of grant activities commenced in the month of July 2018, and updates on implementation progress for these activities across all implementing partners are summarised in the table below.

Implementation Bottlenecks:

Both the MoH/EPI Program and the MoH/PIU experienced teething challenges in with the process of completing activity budget request templates for EPI specific activities. This led to time spent with multiple iterations in preparing budget templates, delays in completing templates and consequently delays in fund approvals and disbursements which impacted implementation progress.

Furthermore, the administrative burden of preparing budget requisition templates falls primarily on the national EPI unit staff for activities planned at all levels. Delays and challenges in completing budget templates have been attributed to competing demands with program activities, this has also contributed to delays in implementation.

Opportunities exist in leveraging zonal and district level staff to support in preparing activity budget requisition templates, however there is a need for PIU to support in orienting and training on the overall PIU requisition process and on how to complete activity budget templates and liquidate activities.

Objective 1	
Objective of the HSS grant (as per the HSS proposals or PSR)	To improve access, quality and utilisation of EHP services including immunisation, with a focus on populations systematically missed due to geographical, socio-economic and cultural barriers.
Priority geographies / population groups or constraints to C&E addressed by the objective	14 Districts.
% activities conducted / budget utilisation	

<p>Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption</p>	<p>Activities Implemented by EPI:</p> <ol style="list-style-type: none"> 1. Map out hard to reach areas and never reached populations <ul style="list-style-type: none"> • Rescheduled. TA needed 2. Map out unimmunized and under-immunized children <ul style="list-style-type: none"> • Mapping tools development (done) • ToT for district trainers (done) • Development and distribution of tools (done) • Actual Mapping- scheduled to commence the week ending Nov. 23rd. 3. Conduct PIRI in low performing areas <ul style="list-style-type: none"> • The activity planned to commence after the completion of the mapping exercise 4. Conduct follow up on PIRI <ul style="list-style-type: none"> • Activity scheduled to commence during PIRI 5. Support HPV introduction during actual days 6. Mapping out of girls for HPV vaccination and micro-planning 7. Support National Supervision during actual days of HPV Introduction <ul style="list-style-type: none"> • Discussions currently ongoing on re-evaluating budget assumptions for 3 line items above and reallocating funds to more effectively and efficiently HPV introduction <p>Activities Implemented by other implementing Parties:</p> <p>NCHSS:</p> <ol style="list-style-type: none"> 1. Conducted Community technical working group meeting for third quarter 2. Conducted NCHS dissemination in 10 districts from (Phalombe, Thyolo, Mwanza, Nsanje, Blantyre, Chiradzulu, Neno, Dedza, Mzimba, Likoma) 3. Disseminate NCHS to the District Community Health Coordinators orientation meeting 4. Conduct consultative workshop in development of infrastructure guidelines <p>MHEN:</p> <ol style="list-style-type: none"> 5. Inception meetings (DEC, DHMT and CSO) 6. CSO Mapping: Mapping was conducted (Designing, Data correction cleaning and analysis) a catalogue of organisations was develop and a final report is being drafted 7. Supported REC training 8. A quarterly newsletter was produce both English and Chichewa Versions. <p>UNICEF:</p> <ol style="list-style-type: none"> 9. Procurement of utility vehicles- 26 motor vehicles, 1 mini bus and 89 motor cycles completed by UNICEF
<p>Major activities planned for upcoming period (mention significant changes / budget reallocations and associated needs for technical assistance¹¹)</p>	<ul style="list-style-type: none"> • Map out hard to reach areas and never reached populations • Conduct PIRI and follow up on PIRI • Introduce HPV
<p>Objective 2:</p>	
<p>Objective of the HSS grant (as per the HSS proposals or PSR)</p>	<p>Improve the supply, quality and utilisation of data at all levels.</p>
<p>Priority geographies / population groups or</p>	<p>All Districts</p>

constraints to C&E addressed by the objective	
% activities conducted / budget utilisation	
Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption	<ol style="list-style-type: none"> 1. Conduct Facility based surveillance orientation in AEFIs, AFP, Measles and NNT Activities Implemented by other implementing parties: CMED <ol style="list-style-type: none"> 2. Village health registers reviewed 3. Health facility census conducted 4. Supported HMIS officers – Facility level data review
Major activities planned for upcoming period (mention significant changes / budget reallocations and associated needs for technical assistance ¹¹	<ul style="list-style-type: none"> • EPI program and CMED to consolidate indicators and dashboards on DHIS2 and define Indicators and sources of data • Import data from DVDMT into DHIS2\Train all National District and Zonal EPI officers on <ul style="list-style-type: none"> • Use of DHIS2 • Interpretation of Data Analytics • Data use for decision making • Data Quality Assessments and Reviews. • Review Existing CMED sops • Develop EPI specific Data quality, analysis and Use <p>Note: The above listed activities are planned for the coming year to meet the objective 2, there is need to review existing budget lines in the HSIS to explore synergies that can support these activities</p> <p>CMED:</p> <ul style="list-style-type: none"> ▪ Printing of village health registers ▪ ToT training in revised registers ▪ Briefing of HAS's on the use of revised tools ▪ Conduct mapping and assessment of existing ICT technologies ○ Deployment of test phase per district- mobile /digital DHIS 2.
Objective 3:	
Objective of the HSS grant (as per the HSS proposals or PSR)	Improving the cold chain infrastructure capacity and the ISCM system.
Priority geographies / population groups or constraints to C&E addressed by the objective	All districts
% activities conducted / budget utilisation	
Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption	Activities Implemented by EPI: <ol style="list-style-type: none"> 1.Training SCM staff in supply chain <ul style="list-style-type: none"> ○ Ongoing. National level staff undergoing training in Rwanda 2. Train Cold chain technicians in preventive maintenance by Ministry of Works <ul style="list-style-type: none"> ○ Discussions and planning ongoing, scheduled for Jan 2019 3. Maintain and repair cold rooms <ul style="list-style-type: none"> ○ Ongoing 4. Provide fuel for distribution <ul style="list-style-type: none"> ○ Ongoing for both routine and new vaccine distribution Activities implemented by Other implementing parties

<p>Major activities planned for upcoming period (mention significant changes / budget reallocations and associated needs for technical assistance⁴)</p>	<ul style="list-style-type: none"> ▪ TA for feasibility & costing analysis by UNICEF for solar energy in cold rooms (3 months) ▪ Sales orders are in progress from UNICEF for the following: Cold boxes, Fridge tags, 4 Tool kits, Spare parts for cold chain repair, 2,400 bicycles, Three 8-seater boats, One 15-seater boat, Two 15-ton trucks, Five 10-ton trucks, Ten 3-ton truck, One Fork Lift, Seven Jack pellets, and 5,025 bags, raincoats and gumboots
<p>Objective 4:</p>	
<p>Objective of the HSS grant (as per the HSS proposals or PSR)</p>	<p>To strengthen leadership and management of EPI at central, zonal and district levels and improve coordination and sustainability.</p>
<p>Priority geographies / population groups or constraints to C&E addressed by the objective</p>	<p>All districts</p>
<p>% activities conducted / budget utilisation</p>	
<p>Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption</p>	<ol style="list-style-type: none"> 1. Conduct supportive supervision by central and zonal levels to districts <ul style="list-style-type: none"> • Scheduled for December 2018 2. Procure airtime for programme management <ul style="list-style-type: none"> • Approved, awaiting procurement 3. Repair and Maintenance of vehicles <ul style="list-style-type: none"> • Ongoing 4. Conduct monthly meeting with programme officers for national level <ul style="list-style-type: none"> • Two conducted, one scheduled. 5. Conduct quarterly meetings with EPI programme officers at zonal level <ul style="list-style-type: none"> • One conducted, one scheduled 6. Conduct bi-annual meetings with District EPI Coordinators <ul style="list-style-type: none"> • One conducted 7. Conduct National EPI Review Meeting <ul style="list-style-type: none"> • Not conducted. Exploring possibility to reprogram funds for data harmonisation exercise. 8. Conduct NITAG meetings. <ul style="list-style-type: none"> • Not done 9. Conduct AEFIs committee meetings. <ul style="list-style-type: none"> • Not done 10. Conduct Joint Appraisal meetings <ul style="list-style-type: none"> • Done 11. Support EPI Sub-TWG meetings. <ul style="list-style-type: none"> • Not done 12. Support EHP TWG meetings <ul style="list-style-type: none"> • Not done

⁴ Note: When specifying Technical Assistance (TA) needs, do not include elements of resource requirements. These will be discussed in the context of the Targeted Country Assistance (TCA) planning. The TCA planning will be informed by the needs indicated in the JA. TA needs should however describe - to the extent known to date - the type of TA required (staff, consultants, training, etc.), the provider of TA (core/expanded partner) the quantity/duration required, modality (embedded; sub-national; coaching; etc.), and any timeframes/deadlines. JA teams are reminded to both look back (TA which was not completed/successful in the past) and forward (planned vaccine introductions, campaigns, major upcoming HSS activities, etc.) when specifying TA priorities for the coming year. The TA menu of support is available as reference guide.

	<p>13. Conduct quarterly review meeting on Gavi grant performance</p> <ul style="list-style-type: none"> • One done <p>14. Procure furniture for EPI Office and conference</p> <ul style="list-style-type: none"> • Not done, consideration to move to year 2
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Objective 5:	
Objective of the HSS grant (as per the HSS proposals or PSR)	To improve and sustain the availability, capacity and motivation of human resources for health to deliver quality EHP services including immunisation services at all levels.
Priority geographies / population groups or constraints to C&E addressed by the objective	All districts
% activities conducted / budget utilisation	
Major activities implemented & Review of implementation progress including key successes & outcomes / activities not implemented or delayed / financial absorption	<p>Activities Implemented by other implementing Parties: COM)</p> <p>KAP Survey</p> <ul style="list-style-type: none"> • District letters of support for survey • National Survey ethics review referral to National Committee • Discussions with NSO on mapping of clusters • Sampling of national representative clusters underway (~40 PPS) • Funding: Not be powered for urban-rural differences <p>EPI Prototype</p> <ul style="list-style-type: none"> • Meetings with JSI & MOH on previous work done • Supervision of academic institutions on EPI Prototype curricula <p>Vaccinology Course</p> <ul style="list-style-type: none"> • Planned to conduct vaccinology course early November 2018. <p>Conduct annual meetings with lecturers/tutors</p> <ul style="list-style-type: none"> • Meetings with JSI & MOH on previous work done • Actual meeting with Tutors not done

a. Performance of Gavi CCEOP support (if country is receiving Gavi CCEOP support)

<p>Malawi is currently benefiting from a \$5.6m Cold Chain Equipment Optimization Platform (CCEOP) grant through Gavi which focuses on equipping health facilities in hard to reach areas without having cold chain equipment to provide quality service delivery.</p> <p>A total of 154 hard to reach facilities were selected for the installation SDDs (Solar Direct Drives) refrigerators. However only 106 health facilities could be accommodated with planned budget following the cost adjustment due to price fluctuations.</p> <p>The CCEOP grant is in the first phase of roll out and installation of the SDD refrigerators has commenced in September 2018. Installation of 106 SDDs is in progress with over 70 % of the CCE already been installed.</p> <p>A Program Management Team (PMT) for CCEOP has been formed to provided technical oversight for installation, commissioning and maintenance of cold chain</p>

equipment. Initially the PMT met quarterly and it is now a monthly meeting to provide regular monitoring support during the installation phase.

The coverage of SDDs will continue increasing in the subsequent years as the installation continues. There are also plans to solarize the National Vaccine Store (NVS) and Regional Vaccine Store (RVS). Consultant to start the works on feasibility of solarizing RVS and NVS was being done during the time this report was being prepared.

b. Financial management performance

Gavi (New Vaccines)	\$15,207,989.00
Gavi MR SIA Operational Costs	\$5,030,349.00
Gavi MR SIA vaccines	\$6,410,000.00
MR VIG	\$ 568,989.00
HSJF Vaccine Support	\$2,403,448.28
Malawi Government	\$1,107,664.87

Table 2 Immunization Financing

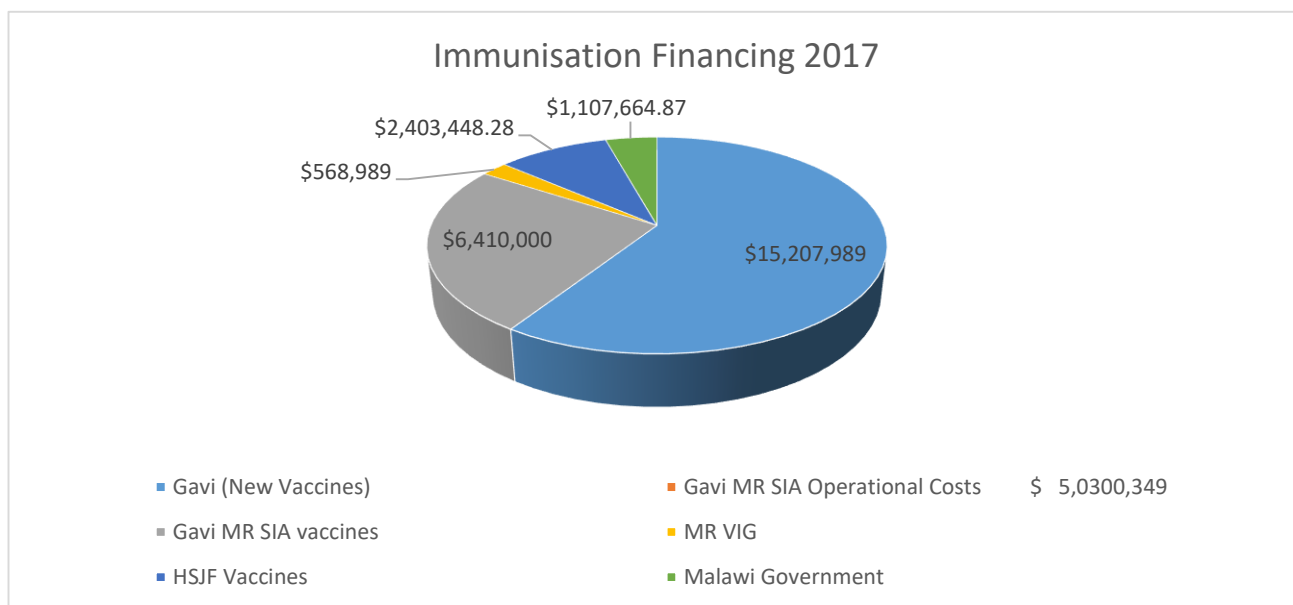


Figure 19 Immunization Financing 2017

Financial Absorption

	Financial Allocation	Balance	Funding Absorption
Gavi (New Vaccines)	\$15,207,989	\$ 15,207,989	100%
Gavi MR SIA Operational Costs	\$ 5,030,349.00	\$213,916.00	96%
Gavi MR SIA vaccines	\$ 6,410,000.00	\$ 6,410,000.00	100%

MR VIG	\$ 568,989.00	\$568,989.00	100%
HSJF Vaccines	\$ 2,403,448.28	\$1,286,493.90	54%
Malawi Government	\$1,107,664.87	\$1,052,281.63	95%

Table 3 Financial Absorption

c. Transition planning (if applicable, e.g. country is in accelerated transition phase)

N/A

d. Technical Assistance (TA)

TCA/PEF 2018

WHO Grant

In September 2018, Dr Gonah a WHO consultant from Zimbabwe was hired and carried out a training for the Malawi NITAG on evidence-based decision making. Nine out of 10 NITAG Members, 2 ex-officio and 5 members from the secretariat attended the training in Salima. WHO Malawi NPO/EPI provided technical assistance during these workshops. The NITAG also developed the internal procedure manual as a secondary output. In December 2018, WHO is planning to support Dr Mac Mallewa, Malawi NITAG chairperson to attend the 2018 Global NITAG Network meeting to be held in Canada. This is part of the ongoing efforts to strengthen the capacity of the NITAG.

Malawi is planning to introduce IPV and HPV vaccines in the routine schedule. WHO technical officers have provided technical assistance to MOH to prepare for this. These have included development of training materials, monitoring materials. The HPV and IPV training deck, HPPV and IPV field guide and HPV and IPV operation guide were developed, finalized and await printing by MOH. WHO Technical officers (NPO/EPI, NPO/HPR, HPV officer) have also provided technical assistance to MOH during the training of health workers at sub-national level.

Orientation of media personnel on crisis management in readiness for HPV and IPV is planned for November 2018. Preparations are currently underway involving WHO, UNICEF C4D, MOH/HEU and MOH/EPI.

In May 2018 WHO carried out accreditation of KCH National measles rubella laboratory. Dr Charles Byabamazima, IST/ESA polio and measles laboratory coordinator led the process. During the exercise laboratory technicians and managers were also trained on laboratory testing bench work.

Strengthening AEFI surveillance and pharmacovigilance in Malawi: WHO has supported MOH (EPI and PMPB) to develop the National AEFI guidelines and Case Reporting forms. Materials were finalized, printed and handed over to MOH for distribution to districts and health facilities. Vaccine Adverse Event Monitoring Information System (VAEMIS) Training of trainers (TOT) was conducted by MOH (EPI and PMPB) with support from WHO in May 2018, followed by training sessions for all districts in August 2018. WHO Malawi NPO/EPI and NPO/ICT provided technical assistance during these workshops.

Development of DQIP: This exercise has been rescheduled to Q1 2019 and discussions are underway with WHO AFRO to lead the exercise. The data quality review will inform the development of the Data Quality Implement Plan.

UNICEF:

Technical support is provided to develop an implementation plan on use of renewable energy for efficient cold chain management at health facilities. Energy need assessment and pre-assessment of health facilities were conducted in 2018, and the TORs are development to implement solar system for health facilities. Consultant is engaged to conduct the feasibility and costing analysis on use of renewable energy for cold rooms of which report will be available in December 2018.

2. UPDATE OF FINDINGS FROM PREVIOUS JOINT APPRAISAL

Prioritised actions from previous Joint Appraisal	Current status
<p>1. • Conduct in depth analysis of different data sources (eg. Admin, DHS, MICS, CES, PIE, census, NSO, WHO/UNICEF estimate, head-counting) for data triangulation- EPI/MOH and WHO</p> <p>• Development of data quality improvement plan - EPI/MOH and WHO</p>	<ul style="list-style-type: none"> • In progress • Planned for 2019
<p>2. • Conducting an equity analysis to identify the drivers for low immunization in certain districts</p> <p>• In-depth analysis of district by district to identify also the best practices leading to high immunization coverage</p> <p>• Revisit the PIRI guidelines based on equity assessment recommendations</p>	<ul style="list-style-type: none"> • In progress • In progress • Not done, Will be included in 2019 plans
<p>3. • CSOs and Directorate of Preventive Health services to lobby to have established posts and program manager for the revised EPI Unit organogram.</p> <p>• MOH to lobby with Human Resource & Development Department to approve and effect the proposed functional review.</p>	<ul style="list-style-type: none"> • In progress • Lobbying done, awaiting approval
<p>4. • Conduct feasibility and costing study to establish the use of solar energy to run national and regional cold rooms</p> <p>• Procurement and installation of solar equipment for the cold rooms</p> <p>• Negotiations with ESCOM to connect a reliable feeder to cold rooms at national level: preparing a cost analysis of the current running expenses (fuel, maintenance) and possible future loss (cost of vaccines, etc.).</p> <p>• Increase allocation for fuel in the 2018/2019 Government budget and lobby partners to support EPI with funds for fuel for the generator sets National and Regional Vaccine Stores</p>	<ul style="list-style-type: none"> • Done • Not Done, Recommendations from the study received, procurement planned for performance based additional HSS grant • Done NVS is currently one of the countrys priority lines • Done
<p>5. • Identify national CRS surveillance focal point person – PM</p> <p>• Establish the CRS surveillance system – Consultant</p> <p>• Orient key people at the national level – Consultant/focal person</p>	<ul style="list-style-type: none"> • Focal point person in place • In progress, group identified and Concept note submitted, EPI and WHO to review the concept note which was already submitted to offer them • Not done, awaiting establishment of CRS system by consultant

<ul style="list-style-type: none"> • Train health workers on CRS surveillance - focal person 	<ul style="list-style-type: none"> • Not done, awaiting establishment of CRS system by consultant
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3. ACTION PLAN: SUMMARY OF FINDINGS, ACTIONS AND RESOURCE/SUPPORT NEEDS IDENTIFIED AND AGREED DURING THE JOINT APPRAISAL

Key finding / Action 1	Problem: Immunization coverage is higher in rural areas (77%) than in urban areas (70%).
Current response	No specific service delivery approach to address for urban Immunization needs in place
Agreed country actions	<ol style="list-style-type: none"> 1. Develop urban immunization strategy 2. Conduct a rapid needs assessment to identify underserved communities in urban areas 3. Engage with Private clinics association to establish and/or improve provision of immunization services 4. Conduct Immunization in Practice training in urban areas including private clinics providers. 5. Conduct dialogue meetings on immunization performance with Local leaders in urban areas (urban block leaders, councilors etc.)
Expected outputs / results	Equitably high coverage across both rural and urban areas
Associated timeline	January – June 2019
Required resources / support	Technical assistance to support with the development of an Urban Immunization Strategy and to conduct the rapid needs assessment
Key finding / Action 2	Missed opportunities for vaccination and 2nd Year of Life Action plan
Current response	No specifically targeted approach to address missed opportunities for vaccination.
Agreed country actions	<ol style="list-style-type: none"> 1. Demand generation for routine immunization services through community engagement and social mobilization 2. Screening and catch up vaccination for un-immunized children- supportive supervision, coaching & mentorship 3. Capacity building of health workers on active defaulter tracing mechanisms. 4. Ensure and support daily provision of immunization services.
Expected outputs / results	<ul style="list-style-type: none"> • Reduction in missed opportunities for vaccination • Reduced drop out between MCV1 and MCV2 • Increased MCV2 coverage at district and national level
Associated timeline	January -December 2019
Required resources / support	<ul style="list-style-type: none"> • Developing and printing of job aids • Funding for supportive supervision • M& E of piloting of interventions • Funding for media airtime • Developing and printing IEC material • Funding for community engagement meetings/activities

Key finding / Action 3	Strengthen Data quality, reporting and use.
Current response	<ul style="list-style-type: none"> • Parallel data reporting systems in use, which leads to work overload, suboptimal data capture and confusion • Challenges with use of data collection tools: Under-2 Registers and tally sheets
Agreed country actions	<ol style="list-style-type: none"> 1. Facilitate historical data import from DVDMT into DHIS2 2. Conduct comprehensive review of EPI program indicators, consolidate indicators and dashboards on DHIS2, define the Indicators and their sources of data 3. Review existing CMED SOP's, and develop EPI specific SOP's guiding Data quality, analysis and Use. 4. Train all National, District and Zonal EPI officers on <ul style="list-style-type: none"> ○ Use of DHIS2 ○ Interpretation of Data Analytics ○ Data use for decision making ○ Data Quality Assessments and Reviews. 5. Conduct rapid review of use of data collection tools-Under 2 register and Tally sheets in various districts to understand challenges of use.
Expected outputs / results	<ul style="list-style-type: none"> • Adoption of DHIS2 by EPI program • Strengthened Data use • Improved reporting rate of EPI data
Associated timeline	January - May 2019
Required resources / support	<ul style="list-style-type: none"> • Collaboration with CMED • TA to support in reviewing use of data collection tools • TA to support in reviewing and consolidating Indicators and dashboards in DHIS2 • Resources to support historical data migration
Key finding / Action 4	Strengthen Supply Chain Capacity, function, data use and reporting
Current response	<ul style="list-style-type: none"> • Flow of information and reporting is not currently defined in Supply chain and cold chain functions. • Lack of national system for tracking maintenance of cold chain equipment • Inadequate vaccine management practices at health facility level • Limited district level capacity to mentor health facilities
Agreed country actions	<ol style="list-style-type: none"> 1. Conduct optimization study of the vaccine distribution network. 2. Define data systems and information flow for EPI supply chain function and map out Logistics management information systems available to support supply chain function. 3. Assess the proposed application for national system for tracking maintenance of cold chain equipment 4. Develop and disseminate module for SCM for district level capacity building for mentoring and supportive supervision.
Expected outputs / results	<ul style="list-style-type: none"> • Vaccine distribution network recommendations and a costing plan • Implementation plan for the proposed Vaccine supply chain information management systems endorsed • National level system and database for tracking maintenance of the cold chain equipment in place • Improved timeliness and completeness of reporting from HFs • Strengthened vaccine management practices at health facility level

Associated timeline	January- August 2019
Required resources / support	<ul style="list-style-type: none"> • TA to support vaccine distribution optimisation study • TA to support mapping of available Logistics management information systems
Key finding / Action 5	Strengthen the planning, coordination, budgeting and implementation of EPI program at all levels
Current response	<ul style="list-style-type: none"> • Lack of systematic work planning; • Regular schedule of meetings are not in place and a clear mechanism for tracking action points not developed; • More reactive response to deal with emerging issues as opposed to a proactive engagement on planning and coordination
Agreed country actions	<ol style="list-style-type: none"> 1. Complete draft EPI Annual Operational Plan 2. Prepare EPI Annual operational plan Budget 3. Strengthen work planning at Sub-national (Zonal) Levels 4. Improve the execution of EPI sub-TWG meetings through improved meeting management. 5. Capacitate EPI District coordinators in supporting Health facility level work planning 6. Develop capacity of Sub-national (Zonal) and district level staff on the process of HSIS grant requisition 7. Alleviate administrative workload on the EPI team around HSIS grant requisition through PIU
Expected outputs / results	<ol style="list-style-type: none"> 1. Strengthened role of EPI Program as Secretariat of Sub-TWG
Associated timeline	January – July 2019
Required resources / support	<ul style="list-style-type: none"> • Core Partner support
Key finding / Action 6	<ul style="list-style-type: none"> • Prepare HPV vaccine routinisation and Multi age Cohort campaign
Current response	<ul style="list-style-type: none"> • Single age cohort preparations under way
Agreed country actions	<ul style="list-style-type: none"> • Explore other sources and support to close the resource gap • Complete major activities outstanding before introduction in 2019 • Commence early preparations for Multi age Cohort vaccination campaign plan for 2020 • Engage CSOs to support in reaching Multi age Cohort • Align HPV with existing adolescent strategy
Expected outputs / results	<ul style="list-style-type: none"> • 90% uptake for HPV1 and 85% uptake for HPV2
Associated timeline	<ul style="list-style-type: none"> • Single age Cohort - January 2019, July 2019 • Multi age Cohort – December 2019
Required resources / support	<ul style="list-style-type: none"> • Readiness assessment and Multiage Cohort implementation

4. JOINT APPRAISAL PROCESS, ENDORSEMENT BY THE NATIONAL COORDINATION FORUM (ICC, HSCC OR EQUIVALENT) AND ADDITIONAL COMMENTS

Joint Appraisal (full JA)

- *Does the national Coordination Forum (ICC, HSCC or equivalent) meet the Gavi requirements (please refer to <http://www.gavi.org/support/coordination/> for the requirements)?*
- *Briefly describe how the Joint Appraisal was reviewed, discussed and endorsed by the relevant national Coordination Forum (ICC, HSCC or equivalent), including key discussion points, attendees, key recommendations and decisions, and whether the quorum was met. Alternatively, share the meeting minutes outlining these points.*
- *If applicable, provide any additional comments from the Ministry of Health, Gavi Alliance partners, or other stakeholders.*

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5. ANNEX: Compliance with Gavi reporting requirements

Please confirm the status of reporting to Gavi, indicating whether the following reports have been uploaded onto the Country Portal. **It is important to note that in the case that key reporting requirements (marked with *) are not complied with, Gavi support will not be reviewed for renewal.**

	Yes	No	Not applicable
Grant Performance Framework (GPF) * reporting against all due indicators			
Financial Reports *			
Periodic financial reports			
Annual financial statement			
Annual financial audit report			
End of year stock level report (which is normally provided by 15 May as part of the vaccine renewal request) *			
Campaign reports *			
Supplementary Immunisation Activity technical report			
Campaign coverage survey report			
Immunisation financing and expenditure information			
Data quality and survey reporting			
Annual data quality desk review			
Data improvement plan (DIP)			
Progress report on data improvement plan implementation			
In-depth data assessment (conducted in the last five years)			
Nationally representative coverage survey (conducted in the last five years)			
Annual progress update on the Effective Vaccine Management (EVM) improvement plan			
CCEOP: updated CCE inventory			
Post Introduction Evaluation (PIE)			
Measles & rubella situation analysis and 5 year plan			
Operational plan for the immunisation programme			
HSS end of grant evaluation report			
HPV specific reports			
Reporting by partners on TCA and PEF functions			

In case any of the required reporting documents is not available at the time of the Joint Appraisal, provide information when the missing document/information will be provided.

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